TOWN OF HUNTINGTON, NEW YORK

LOCAL SOLID WASTE MANAGEMENT PLAN

Volume I

Department of Environmental Waste Management

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E.1 Executive Summary

The Town of Huntington has been committed to the practices of pro-active waste prevention and aggressive material recovery and recycling for many years now, since its initial programs first originated in the early 1970s. Their first local solid waste management plan (LSWMP), pursuant to Title 6 NYCRR Part 360-15.9 was completed in 1994. This new LSWMP is prepared in accordance with all applicable current codes and guidance from the New York State Department of Environmental Conservation (NYSDEC).

This current plan was completed as a complement to initiatives like *"Sustainable Huntington"* and *"Green Huntington"*, Town programs designed to help further the Town's commitment in the *"Climate Smart Communities Pledge"*, adopted on July 24, 2012. This pledge to reduce greenhouse gas emissions and to reduce dependency on non-renewable resources is recognized and sponsored by six New York State agencies and departments: Environmental Conservation, the Energy Research & Development Authority, Transportation, Health, the Department of State and the Health & Service Commission.

With that in mind, the planning process has focused heavily on the guidance and goals outlined in the NYSDEC's *Beyond Waste: A Sustainable Materials Management Strategy*. The resulting LSWMP is intended to be a living document and resource for the Town and its Department of Environmental Waste Management. It contains reasonable and realistic strategies, goals, and programming initiatives, outlined in a schedule that is mindful of the Town's limited resources in an ever-changing, uncertain economic climate. Major concepts contained herein are described as follows:

- A description of demographics, population and land use patterns and trends within the Planning Unit (Section 1)
- A detailed characterization and quantification of all waste streams generated within the Town's geographic borders by the residential, commercial, industrial and institutional sectors: Municipal Solid Waste (MSW), Organics (food waste and yard waste), Construction & Demolition Debris (C&D), Biosolids, and Non-Hazardous Industrial Waste. Estimates are provided where specific local data does not exist. (Section 2)
- A description of the Town's current solid waste processing and recycling programs and initiatives (Section 3)
- Evaluation of prospective new technologies and programs which the Town could employ to further reduce waste generation and increase recycling rates (Sections 5-6)
- A systematic ranking and selection of future programs and initiatives to be further studied or undertaken, accompanied by an implementation schedule and waste reduction projections for the duration of the planning period (Sections 6-7)

1.1 Description of Planning Unit

The Planning Unit for this Local Solid Waste Management Plan (LSWMP) consists of the Town of Huntington and the four incorporated Villages located within the Town. The four villages are the Village of Asharoken, the Village of Huntington Bay, the Village of Lloyd Harbor and the Village of Northport. While the Villages manage their own waste and recyclables programs, the Town provides resources, such as including the Villages in their consolidated annual reports. Additionally, Town recycling contracts with private vendors are structured in a way that Villages may participate with them if they choose. There are no other neighboring municipalities who have elected to become participants in this Planning Unit.

In 1989, the Town of Huntington entered into a 20 year Municipal Cooperative Agreement (MCA) with the Town of Smithtown to dispose of waste in the then newly constructed Huntington Resource Recovery Facility (RRF) (a Waste –to-Energy (WTE) Plant) located in the Town of Huntington. This agreement recently ended on October 27, 2012. Preceding the October 2012 expiration, a restated agreement was executed between Huntington and Smithtown. The restated MCA provided for a time extension to the agreement for another 7 years plus 5 additional option years until December 31, 2024. Hence, while the Town of Smithtown is not a member of the Town of Huntington planning unit, its waste management programs can greatly affect the dynamics of the Town of Huntington's waste management system.

The Town of Huntington is situated in the northwesterly portion of Suffolk County, Long Island, New York and covers a land area of 83 square miles, though incorporated area including water bodies is estimated at 93 square miles. The Town is bounded on the North by Huntington Bay, on the east by the Town of Smithtown, on the south by the Town of Babylon and on the west by Nassau County. A Regional Setting Map is provided in Appendix No. A.

1.2 Duration of Planning Period

This Comprehensive Solid Waste Management Plan, dated September 2016 establishes the structure of the Town of Huntington's solid waste and recycling management for a 10-year planning period. Accordingly, a planning period has been selected by the Town of Huntington, spanning from 2016 through 2026.

1.3 Objective of the Plan

In accordance with Environmental Conservation Law (ECL) Article 27-0107(1)(a), local planning units that operate municipal solid waste disposal facilities must have an approved Solid Waste Management Plan (SWMP) that describes the management, handling and disposal of solid waste and recyclables. This plan has been prepared in accordance with Part 360 and DEC guidance documents.

This Plan examines the Town's current solid waste management experience and future plans to continue and expand its integrated solid waste management plan consistent with the context of the State's goals for waste minimization, and enhancing the reduction, reuse and recycling practices in the Town. The ultimate goal of the plan is to achieve the most cost effective solid waste operation feasible which promotes waste reduction and recycling and is convenient for its residents.

1.4 Town and Village Population

As of the 2010 United States Federal census, the population of the Town, including incorporated Villages was 203,264 residents, living in 69,311 households. As this census significantly pre-dates this plan, the baseline population estimates included within will instead reference the 2013 American Community Survey data, which indicates a population of 203,447, living in 68,896 households.

According to the Town's Planning Department and U.S. Census Data, the Town's population last major growth period was during the 1960s, with a 36.7% increase between 1960 and 1970. Since then, the change in population has ranged from a maximum 4.9% decrease between 1980 and 1990, to a maximum increase of 4.0%, experienced from 2000 to 2010. Table 1-1 below depicts the Town's population over the last 40 years including residents residing in the villages:

Table 1-1
Town Wide Population Including Villages

Year	Town Population
1970	199,486
1980	201,350
1990	191,474
2000	195,289
2010	203,264
2013	203,447

Table 1-2 below depicts the population of each of the four incorporated villages located within the Town. The residents in the villages comprise approximately 6.5% of the total Town population.

Table 1-2: Village Population(1)

Village	Population
Asharoken	610
Lloyd Harbor	1453
Huntington Bay	3670
Northport	7405
Total	**13,138**

Note (1): Data source is 2013 American Community Survey Data

Table 1-3 compares the population in the unincorporated area of the Town with that in the incorporated Villages. Household sizes are presented for comparison, revealing that the average household within the unincorporated area of the Town is higher than within the Villages.

Table 1-3: 2013 American Community Survey Data

Municipality	Population	# of Households	Household Size
Town, unincorporated	190,309	64,245	2.96
Asharoken	610	224	2.72
Huntington Bay	1453	569	2.55
Lloyd Harbor	3670	1085	3.38
Northport	7405	2773	2.67

The information presented in Tables 1-1 through 1-3 does not reflect a consistent growth trend, however, two recent planning documents[(2)] have been completed which cite the following trends within the Town of Huntington:

- "Traditional" households with two parents and children have decreased steadily for over 30 years
- In Suffolk County as a whole, which is reflected in Huntington's demographics, household size has declined significantly since 1980, with single person households increasing by approximately 95%. Over half of these single-person households are senior citizens.
- The Town of Huntington has experienced a decline in residents between 25 and 34 years of age.
- The Town's population is growing older. Over a third of Huntington's residents are over age 65.

Based on a land mass of 83 square miles, the population density of the town is approximately 2,451 people per square mile which is indicative of a suburban setting rather than a rural or urban area. Though the character of the Town is mainly suburban, a comparison the population density rates of its various communities is presented to better understand the demographics of the Town.

Table 1-4: 2010 Population Densities[3]

Census-Designated Place (CDP)	Area (Square Miles)	Population Density (persons per square mile)
Centerport	2.1	2618
Cold Spring Harbor	3.7	1383
Commack	6.0[4]	3018
Dix Hills	16.0	1686
East Northport	5.2	3917
Greenlawn	3.7	3692
Huntington	7.6	2376
Huntington Station	5.5	6033
Melville	12.1	1571
Northport (Village)	2.3	3207
South Huntington	3.4	2764

Note (2): Population and Demographic discussion is based on material contained within The Suffolk County Comprehensive Plan 2035 (Draft dated August 2011) and Horizons 2020 Comprehensive Plan Update for the Town of Huntington (Draft dated December 2008)

Note (3): Population Density Source is 2010 U.S. Census Bureau

1.5 Administration

The Town of Huntington is governed by an elected Town Supervisor, Town Council of four members, Town Clerk, Receiver of Taxes and Superintendent of Highways. Over twenty (20) departments providing services including Land Use Planning & Zoning, Emergency Preparedness & Public Safety, Senior Services, and Parks & Recreation are run by Department heads who report to the Town Supervisor and Town Council.

The Department of Environment Environmental Waste Management is the Town of Huntington's Municipal Department charged with the primary responsibility for solid waste planning and management in the Town. The Department's mission is to "develop and implement programs and policies designed to protect and enhance the quality of the environment within the Town of

Huntington as it relates to solid and liquid wastes and recycling." [(3)] The department handles all aspects of waste management for the Town, including public education, exploration of new programs and technologies, compliance with State and Federal regulatory requirements, and oversight of the Huntington Resource Recovery Facility.

The Department manages the Town's Consolidated Refuse District which provides sanitation, recycling and yard-waste collection through both municipal employees and private contractors to the residents of the Town's hamlets. (Incorporated Villages manage their own waste collection programs, though they have the option to participate in any Town waste management contracts at their own expense.)

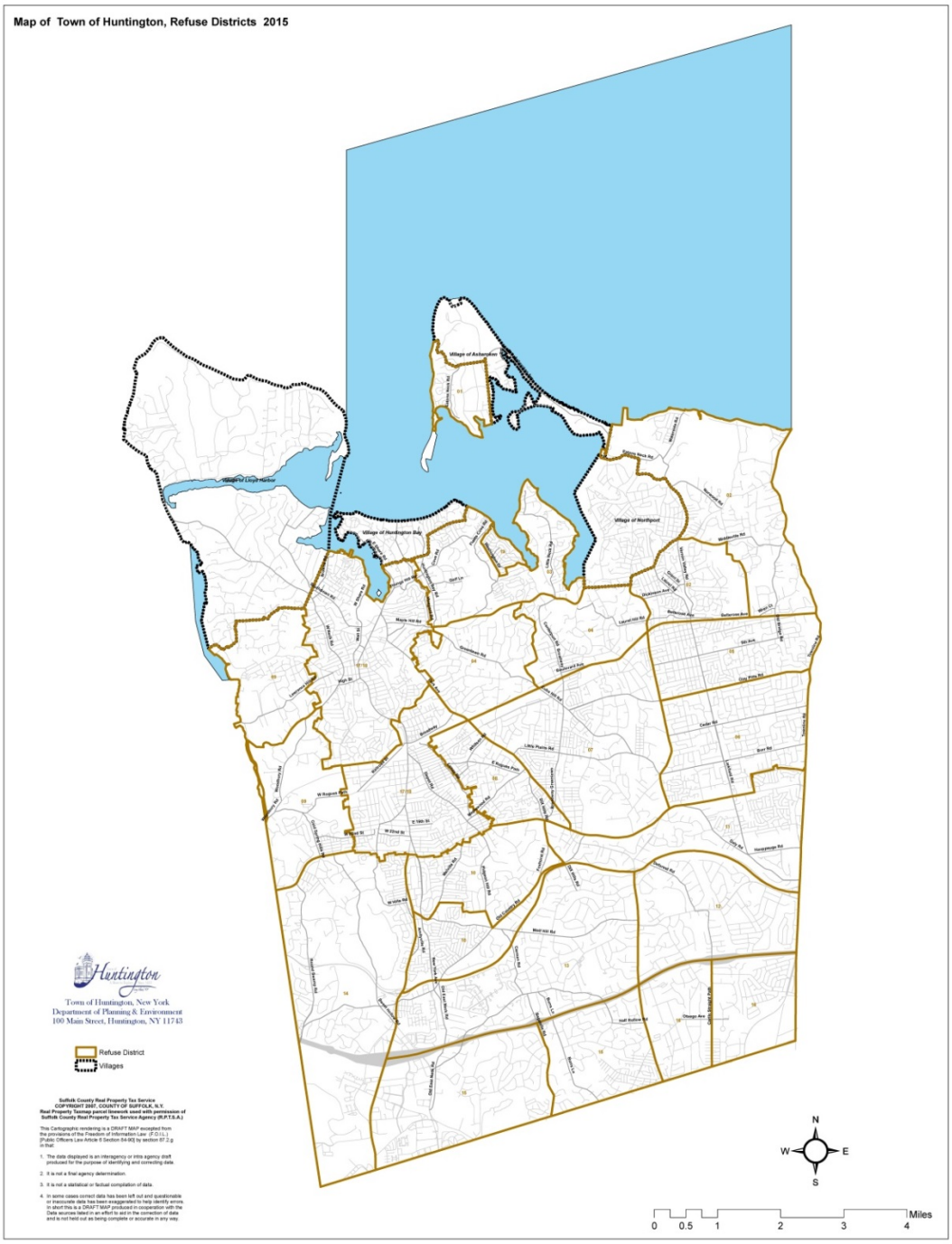
The Consolidated Refuse District consists of over 58,000 residential tax parcels that receive two refuse collections and one recycling collection per week and a minimum of 32 yard-waste collections per year. The District contains over 500 commercial parcels that receive six refuse collections and six corrugated cardboard collections per week by municipal employees.

The Department also is responsible for the monitoring of the closed and capped East Northport Landfill, the operation of the Town's Recycling Center, and the Wastewater Disposal Division runs sewage treatment and collection operations of the Huntington Sewer District, the Centerport Sewer District, and the Waste Water Disposal District. As the Town of Smithtown Municipal Services Facility located on Old Northport Road in Kings Park, NY, near the Towns' common border accepts residential Yard Waste, Recyclables, and Construction and Demolition (C&D) debris from Huntington residents, the Department coordinates inter-municipal waste management activities with Smithtown's Department of Environment and Waterways. The Department of Environmental Waste Management is also enforces Chapter 117 (Solid Waste Management) of the Town Code.

Note (3): Departmental summary information from Town of Huntington 2015 Adopted Budget document

A map of the Town of Huntington, with collection districts outlined, is presented as Figure 1-1 on the following page.

Figure 1-1
Town of Huntington Refuse Collection Districts



Source: Town of Huntington Planning Department, GIS Division

1.6 Seasonal Variations and Unique Circumstances

The Town of Huntington houses some unique facilities. The most significant of which include:

- The Northport Veterans Affair Medical Center, a regional in-patient and out-patient medical care facility located on a 300-acre campus, operated by the United States Department of Veterans Affairs

- The Huntington Hospital, a member of the Northwell Health System, which is a 408-bed community health care facility servicing over 12,000 patients per year.

- The Huntington Quadrangle, a commercial center located along the Town's Route 110 Commercial Corridor

- The Walt Whitman Mall, a regional retail center which is a major employer in the service industry and that attracts customers from throughout Long Island

As a result of the Town's commercial and industrial establishments, the day time population is estimated to increase by approximately 20,000 people, or roughly 1%. As the U.S. Census Bureau does not maintain employment data in line with the boundaries of the Planning Unit, LKMA has prepared estimate on employees within the Town based on land use factors. According to Suffolk County Planning Statistics (2011), the County has 60,086 acres of land being utilized by the commercial, institutional and industrial sectors (CII). Huntington's CII land use of 5,963 acres represents 9.92% of this total. The US Census Bureau County Business Patterns survey for 2013 indicates a total of 557,995 people were employed in Suffolk County. Based on population, Huntington's share of employees would be 55,376.

There are no discernible seasonal effects on waste disposal in the Town of Huntington other than moderate increases in the summer due to heightened activities in July and August by Town residents. Typically, the summer and fall months have higher overall waste generation due to the collection of leaves, brush and other yard debris for composting. Any variation in collected materials does not pose a problem for the collection, disposal or recycling of the Town of Huntington waste stream. Generation of waste does not vary significantly as a result of tourism, as the town is not a large scale destination point for overnight tourism.

1.7 General Land Use

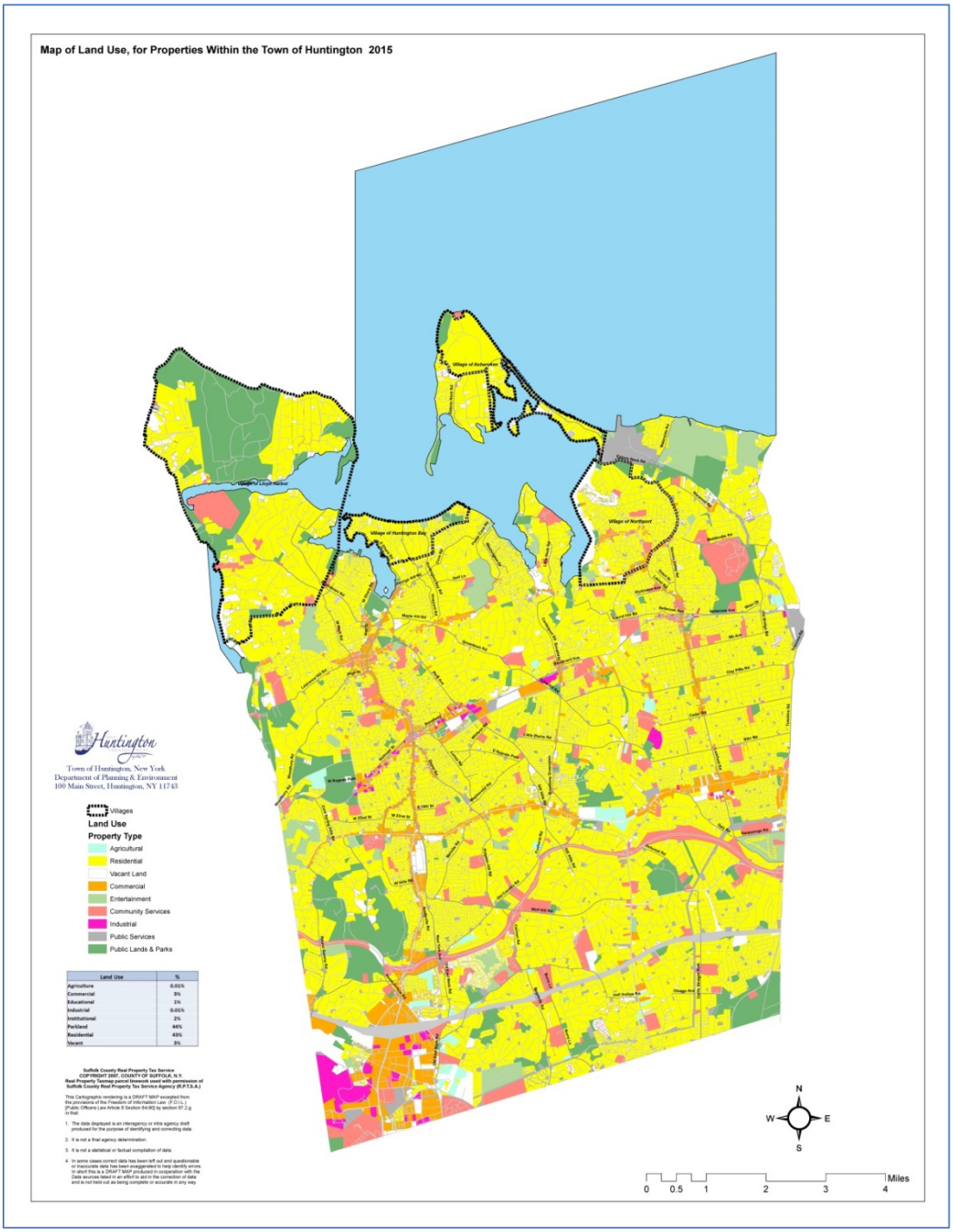
According to the Town of Huntington's Comprehensive Plan, Existing Land Use within the Town is depicted below in Table 1-5. A sub-total of the Commercial, Industrial, and Institutional (CII) land use has been calculated for use throughout this plan.

Table 1-5
Existing Land Use

Land Use	Acres	% of Total
Agriculture	498	0.9
Commercial	1,452	2.7
Industrial	665	1.2
Institutional	3078	5.8
Office	768	1.4
Open Space/Recreation	7754	14.6
Residential	33,829	63.8
Utilities/Infrastructure	3,174	6.0
Subtotal CII	**5963**	**11.3**
Total	**52,995**	**100.0**

As further illustrated by the map presented as Figure 1-2 on the following page, the Town of Huntington is largely characterized by residential land use, most of which are single family dwellings.

Figure 1-2
Town of Huntington Land Use Map



Source: Town of Huntington Planning Department, GIS Division

The Town provides waste collection services to a district of the size of 58,000 residential parcels. Actual households included in the collection are described by Town tax records to be comprised of the following:

- Single Family Homes & Townhomes: 53,895 households
- Two Family Homes: 3,005 households
- Multi-Family Homes: 55 households

Note (4): Discrepancy between total parcels in collection district and total parcels that actually are being collected due to approximately 2656 parcels of residential vacant land being included in the collection district.

The Town also provides waste collection services to approximately 500 commercial parcels which are located in Huntington's Downtown and Huntington Station's Business Improvement Districts (BID). These parcels contain mostly older, historic buildings which have been serviced by the Town long before modern times. The Town Waste Management Department has also arranged with the BIDs to service the public trash containers that are provided for their patrons.

Please be aware the following types of residential households are located outside of the Town's residential garbage collection districts, and as such, are collected as commercial waste. A listing of these complexes is provided as Appendix B.

- 3,292 of 4,844 total residential units located in 53 condominium, apartment, townhouse and co-operative complexes throughout the unincorporated area of the Town
- 343 units in 7 Motels (used for transient housing)

Commercial businesses located in the Town are limited to approximately 2.7 percent (1,452 acres)[4] of the town's total acreage. Commercial activities are located in the main hamlet centers of Cold Spring Harbor, East Northport, Greenlawn, Huntington Station and Huntington Village. Major commercial centers and corridors within the Town include the Melville Employment Center, Jericho Turnpike and Route 110 between Jericho Turnpike and Melville. Minor commercial centers include the Route 25A Corridor located between Huntington and Northport, the Fort Salonga Corridor (also on Route 25A, east of Northport), and the Larkfield Road Corridor (a north-south corridor in the hamlet of East Northport)

Industrial Centers located in the Town occupy about 1.2% (665 acres)[(4)] of the Town's total area. Most of this land use is within the hamlet of Melville along the Route 110 and Pinelawn Road corridors, and consists of establishments engaged in light manufacturing and warehousing/distribution. There is also the Pineridge sand mine and an additional area of light

industrial use along Spagnoli Road, which branches off of Route 110 to the west. Several industrial parcels are located along the LIRR right-of-way and as such, are able to utilize sidings for freight and private waste transport.

Though located just outside its borders, The Cold Spring Harbor Laboratory has become a focus for future commercial and industrial expansion within the Town of Huntington. As such, a number of biotechnology and other high-tech firms are now locating themselves within the Route 110 corridor. The Town's Horizons 2020 Plan cites this corridor as a focus for future industrial growth.

Based on data maintained by the Suffolk County Planning Department and the Town of Huntington Assessment Office, the Town contains roughly a total of 25,500,000 square feet of commercial and institutional developments broken down as follows: approximately 10,907,000 square feet of commercial office space, 7,139,000 square feet of retail space, 425,000 square feet of hotel/motel space, and roughly an additional 7,000,000 square feet combined of industrial, institutional, food service, and other miscellaneous types of non-residential development. Further details regarding private commercial development are provided in Appendix C.

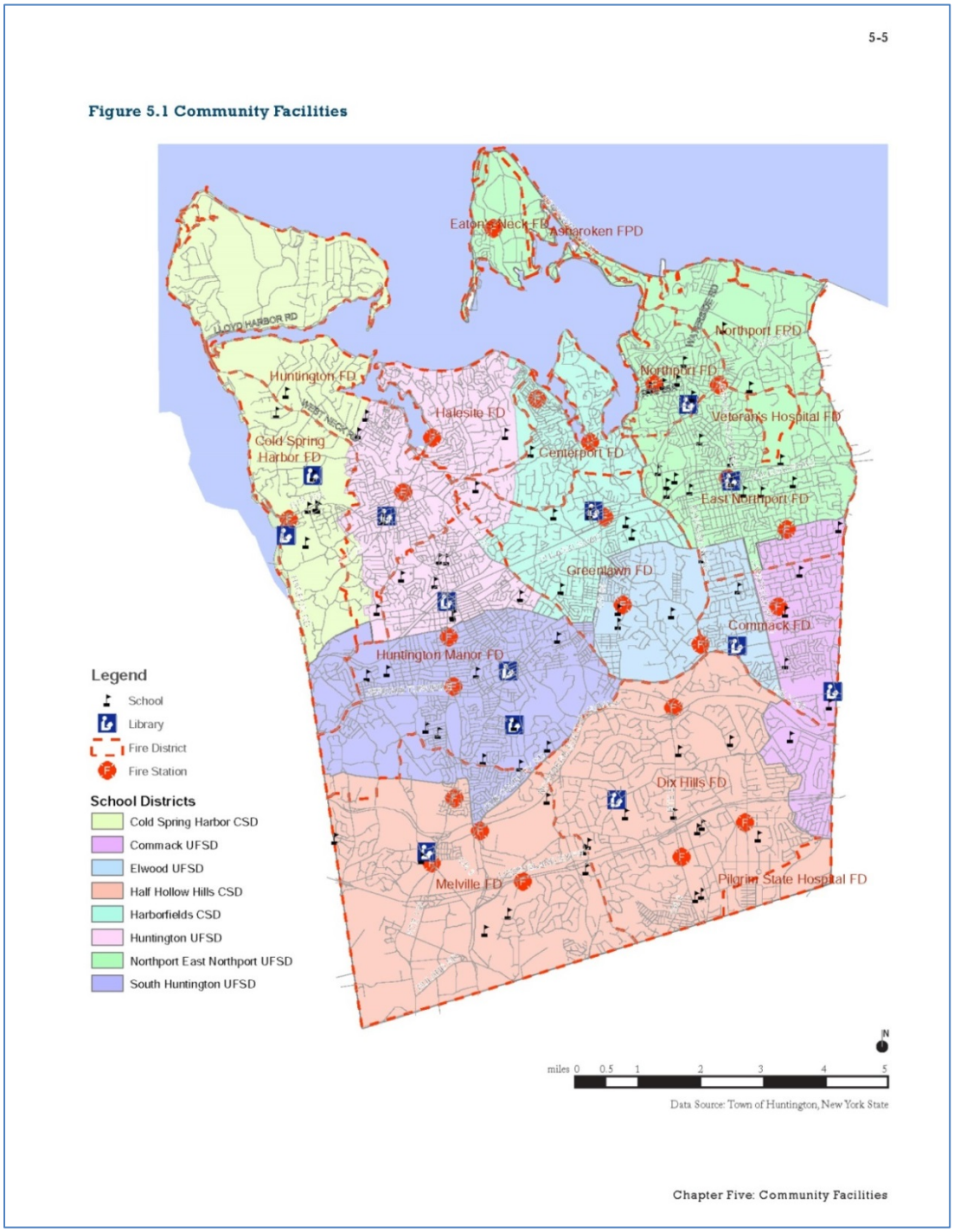
Note (4): Town of Huntington Horizons 2020 Plan is the source for land use overview and statistics

1.8 Community Facilities

The Town of Huntington is served by eight public school districts, eight public library districts, twelve volunteer fire districts, and police protection is mostly provided by the 2nd Precinct of the Suffolk County Police Department, located at 1071 Park Avenue in Huntington, though all of the Incorporated Villages maintain independent police forces.

Detailed lists of all schools, hospitals, nursing homes/assisted living, and adult rehabilitation centers are included in Appendix D. A general reference map is provided as Figure 1-3 below.

Figure 1-3
Town of Huntington Land Use Map



Map Source: Horizons 2020 Huntington Comprehensive Plan Update

The Town is also home to a few Federal and State parks. The Town has no jurisdiction over waste management practices in these parks, nor are they clients at the HRRF. It is believed the majority of the parkland is governed by "Carry In, Carry Out" policies, and the Town did attempt to obtain further information from the relevant agencies. Initiatives to address data collection regarding these waste streams are included in Sections 6 & 7. A list of the parks follows:

Table 1-6
Federal and State Parks

Name	Jurisdiction
Target Rock Federal Preserve	United States of America
Caumsett State Park	New York State
Cold Spring Harbor Park	New York State
Oak Brush Plains State Preserve	New York State
Trailview State Park	New York State

2.1 Overview

The Town of Huntington's Department of Environmental Waste Management is responsible for the environmentally sound disposal of solid waste within the Town and sanitary sewage disposal from the Huntington and Centerport Sewer Districts. The four incorporated villages within the Town retain the authority to manage their own solid waste programs; however, the Town allows the Villages to participate in any solid waste purchasing agreement that they have in force, and the Town retains the authority to license carters, even within Village borders. This program provides for the collection of municipal solid waste (MSW) and recyclables from approximately 68,896 households, including the incorporated Villages.

Commercial and institutional solid waste is also managed by the Town with collection and disposal provided by private carters who contract directly with businesses and institutions for their collection, recycling, and disposal services. However, waste generated within the Business Improvement Districts located in Huntington Village and Huntington Station is serviced by municipal employees.

At the time of plan initiation, the year of 2013 was the most recent year for complete demographic information to correspond to waste management data available. As such, for the purposes of this plan, thorough analyses and waste generation estimates will be based on data from the year 2013.

2.2 Current Estimates of Waste Generation

2.2.1 Residential Waste Quantities

2.2.1.1 Municipal Collection

Residential (household) waste is collected in the Town's Consolidated Refuse District (formerly individual Districts 1 through 16). Residents of the four incorporated villages, Village of Huntington Bay, Village of Northport, Village of Asharoken, and Village of Lloyd Harbor, are not serviced under this collection program. The waste is collected by both Town employees and private carters under contract to the Town who deliver the household waste directly to the Huntington Resource Recovery Facility (a Waste to Energy (WTE) plant operated by Covanta).

Recyclables are also collected by private carters and delivered to OMNI Recycling of Westbury for processing and sale to markets. The Town's yard waste is collected by contracted carters, which are responsible for the Consolidated Refuse District, and municipal employees, responsible for districts 17 and 19. Yard waste is processed by Power Crush, Inc. in Kings Park, NY.

Please see Table 2-1 below for a tabulation of total residential waste quantities delivered to the HRRF over the last several years from the Town's Consolidate Refuse District and the incorporated villages.

Table 2-1
Town of Huntington
Town-Wide Household MSW
(Includes Incorporated Villages)

Calendar Year	Total Residential(1) Tonnage Totals
2014	98,873.65
2013	99,798.16
2012	99,134.22
2011	99,631.72
2010	97,441.78

An analysis of the above residential waste tonnage received over the last five years shows a steady or somewhat declining trend in the generation rate of residential waste from 2010 to 2014. This is consistent with lower waste quantities being

recorded in other townships across Long Island. The reasons for this decrease are not entirely clear although undoubtedly the recent economic down turn in the last several years is a factor. Other factors may include the following:

- Changes in material use, such as reductions in paper use as society increasingly turns to electronic print and increasing use of lightweight plastics in place of heavier metals, glass, and paper packaging
- Changes in purchasing habits, such as making bulk purchases at warehouse stores (i.e. Costco and Sam's Club)
- Diversion of materials from disposal through greater recycling, re-use, or home composting

Some Long Island municipalities have avoided disposal through reduction in yard waste management by banning the collection of grass through curbside yard waste collection and increased collection efforts for leaves and brush. Huntington has a "*Just Mow It"* program in place encouraging residents to recycle their grass clippings on their lawn as an effective disposal alternative. As the Town provides separate collection of leaves and brush to its residents, our analysis of seasonal waste generation suggests there is very little yard waste in the Town's disposal stream.

The decline in residential waste generation rates is despite the fact that between 1990 and 2010 it is estimated that the population of Huntington grew by 11,790 people. Thus, the per capita decline of waste generation is even greater than it appears.

2.2.1.2 Incorporated Villages

The totals presented in Table 2-1 include the household waste collected in the four villages. A summary of household waste generated in each individual village, excluding Huntington Bay, is shown in Table 2-2 below. The Village of Huntington Bay is not included in the above table, as their residents contract private collection of their waste with no municipal involvement.

Table 2-2
Total Residential Tonnage from Villages
(Household MSW)

Calendar Year	Village of Asharoken	Village of Lloyd Harbor	Village of Northport	Total All Villages Tonnages
2014	329.46	1,793.67	4,838.90	6,962.03
2013	352.19	1,809.83	5,074.80	7,236.82
2012	382.52	1,807.25	4,930.01	7,119.78
2011	364.37	1,851.41	4,134.86	6,350.64
2010	358.44	1,794.50	4,816.71	6,969.65

Though actual data on the Village of Huntington Bay is not available, the land use and development patterns of that village are very similar to the Village of Lloyd Harbor, so it is reasonable to estimate the waste generated within the village as percentage of Lloyd Harbor's, based on population. For 2013, Huntington Bay contained 40% of the population residing within Lloyd Harbor. This would suggest that Huntington Bay generated an estimated 724 tons of waste for that year, resulting in an overall total of 7,961 tons of residential waste by incorporated villages for 2013.

2.2.1.3 Private Collection

Not all of the waste generated by residential complexes is included in Table 2-1, as several of the complexes are collected as commercial waste by private carters, and not part of the municipal collection program. According to the Suffolk County Planning Department, within the Town of Huntington there are 4,844 housing units in Apartment, Condominium and Town House Complexes. The Town estimates that of the 4,844 units, 3292 or 68%, of the units are serviced as commercial entities. Based on the EPA per capita waste generation rate of 4.4 lbs/person/day, and using the 2013 household size for the unincorporated areas of Huntington of 2.96, a reasonable per unit estimate for multi-family residential complexes generate is 2.4 tons per year per unit. Using a factor of 2.4 tons/unit yields an estimate of 7900 tons of multi-residential waste within the Town of Huntington is collected and handled as commercial waste.

Additionally, several of the motels located within the commercial districts of the Town in reality house transient residential populations throughout the year, whether through programs like the Town-run Section 8 Affordable Housing program or sheltering provided by the Suffolk County Department of Social Services, or used by corporations in the Huntington Quadrangle to house employees on extended business trips. Of the 12 hotels and 1,371 units extant, it is estimated 343 of these units in 7 motels actually are used as residential households. Using a factor of 2.4 tons/year/unit, an estimated amount of residential motel waste collected was 823 tons.

2.2.1.4 Summary

The table below summarizes the sources and quantities of residential household solid waste generated throughout the Town of Huntington and its incorporated Villages.

Table 2-3
Estimated Residential Waste Generated in 2013

Description	Annual Total (Tons)
Residential -Municipal Collection	92,561
Residential Complexes – estimate - collected as commercial	7,900
Hotel/Motel Residential Waste- estimate- collected as commercial	823
Residential – Villages - actual	7,237
Residential – Village of Huntington Bay - estimated	724
Total 2013 Residential Waste	**109,245**

The quantities presented above in Table 2-3 will be used as the basis for further analysis throughout the remainder of this solid waste management plan.

2.2.2 Commercial and Institutional Waste Quantities

The Town of Huntington currently has little involvement with the handling of commercial and institutional waste, and as such, comprehensive and detailed data regarding these waste streams is not currently readily available. (Refer to Section 6 for possible future remedies). As such, various methodologies are being applied to estimate the quantities and characteristics of the commercial and industrial waste stream. Note that several multi-residential complexes, such as some condo developments, are currently privately collected as commercial waste, and not included in the Town's residential waste collections.

Following is a discussion of the various data and methods used to estimate the amount of commercial waste generated within the Town of Huntington.

Business Improvement Districts

The Town has waste collection programs for the downtown-type businesses who are located in either the Huntington Business Improvement District (BID) or the Huntington Station BID. Table 2-4 below shows the quantities of commercial solid waste collected and processed by the Town from these businesses for years 2010-2014:

Table 2-4
Huntington and Huntington Station
Business Improvement District
Commercial Waste Tonnages (combined)

Material	2014 Tonnage	2013 Tonnage	2012 Tonnage	2011 Tonnage	2010 Tonnage
Commercial	8,900.56	10,177.20	10,218.48	9,032.78	8,769.04

Town Carter License Data

The Town does currently license all private carters who operate within the Town boundaries. The private carters collect MSW and recyclables from all commercial and institutional establishments within the Town. Currently, the pricing structure is based

on the both the number of trucks who may operate within the Town, and the number of waste containers eligible to be used throughout the Town.

For the year 2015, 51 carters licensed by the Town typically haul solid waste. This includes those contracted by the Town for the residential and business district waste collection programs, as well as those who offer recycling collection services. The licensees operated 181 trucks, and based on the Town's recycling rates hovering around 35%, this would indicate 65% of these trucks, or about 118 trucks would be actively handling MSW. The MSW collection trucks may have been hauling anywhere from 1-365 days during the year.

Conservatively, if in total, 75 trucks (accounting for trucks out-of-service or operating in municipal collection or other capacities) were active for 4 days/week during the year (200 days/yr), and each truck hauled an average of 6.75 tons per day (assuming typical capacity of 25 cubic yards, compacted to a density of 20 pounds/cubic foot i.e. .27 tons/cubic yard), this suggests approximately 101,250 tons of waste collected on an annual basis. Of this waste collected, deducting the approximately 8,723 tons of residential waste collected privately, the net result is 92,527 tons per year of commercial and institutional waste.

Estimate Based on other Studies

LKMA had conducted a study of various waste generation studies performed across the nation, and presents those herein for comparison.

New York State

NYSDEC's Beyond Waste concludes that 46% of all waste generated in New York State is commercial and institutional (versus 54% is residential). Using this ratio, and holding the residential waste generated at 109,245 tons/year (as outlined in throughout this section) the Town of Huntington may generate 93,061 tons/year of commercial sector waste. The data presented within this plan is roughly in line with this estimate. The Town's ratio appears to be closer to 50% residential/ 50% commercial, but there are a few reasons for this:

1) Lack of available reliable data on commercial and institutional waste

2) While Huntington's land use data indicates a vast majority of land is used for residential purposes, the residential development is primarily single family homes and far less densely populated than the commercial development areas, which feature dense development of multi-story, multi-tenant buildings.

The State of California

The California Department of Resources, Recycling and Recovery (CalRecycle) publishes a summary of various waste studies performed from 1991-2006 with generation rates for various types of commercial and office use ranging from 5-250 pounds/1000 square foot of space/day. The studies were performed primarily in the Los Angeles area, and thus reflect rates of a densely populated urban area similar to some portions of the Town of Huntington
(Refer to Appendix E for background information on the data from CalRecycle).

Though in some part due to different types of commercial uses, the variability of this data illustrates the challenge of accurately estimating waste generation rates. Though the studies are older, US EPA findings are indicating that though recycling has increased over the past twenty years, waste generation rates have remained consistent. LKMA's analysis of the study below, combined with Suffolk County Planning's square footage statistics, suggests 129,940 tons of commercial waste may be generated on an annual basis.

Table 2-5
CalRecycle Commercial Sector - Study Summary

Gen. Rate	Units of Measure	Source Date	Source Type
5.0	lb/1000 sq ft/day	1992	Commercial
13.0	lb/1000 sq ft/day	1993	Commercial
46.0	lb/1000 sq ft/day	1992	Retail
6.0	lb/1000 sq ft/day	1991	Retail
2.5	lb/1000 sq ft/day	1992	Retail
6.0	lb/1000 sq ft/day	1992	Office
6.0	lb/1000 sq ft/day	1991	Office
84.0	lb/1000 sq ft/day	1992	Office

90.0	lb/1000 sq ft/day	1997	Auto dealer and service stations
31.2	lb/1000 sq ft/day	1997	Retail
250.0	lb/1000 sq ft/day	1997	Shopping Center
31.2	lb/1000 sq ft/day	1997	Supermarket
47.6	*lb/1000 sq ft/day*	*Average*	
6.0	*lb/1000 sq ft/day*	*Mode*	
27.9	*lb/1000 sq ft/day*	*Adjusted Average, excluding outliers*	
0.0279	**lb/sq ft/day**	Adjusted Average, excluding outliers	
712,087.5	**lbs/day**	(x 25,500,000 square feet of commercial development in Huntington)	
356.0	**tons/day**	(x 1/2000 tons/lb)	
129,940.0	**tons/year**	(x 365 days/year)	

Albany County, New York

The County of Albany of New York completed an update to their Solid Waste Management Plan in January 2014. The County of Albany is similar in population and land use to the Town of Huntington. Based on data available to the plan's preparer, CHA, as well as data tabulated by the New York State Office of General Services on waste generation, the plan concluded that 2.37 lbs per employee per day would be an appropriate rate to estimate commercial MSW within the County of Albany. Based on an estimated 55,376 employees located within the Town of Huntington, this would suggest **131,241** tons of commercial/institutional waste generated annually.

Summary Commercial Waste Generation Rates

A side-by-side comparison of the four different methods used to estimate the commercial, institutional and industrial MSW generated within the Town of Huntington is presented below. The amount of waste estimated using statistics from the NYSDEC Beyond Waste is significantly lower than the other three totals. A possible cause for this may be that the relatively low population density throughout the majority of New York State may drive down summary statistics for the state. In contrast, application of rates from studies for the Los Angeles, CA and Albany, NY

areas yielded estimates for Huntington that were comparable to each other, but higher than the LKMA estimate based on Town data.

The differences in these waste generation estimates illustrate the need for the Town to continuously improve data collection efforts, not just of waste collection data, but also to create inventories of commercial, industrial, and institutional facilities within the Town so that they may more accurately apply generation rates from reputable studies as well. For the purposes of this plan, LKMA is choosing to rely upon Beyond Waste and the many extant studies on commercial waste rates which would indicate that commercial waste generation in a locality is less than residential waste generation. As such, the estimate based on Town carter data, 92,527 tons per year, is slightly less than the estimated residential waste estimate, and appears to most likely reflect conditions within the Town of Huntington.

Table 2-6
Estimated Commercial Waste Generated in 2013

Description	Annual Tonnage Total
Town of Huntington Data – Municipal Collection	*10,177*
Town of Huntington Private Collection – based on Town Carter license data	*92,527*
Town Commercial Total	**102,704**
NYS Beyond Waste	**93,061**
CalRecycle Comparison	**129,940**
County of Albany, NY	**131,241**

2.2.3 Organics

Food Waste

As more detailed local data regarding food waste is not available at this point and time, this plan will rely on waste composition model provided by the NYSDEC for the estimated amount of food waste contained within the Town's waste stream. This model, customized to the Town of Huntington by adjusting for allowable local

parameters, is fully presented in Section 2.5.1. It suggests 14.07%, or 29,821 tons, of the MSW generated within the Town on an annual basis is food scraps. Future goals to remedy the lack of specific local data are presented in Sections 5-7. At the present time, this tonnage is included within the residential waste estimates presented in Tables 2-1, 2-2, and 2-3. The estimate is provided as a baseline for future planning purposes, and this sub-section has been provided as a demonstration of the Town's commitment to addressing this waste stream in the future.

Yard Waste

In 2013, the Town of Huntington and its incorporated villages handled a total of 20,113 tons of yard waste obtained through its municipal collection program for residences or through residential drop-off. This amount does not include any amounts generated from the CII sector, which accounts for approximately 11.3% of land use within the Town. It is reasonable to expect the CII sector share of yard waste generated throughout the Town to be comparable to its share of land use, i.e. 11.3% of the total, which further suggests that 20,113 would be 88.7% of the total yard waste generated through the Town. As such, it is estimated that the total residential and commercial yard waste generated throughout the Town on an annual basis is 22,675 tons, with 11.3% of that, or 2,562 tons representing the amount generated by the CII sector.

As a comparison, the waste composition model provided by the NYSDEC presented in Section 2.5.1 suggests 10.10% of the waste generated within the Town on an annual basis is yard trimmings. Based on the total waste figure of 234,624 (MSW plus Yard Waste, not including C&D or biosolids), the model predicts 23,697 tons of yard trimmings would enter the waste stream. This figure is in line with the estimate presented above.

2.2.4 Biosolids

The Huntington Sewer District Sewage Plant generates sludge on an annual basis. The Sewer District reports the following: "Sludge is anaerobically digested at the treatment plant. Sludge from the secondary digester is dewatered on-site with a belt filter press. The dewatered sludge is then pick up by a licensed sludge hauler for ultimate disposal of the solids." Currently, after reduction of this waste stream through anaerobic digestion, the biosolids are transported to an organics processing and recovery facility in upstate New York. Under current Town contract specifications, the vendor determines the processing and disposal based on market conditions. Inevitably, the vendor landfills at least a portion of the sludge, as a cost-effective recovery mechanism with available capacity for the entire waste stream is not readily available. It is anticipated that, as the organics recovery effort is gaining increasing State and Federal advocacy and promotion, and STP treatment technology advances, expanded reduction and recovery options may become available in the future. A detailed discussion of the current fate of the biosolids is included in a letter from the Huntington Sewer District included as Appendix F.

Table 2-7 follows, describing the net quantities of biosolids generated, after anaerobic digestion. The Town will continue to monitor advances in technology and organics recovery markets to limit the portion of this waste stream that will be landfilled.

Table 2-7
Huntington Sewer District
Annual Sludge Disposal

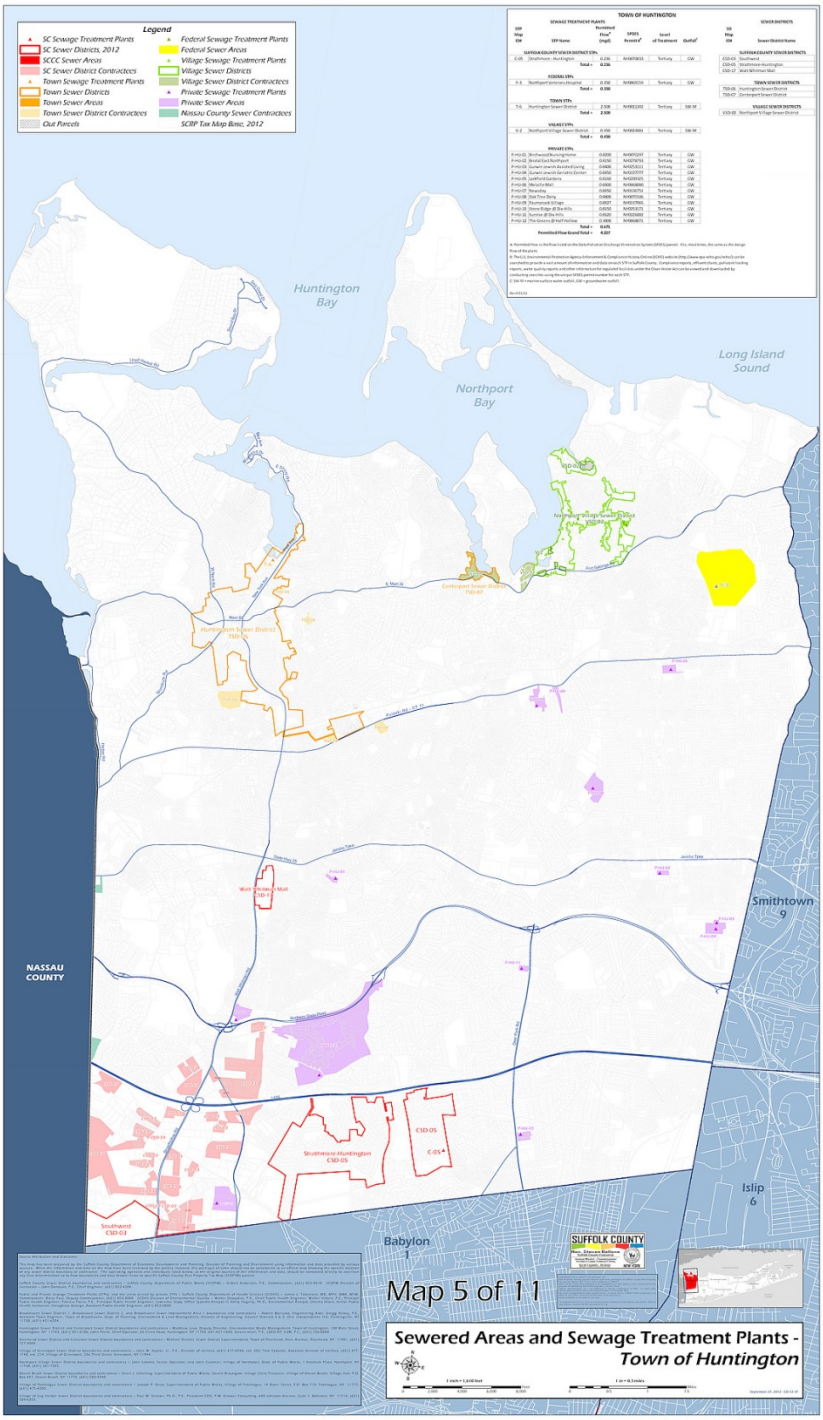
YEAR	VOLUME (CUBIC YARDS)	DRY SOLIDS (METRIC TONS)	DRY SOLIDS (TONS)
2002	3333	485.5	535.2
2003	3604	532.5	587.0
2004	2564	424.6	468.0
2005	3420	562.1	619.6
2006	3600	595.9	656.9
2007	2580	440.4	485.5
2008	4756	722.8	796.8
2009	5850	774.8	854.1
2010	5820	717.4	790.8

YEAR	VOLUME (CUBIC YARDS)	DRY SOLIDS (METRIC TONS)	DRY SOLIDS (TONS)
2011	4860	601.7	663.3
2012	6700	986.2	1087.1
2013	**6477**	**1026.5**	**1131.5**
2014	6503	902	994.3

According to Figure 2-1 presented below, the Huntington Sewer District has by far the largest treatment capacity within the Town. As of 2013, the Huntington Sewage Treatment Plant (STP) was operating at just over 76% of its permitted capacity, leading to the conclusion that its max capacity, the biosolids generated would be approximately 1,490 tons. Referring to the table of plant capacities provided within Figure 2-1, and using the bio-solid generation of the Huntington STP as a baseline, it is a reasonable estimate that even if all STPs within the Town were operating at their maximum capacities, it is likely their contribution to this waste stream would not exceed an additional 993 tons.

At maximum current capacity, all the STPs within the Town combined would not likely generate more than 2,483 tons of biosolids. That would represent less than .7% of all waste generated within the Town. Even with plans to expand sewer districts, it is unlikely that biosolids would expand during this planning period to the point where it would become of priority in the face of Town's limited resources to further quantifying and characterizing of this waste stream, though the Town does intend to upgrade biosolids processing methods as new technologies become available. Furthermore, due to County, State, and Federal regulations, the Town has no local control over the management of solid waste generated by any of these independent plants, nor is the Town privy to actual biosolids generation data or future management plans at the plants managed by other entities. As such, waste projections summarized and calculated in Section 4 and Section 7 will be based only on the biosolids generated by the Huntington Sewer District

Figure 2-1
Sewer Districts and Plants in Huntington



Source: Suffolk County Department of Economic Development and Planning

2.2.5 Construction and Demolition Waste

New York State's Part 360 defines Construction and Demolition (C&D) waste as "uncontaminated solid waste resulting from the construction, remodeling, repair, and demolition of utilities, structures, and roads; and uncontaminated solid waste resulting from land clearing". In practice, the NYSDEC Annual Report form completed by all authorized C&D processors includes categorical reporting for Aggregate, Asphalt, Brick, Brush/Stumps, Bulk Metal, Concrete, Mixed C&D, Mixed Fill, Other Masonry, Paper/Cardboard, Rock, Roofing Shingles, Clean Soil, Wallboard, Wood Chips, Clean Wood, and Emergency Debris. This definition is somewhat wider than that used for many C&D studies, which focus primarily on materials generated from buildings.

Because the wide variety of sources for C&D waste and the many markets available for processing and re-use, it is furthermore difficult to distinguish C&D waste generation rates from C&D disposal rates. For example, it is common in site development activities for aging asphalt pavement to be processed and re-used as sub-base on site, or on nearby sites being developed concurrently. While technically this is waste generated and then 100% recycled, in typical practice many activities of this nature may escape any data collection process by municipal, county and state agencies.

As the Town of Huntington does not maintain a transfer station or otherwise handle C&D, they do not currently maintain very much data on the amounts of C&D generated within the Town nor its ultimate destination. Possible solutions to remedy this lack of hard data in the future are discussed in Sections 5-7 of this Plan.

For the current plan, in order to comply with the Agency's goals outlined in *Beyond Waste* to more accurately characterize and calculate waste generation rates, LKMA has chosen to examine three different sources of data to generally quantify and characterize C&D waste generated within the Town of Huntington: existing literature and/or studies conducted by various agencies and organizations within the United States, Town of Huntington carter license applications, and NYSDEC Annual Reports for C&D processors and landfills located within Suffolk County, NY.

2.2.5.1 C&D Generation Existing Studies and LKMA Analysis

Literature Study

Over the past few years, LKMA has conducted a literature search of various technical reports for studies that have been made researching C&D material and in particular, any data presented on generation rates for this waste stream. We have also consulted the NYSDEC Beyond Waste Solid Waste Management Plan. A summary of some prominent studies follows.

The USEPA released a report in 2009 entitled "Estimating 2003 Building Related C&D Material Amounts" and concluded that the C&D per capita generation rate *from building-related construction* in 2003 is 3.2 lbs. per day per capita, an increase from an earlier 1997 report of 2.8 lbs. per day per capita for a national average.

A study conducted by DSM Environmental Services, Inc. in May of 2008 for the State of Massachusetts researching the C&D industry presented an average per capita generation rate for C&D at 1.7 pounds per person per day, based on aggregating 11 studies of C&D both generated and disposed of, including the 1997 EPA study. The rates of individual studies ranged from .8 (disposed C&D only) to 2.9 (from the State of Delaware, who has tight state controls on solid waste disposal facilities). LKMA performed an analysis of the data presented in this study, excluding studies which focused only on quantities of C&D disposed, not total generation rates. The resulting per capita rate was 1.61 lbs./person/day.

Another document issued in June 2009 by the Northeast Waste Management Officials Association (NEWMOA) entitled *"Construction and Demolition Waste Management in the North East"* reports a New York State C&D generation rate of 0.29 tons per capita per year which equates to 1.59 pounds per day per capita. This figure matches closely with a calculation LKMA has performed using a reported statewide C&D total tonnage of approximately 5,500,000 tons generated annually and a statewide population of 20 million residents (a C&D per capita generation rate of 1.51 lbs./person/day). This figure also closely matches the LKMA analysis of the data presented in the 2008 Massachusetts report presented above.

It is interesting to note that the two largest studies available, the 2009 EPA study and the 2006 California study have widely different rates – 3.2 versus 1.3 lbs per day per capita. It is important to understand that local construction trends and

natural resources available can change these rates greatly. For an example, an event such as a tropical storm or hurricane would raise the amounts of brush and stumps substantially in the year of the event, and then perhaps a year or two afterwards, as insurance and other aid money becomes available, raise the amounts of building materials disposed of. As such, even the composition of the waste is not consistent from year-to-year.

In summary, the rates provided in the literature discussed above range from 1.3-3.2 lbs. per person per day. Based on the Town's population of 203,447, it is anticipated that local data should reveal an annual quantity generated within the range of 48,268-118,813 tons.

Town of Huntington Carter Licensee Data - Extrapolation

The only current data the Town does currently collect is self-reported by haulers in their annual Town carter license application data. This would likely not include minor amount of demolition waste hauled by residential contractors on their work trucks each day, but the C& D transported under these licenses likely represents a significant portion of the C&D waste stream generated. The haulers reported 331,130 tons of C&D were transferred within the Town of Huntington for the year of 2013, which also was the year following Hurricane Sandy's devastation on October 28, 2012. However, given that this exceeds the amount of MSW generated, this data does not appear to be reliable. Possibly it includes amounts that were not direct hauls.

The data can be refined through a further analysis of the license data itself. For example, in the year 2015, 48 carters licensed by the Town typically haul C&D. The licensees operated 80 trucks, who may have been hauling anywhere from 1-365 days during the here, and permanently placed 523 containers, which may have ranged in size from 1-40 yards. Conservatively, if in total, 60 trucks (accounting for trucks out-of-service or operating in other Towns) were active for 2-3 days/week during the year (125 days/yr), and each truck hauled an average of two 10-yard containers per day, this would result in 150,000 cubic yards of C&D debris generated. Using the NYSDEC conversion factor of 1 cubic yard per .75 tons, this equates to approximately 112,500 tons, plus the approximately 150 tons received from Huntington residents at the Smithtown MSF, results in an estimate of 112,650 tons, which would be closer to a per capita rate of 3.04 lbs per day.

NYSDEC Annual Reports for Suffolk County, NY

To better understand local C&D generation rates, LKMA has summarized and analyzed C&D Waste data for the year 2013, obtained from NYSDEC Annual reports for C&D processors and for C&D landfills in Suffolk County, NY. The resulting County-wide per capita rate is then calculated based on Huntington's share of the population. The data contained there-in is self-reported by processors, and of varying quality. Two significant observations regarding the data are that many handlers do not always seem to apply the NYSDEC definition of "direct haul" properly nor do they specifically detail the sources of the waste. As such, the waste generation rates are significantly higher those reported in existing controlled studies. However, it is noted that many of the reports provided indicated 100% recovery of the C&D materials, so although the waste generation rates calculated off of these reports may seem high, it is likely that much of the C&D was re-used, and not landfilled.

A Summary Spreadsheet of displaying the net disposal data is presented as Appendix G. It should be noted that two assumptions were used during data compilation: 1) Only amounts specifically identified as "Direct Haul" were reported, and 2) If the source of the waste was unidentified, or listed generally as "Nassau/Suffolk County", the Suffolk County share was assumed to be 50%. Additional generation details and notes regarding specific handlers are included in the table provided in Appendix H.

The amount of C&D reported on NYSDEC Annual Reports by permitted or registered C&D handling facilities for Suffolk County for the year 2013 was 1,836,505 tons, or per capita based on Suffolk County's population of 1.5 million, calculated to be 6.71 pounds per person per day. At Huntington's population level of 203,447, this would suggest 249,088 tons of C&D. As this figure exceeds the amount of MSW generated by the residential and commercial sectors, and most nationwide waste stream studies would suggest this is an anomaly, great caution should be applied to using this figure. It is also important to note, in addition to the difficulties with data quality reported above, that most of the emergency debris, brush debris, and demolition debris generated by Hurricane Sandy which hit Suffolk County on October 28, 2012 would be included in these numbers. Additionally, the definition of C&D for NYSDEC Annual Reports includes

material that is generated and re-used in the course of site work, such as asphalt, concrete and clean fill.

To generate a more useful statistic, LKMA has prepared an alternate calculation from the Annual Report data based on an adjusted total which includes only waste amounts recorded in the categories of Recycled Concrete Aggregate, Brick, Bulk Metal, Mixed C&D, Mixed Fill, Roofing, Paper/Cardboard, and Unadulterated Wood. These categories more closely correspond to the materials analyzed within the literature studies most solid waste management professionals rely upon, and more truly reflect those materials associated with typical building construction, renovation and demolition. That amount of C&D for Suffolk County for the year 2013 totals 724,764 tons, or per capita based on Suffolk County's population of 1.5 million, calculated to be 2.65 pounds per person per day. At Huntington's population level of 203,447, this would suggest 98,392 tons.

To ensure these waste generation quantities are far less than the tonnage being landfilled on an annual basis, LKMA also examined a 2009 Waste Flow report for the Town of Huntington prepared and provided by the NYSDEC, as well as the C&D Landfill Reports for facilities operating in Suffolk County. These tables are included in Appendix I.

The amount of C&D reported to be disposed of within Suffolk County for the year 2013 was 496,008 tons, or per capita based on Suffolk County's population of 1.5 million, calculated to be 1.81 pounds per person per day. At Huntington's population level of 203,447, this would suggest 67,209 tons of C&D generated within the Town's boundaries is disposed of in landfills. As the disposal sites generate their reports off of scale records, this figure should be more reliable than the estimated amounts contained within all the handlers' reports. Based on a generation quantity ranging from 98,392 - 249,088 tons, the annual recovery rates range from 67%- 27%.

2.2.5.2 Summary C&D Generation Rates

A summary of the information presented in Section 2.2.5 is presented below.

Table 2-8
Comparison of C&D Waste Generation Rates

Source	Tons	Rate
Literature Studies	48,268-118,813	1.3-3.2 lbs/person/day
Licensee Extrapolation	112,650	3.04 lbs/person/day
Licensee Self-Reports	331,130	8.92 lbs/person/day
2013 NYSDEC Annual Reports – actual	249,088	6.71 lbs/person/day
2013 NYSDEC Annual Reports – adjusted	98,392	2.65 lbs/person/day

The summary displayed in Table 2-9 reflects the challenges local solid waste management professionals face in estimating the waste generated within their borders. While the expertise and resources of those who performed the literature studies must not be discounted, the local data reflected in the NYSDEC Annual Reports for Suffolk County is a significant source which cannot be overlooked. Comparing the average per capita C&D generation of the literate studies of 2.25 lbs/person/day, the estimates obtained from the Adjusted NYSDEC Annual Report data is the local data that is closest to this amount, and falls solidly within the range suggested by the studies. As such, it is reasonable to use this figure of 98,392 tons, or 2.65 lbs/person/day, as the basis for further C&D analysis within this local solid waste management plan.

2.2.7 Non-Hazardous Industrial Waste

The term "Non-hazardous Industrial Waste" signifies waste that is generated by various industrial processes which is not otherwise included in commercial waste or C&D estimates. The Town of Huntington has very few industrial establishments which have the potential to generate this type of waste, as according to Town Assessment data, manufacturing establishments occupy just .9%, or 383 acres, of overall land use. While the Town does not currently maintain exact data on the waste streams generated by these businesses, an estimate for planning purposes can be derived by calculating the percentage of State-wide non-hazardous industrial waste generated.

The New York State DEC Beyond Waste Plan cites a figure from 2008 that 3.5 million tons of non-hazardous industrial waste was generated in New York State. Based on the U.S. Census Bureau's County Business Patterns dataset from 2013, Suffolk County houses 53,039 out of 429,298, or 12.4%, of manufacturing employees in the State. These employees are classified under NAICS as codes 31-33. This would preliminarily suggest that 12.4% of state-wide industrial waste, or 432,419 tons, is generated within Suffolk County. However, multiple land use statistics extracted from several different Suffolk County and Town-based planning documents, as well as LKMA's common knowledge of industrial development in Suffolk County, suggest that the majority of the manufacturing uses locally are actually for warehousing and distribution, activities which typically do not generate industrial waste materials such as ash, slag, foundry sand, etc. As such, it is reasonable to estimate that approximately 40% of Suffolk's share of that waste, i.e. 4.96% of the state-wide total, is more representative of the actual amount of industrial byproducts generated in Suffolk County. Performing the calculation yields an estimated 173,600 tons generated with Suffolk County in the year 2008.

However, the Suffolk County 2035 Comprehensive Plan indicated that the County lost approximately 12.5% of its manufacturing from the years 2001 through 2012. It is reasonable to suggest that much of that was lost during the economic downturn which occurred between 2007 and 2012. Hence, a further adjustment to the 2008 waste generation data, reducing it by 12.5% from 173,600 tons results in approximately 151,900 tons being generated in Suffolk County for the year 2013. To calculate the share of this estimate that is generated within the Town of Huntington, an analysis of Huntington's portion of land used for industrial/manufacturing purposes within Suffolk County has been performed. According to the Suffolk County 2035 Plan, industrial land uses account for 4.9% of land use in Suffolk County. Multiplying by 912 square

miles of land mass in the County, results in 44.7 square miles, or rather 28,608 acres of industrial land. Huntington's 383 acres is 1.3% of this, suggesting that 1.3% of 151,900 tons, or 1,975 tons of non-hazardous industrial waste is generated within the Town of Huntington on an annual basis.

While 1,975 tons is not insignificant, especially since studies suggest up to 40% of the waste may be diverted, the estimate is a very low quantity compared to the Town's other waste streams. And while it is important to ensure the remainder of this waste is disposed of properly, enforcement of proper disposal would fall under the jurisdiction of various New York State and Suffolk County Health and Environmental regulations. In the face of limited resources to devout to future characterization of waste studies, further study of this waste stream will not be prioritized at this time.

2.2.6 Summary Waste Generation

For purposes of consistent comparison with the 2013 American Community Survey demographic information presented in Section 1, waste generation estimates from the Town for the year of 2013 are summarized in the table below. The source of all figures below has been discussed throughout Section 2.2.

Table 2-9
2013 Waste Generation

Description	Annual Totals (Tons)
Residential -Municipal Collection	92,561
Residential - Villages	7,961
Residential – collected as commercial[1]	8,723
Residential Total	**109,245**
Commercial – Municipal Collection	10,177
Commercial – Private Collection[1]	92,527
Commercial Total	**102,704**
MSW Sub-Total	**211,949**
Residential Yard Waste	20,113
Commercial Yard Waste[1]	2,562
Total Yard Waste	**22,675**
Total, Including Yard Waste	**234,624**
C&D	98,392
Non-Hazardous Industrial Waste	1,975
Biosolids (maximum STP capacity)	2,483
Total of all Waste Streams	**337,037**

Note (1): These totals are estimated as discussed throughout Section 2.2

This summary indicates that the breakdown of MSW handled in the Town of Huntington is approximately 52% residential and 48% commercial. The results presented in this table rely upon the data and estimates presented throughout Section 2.2, and are the basis for further analysis throughout this plan.

2.3 Recyclables

2.3.1 Recycling Overview

The Town provides for collection of residential recyclables under contract with a private hauler. The Town itself provides E-Waste collection by appointment through the use of municipal employees. There is also a Town recycling center which accepts a variety of recyclables. Commercial entities must privately contract recyclables collection.

As of 2013, there were two separate collections by the contracted carter – one for paper products and one for mixed glass, metal and plastic. As such, specific data on the breakdown of materials diverted is not available. As the Town moved to single-stream recycling in 2014, even less specific data on the breakdown of materials diverted is available to them. Possible remedies to this are included in Section 6.0.

As of 2014, the Town of Huntington has implemented an "All in One" Single Stream Recycling Program where residents can combine all of their recyclables into one container for collection. Included as Appendix J is a copy of the Town of Huntington's Trash Pickup & Recycling Calendar, which lists in more detail the items currently acceptable for recycling by the Town as well those items *currently* not accepted for recycling. Most of the Villages are currently using a single stream recyclables collection contract as well, though this varies from year to year.

2.3.2 Recyclables Quantities

Quantities of residential recyclables collected by the Town and the incorporated villages for years 2010-2014 are shown below in Table 2-10.

Table 2-10
Quantities of Recyclables Collected and Processed Town-wide

Item No.	Material	2014 Tonnage	2013 Tonnage	2012 Tonnage	2011 Tonnage	2010 Tonnage
1.	Mixed ONP, OCC and Paper	10,230.81	10,240.67	10,382.90	10,708.37	10,967.12
2.	Mixed Bottles, Cans and Plastics #1-7	5,484.92	5,569.17	5504.21	5475.85	5370.59
3.	Scrap Metal	637.18	400.15	240.76	462.07	792.84
4.	HRRF Metals(1)	2,916.89	2992.97	2833.19	2365.79	2016.85
5.	E-Waste	184.88	144.94	180.60	52.40	108.10
6.	Miscellaneous Recyclables	55.27	73.64	94.27	49.96	93.36
	Subtotal Items 1-6	19,509.95	19,421.54	19,235.93	19,114.44	19,348.86
7.	Total Yard Waste	17,542.43	20,113.22	18,284.37	20,936.72	21,169.15
	Total Items 1-7	37,052.36	39,534.76	37,520.30	40,051.16	40,518.01

Note (1): Metals recycled from Huntington's share of recovered metals from Huntington Covanta WTE Plant.

Table 2-11 below shows the quantities of recyclables collected and processed in the incorporated villages for years 2010-2014. Due to programmatic changes, the breakdown for Mixed Recyclables for years 2012 and 2014 include the Village of Huntington Bay. Years 2010, 2011, and 2013 do not include Huntington Bay.

Table 2-11
Quantities of Recyclables Collected and Processed From Villages Only

Material	2014 Tonnage	2013 Tonnage	2012 Tonnage	2011 Tonnage	2010 Tonnage
Paper	853.99	812.25	825.31	917.08	770.63
Mixed Recyclables	549.99	464.15	534.55	469.12	439.45

2.3.3 Estimated Town-wide Recycling Rate

Town-wide Recycling Rates are presented throughout this section.

2.3.3.1 Municipal Collection Rates

In 2013, the Town of Huntington directly collected and managed the following types of municipal solid waste from its collection districts:

Table 2-12
Total 2013 MSW Quantities
Town of Huntington Collection Districts and Villages

Waste Type	2013 Tonnage Received
Residential MSW	99,798
Commercial MSW	10,177
Recyclables - ONP/OCC/Mixed Paper	10,241
Recyclables - Comingled Containers	5,569
Metals from WTE Ash	2,993
Other Scrap Metal	400
Yard Waste	20,113
Other Recyclables	219
Recycling Total	**39,535**

Based on a total of 129,358 tons of waste (MSW and yard waste) handled by the Town of Huntington from its waste collection districts in 2013, a recyclable material diversion rate of 30.6% was achieved from Town programs.

2.3.3.2 Private Collection and Town-wide Rates

Currently the Town receives only self-reported information from the private recyclers who service the commercial, institutional and industrial sectors. This information is contained within their annual carter license application issued by the Town, but the quality varies widely, and there is no way to verify the accuracy. Future remedies to this situation are further discussed in Sections 6 and 7.

Based on a compilation of the haulers' self-reported information for 2013, an additional of 53,870 tons of recyclables were diverted from the waste stream, resulting in a total of 93,405 tons of diverted material (including yard waste). Based on the estimated figure of 234,624 tons of waste generated Town-wide (refer to Table 2-9), this results in a material diversion rate of 30.1%. This likely is an underestimate due to lack of knowledge of CII recycling programs, and it reasonable to speculate the recycling rate for the entire Town waste stream is in line with the figure of 34.3%, cited by the U.S. EPA for 2013.

2.3.4 Enforcement of Town Recycling Ordinances

The Town of Huntington uses sanitation inspectors equipped with advanced mobile software capabilities to identify, track and deter violations of its recycling ordinances. They are able to effectively trace and apprehend any commercial carter who participates in egregious violations of the Recycling Ordinance. The Town's enforcement philosophy is to use a "carrot" rather than "stick" approach.

Rather than issuing violations, the Town of Huntington focuses on providing warning notices that include public education to residents and businesses on recycling matters such as what to recycle and how to recycle properly. In egregious cases, however, more stringent enforcement mechanisms are available, including issuing summons to district court and a series of fines and penalties. Samples of public education materials used for enforcement are included in Appendix K.

2.4 Per Capita Municipal Solid Waste Generation Rates

NYSDEC defines Municipal Solid Waste (MSW) as combined household, commercial, and institutional waste materials generated in a given area. MSW does not include industrial, hazardous, or construction waste. Provided below in Table 2-13 is a summary table of waste generation quantities and per capita rates for the year 2013. As referenced in Section 1, the population for the year 2013 for the Town and its incorporated villages was 203,447. Note as the sewer districts which generate biosolids cover only a small portion of the Town, this waste stream is not included in this table. Refer to Section 2.2.4 for further information.

Table 2-13
Town of Huntington
2013 Waste Generation

Waste Description	Annual Totals (Tons)	Per Capita (lbs/person/day)
Residential Total	109,245	2.94
Commercial Total	102,704	2.77
MSW Sub-Total	211,949	5.71
Total Yard Waste	22,675	0.61
Estimated Other Organics[1]	29,821	0.80
C&D	98,392	2.65
Non-Hazardous Industrial Waste	1,975	0.05

Note (1): This amount is a subset of the residential total; refer to Section 2.2.3

2.5 Characterization of Solid Waste

Managing waste in a sustainable manner is an increasing priority for both the public and private sector, as organizations seek to meet their environmental responsibilities, comply with regulations, or seek opportunities for cost savings. Understanding the composition of recoverable materials remaining in the municipal waste stream will enable a municipality to develop programs to target the diversion or recovery of these materials and make informed decisions.

This section presents estimated composition information on the MSW stream and C&D. It is recognized that the Town does not currently have access to more accurate information on these waste streams, nor any detailed information on organics and non-hazardous industrial waste. Future waste composition data collection efforts are outlined in Sections 6 and 7 of this plan.

2.5.1 Waste Composition Analysis

For planning purposes, the NYSDEC has provided a model of waste composition within New York State, which should account for local waste trends and be more accurate than relying on nationwide studies. Table 2-14 below is derived from the Agency's provided "MSW Detailed Comp Analysis".

Based on the population densities presented in Table 1-4 and the Village populations, the waste composition estimates have been adjusted based on U.S. Census data presented in Section 1 to reflect that 1% of the Town's population is rural, 94% of the Town's population is suburban, and 5% is located in an urban setting. Land use information presented in Section 1 has been utilized to adjust the residential and commercial balances in the model.

Table No. 2-14

Town of Huntington										
Municipal Solid Waste (MSW) Detailed Composition Analysis Year 2013										
	MSW GENERATED									
Material	Rural			Suburban			Urban			Planning Unit/ Municipality Percentages
	1.00%			94.00%			5.00%			
	Res.	CII	Combined	Res	CII	Combined	Res.	CII	Combined	
Land Use	**93.00**	**7.00**	**100.00**	**65.00**	**35.00**	**100.00**	**75.00**	**25.00**	**100.00**	**100.00**
Newspaper	**5.20**	**1.90**	**4.97**	**5.00**	**1.90**	**3.92**	**6.60**	**2.00**	**5.45**	**4.00**
Corrugated Cardboard	**6.60**	**13.90**	**7.11**	**6.60**	**13.90**	**9.16**	**6.90**	**13.70**	**8.60**	**9.11**
Other Recyclable Paper										
Paperboard	3.20	1.10	3.05	3.30	1.00	2.50	3.60	0.90	2.93	**2.52**
Office Paper	0.80	3.80	1.01	0.90	4.20	2.06	1.10	5.80	2.28	**2.06**
Junk Mail	3.00	0.70	2.84	3.20	0.70	2.33	3.50	0.70	2.80	**2.35**
Other Commercial Printing	1.70	2.30	1.74	1.70	2.40	1.95	2.30	2.60	2.38	**1.96**
Magazines	1.10	0.90	1.09	1.00	0.80	0.93	1.10	1.00	1.08	**0.94**
Books	0.50	0.30	0.49	0.50	0.30	0.43	0.60	0.40	0.55	**0.44**
Bags	0.50	0.20	0.48	0.50	0.20	0.40	0.60	0.20	0.50	**0.40**
Phone Books	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.20	0.28	**0.30**
Poly-Coated	0.20	0.30	0.21	0.20	0.20	0.20	0.30	0.20	0.28	**0.20**
Other Recyclable Paper (Total)	**11.30**	**9.90**	**11.20**	**11.60**	**10.10**	**11.08**	**13.40**	**12.00**	**13.05**	**11.18**
Other Compostable Paper	**6.80**	**6.80**	**6.80**	**6.40**	**6.40**	**6.40**	**6.80**	**6.80**	**6.80**	**6.42**
Total Paper	***29.90***	***32.50***	***30.08***	***29.60***	***32.30***	***30.55***	***33.70***	***34.50***	***33.90***	***30.71***
Ferrous/Aluminum Containers										
Ferrous Containers	1.90	1.00	1.84	1.20	0.70	1.03	1.40	0.70	1.23	**1.04**
Aluminum Containers	0.70	0.40	0.68	0.60	0.30	0.50	0.50	0.40	0.48	**0.50**
Ferrous/Aluminum Containers (Total)	**2.60**	**1.40**	**2.52**	**1.80**	**1.00**	**1.52**	**1.90**	**1.10**	**1.70**	**1.54**
Other Ferrous Metals	**5.20**	**5.40**	**5.21**	**5.00**	**5.80**	**5.28**	**3.30**	**3.70**	**3.40**	**5.19**
Other Non-Ferrous Metals										
Other aluminum	0.20	0.30	0.21	0.20	0.30	0.24	0.20	0.30	0.23	**0.23**
Automotive batteries	0.80	0.50	0.78	0.70	0.40	0.60	0.20	0.20	0.20	**0.58**

Town of Huntington										
Municipal Solid Waste (MSW) Detailed Composition Analysis Year 2013										
	MSW GENERATED									
Material	Rural			Suburban			Urban			Planning Unit/ Municipality Percentages
	1.00%			94.00%			5.00%			
	Res.	CII	Combined	Res	CII	Combined	Res.	CII	Combined	
Other non-aluminum	0.50	0.30	0.49	0.30	0.40	0.34	0.40	0.20	0.35	**0.34**
Other Non-Ferrous Metals (Total)	**1.50**	**1.10**	**1.47**	**1.20**	**1.10**	**1.17**	**0.80**	**0.70**	**0.78**	**1.15**
Total Metals	***9.30***	***7.90***	***9.20***	***8.00***	***7.90***	***7.97***	***6.00***	***5.50***	***5.88***	***7.87***
PET Containers	**1.10**	**0.80**	**1.08**	**0.90**	**0.80**	**0.87**	**1.20**	**1.00**	**1.15**	**0.88**
HDPE Containers	**1.10**	**0.60**	**1.07**	**0.90**	**0.70**	**0.83**	**1.00**	**0.70**	**0.93**	**0.84**
Other Plastic (3-7) Containers	**0.20**	**0.10**	**0.19**	**0.20**	**0.20**	**0.20**	**0.20**	**0.20**	**0.20**	**0.20**
Film Plastic	**5.70**	**5.90**	**5.71**	**5.50**	**5.80**	**5.61**	**5.80**	**5.80**	**5.80**	**5.62**
Other Plastic										
Durables	3.10	3.20	3.11	3.00	3.20	3.07	3.20	3.30	3.23	**3.08**
Non-Durables	1.60	1.80	1.61	1.60	1.80	1.67	1.80	1.90	1.83	**1.68**
Packaging	1.40	1.10	1.38	1.40	1.10	1.30	1.50	1.10	1.40	**1.30**
Other Plastic (Total)	**6.10**	**6.10**	**6.10**	**6.00**	**6.10**	**6.04**	**6.50**	**6.30**	**6.45**	**6.06**
Total Plastics	***14.20***	***13.50***	***14.15***	***13.50***	***13.60***	***13.54***	***14.70***	***14.00***	***14.53***	***13.59***
Glass Containers	**4.10**	**3.80**	**4.08**	**3.90**	**3.80**	**3.87**	**4.30**	**3.80**	**4.18**	**3.88**
Other Glass	**0.50**	**0.40**	**0.49**	**0.30**	**0.40**	**0.34**	**0.40**	**0.40**	**0.40**	**0.34**
Total Glass	***4.60***	***4.20***	***4.57***	***4.20***	***4.20***	***4.20***	***4.70***	***4.20***	***4.58***	***4.22***
Food Scraps	**12.70**	**13.30**	**12.74**	**12.90**	**15.50**	**13.81**	**17.20**	**25.20**	**19.20**	**14.07**
Yard Trimmings	**3.10**	**1.10**	**2.96**	**11.30**	**9.10**	**10.53**	**4.20**	**1.50**	**3.53**	**10.10**
Total Organics	***15.80***	***14.40***	***15.70***	***24.20***	***24.60***	***24.34***	***21.40***	***26.70***	***22.73***	***24.17***
Clothing Footwear, Towels, Sheets	4.60	3.00	4.49	4.40	3.20	3.98	4.80	2.50	4.23	**4.00**
Carpet	1.40	1.30	1.39	1.70	1.40	1.60	1.70	0.90	1.50	**1.59**
Total Textiles	***6.00***	***4.30***	***5.88***	***6.10***	***4.60***	***5.58***	***6.50***	***3.40***	***5.73***	***5.59***
Total Wood	***4.10***	***9.00***	***4.44***	***2.90***	***4.10***	***3.32***	***2.00***	***3.50***	***2.38***	***3.28***
C&D Materials	8.00	7.60	7.97	3.80	2.70	3.42	4.40	3.80	4.25	**3.50**
Other Durables	1.90	1.70	1.89	1.60	1.50	1.57	1.90	1.50	1.80	**1.58**

Town of Huntington										
Municipal Solid Waste (MSW) Detailed Composition Analysis Year 2013										
	MSW GENERATED									
Material	Rural			Suburban			Urban			Planning Unit/ Municipality Percentages
	1.00%			94.00%			5.00%			
	Res.	CII	Combined	Res	CII	Combined	Res.	CII	Combined	
Diapers	1.90	1.10	1.84	2.10	1.20	1.79	2.30	1.10	2.00	**1.80**
Electronics	1.30	1.40	1.31	1.60	1.70	1.64	1.30	1.30	1.30	**1.61**
Tires	1.80	1.80	1.80	1.70	1.40	1.60	0.50	0.40	0.48	**1.54**
HHW	0.60	0.00	0.56	0.60	0.00	0.39	0.50	0.00	0.38	**0.39**
Fines	0.60	0.60	0.60	0.10	0.20	0.14	0.10	0.10	0.10	**0.14**
Total Miscellaneous	***16.10***	***14.20***	***15.97***	***11.50***	***8.70***	***10.52***	***11.00***	***8.20***	***10.30***	***10.56***
Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Using the total town-wide waste estimates shown in Table 2-13 above and the waste composition percentages in Table 2-14, LKMA has calculated a theoretical waste quantity for each of the waste categories shown below in Table 2-15. These values reflect an estimate of the total municipal solid waste stream, including organics, generated within the entire Planning Unit.

It should be noted this table does not include recovered materials described in Section 2.3, but rather is meant to be reflective of the estimated composition of the waste stream that is currently subject to disposal and/or processing at a WTE facility. It should be further noted that the calculated percentages of wood and C&D likely include some diverted materials due to strict monitoring protocols on incoming waste at the HRRF and other similar facilities, such as the WTE plants in the Towns of Babylon and North Hempstead, which might be utilized by private commercial operations.

Table 2-15
Assumed 2013 Baseline Huntington MSW Composition (tons)

Material	Planning Unit/ Municipality Percentages	Waste Stream Estimate (tons)
Newspaper	**4.00**	9,390
Corrugated Cardboard	**9.11**	21,367
Other Recyclable Paper		
Paperboard	**2.52**	5,917
Office Paper	**2.06**	4,823
Junk Mail	**2.35**	5,523
Other Commercial Printing	**1.96**	4,609
Magazines	**0.94**	2,203
Books	**0.44**	1,024
Bags	**0.40**	941
Phone Books	**0.30**	701
Poly-Coated	**0.20**	478
Other Recyclable Paper (Total)	**11.18**	26,219
Other Compostable Paper	**6.42**	15,072
Total Paper	***30.71***	**72,049**
Ferrous/Aluminum Containers		
Ferrous Containers	**1.04**	2,447
Aluminum Containers	**0.50**	1,163
Ferrous/Aluminum Containers (Total)	**1.54**	3,611
Other Ferrous Metals	**5.19**	12,166
Other Non-Ferrous Metals		
Other aluminum	**0.23**	550
Automotive batteries	**0.58**	1,354
Other non-aluminum	**0.34**	791
Other Non-Ferrous Metals (Total)	**1.15**	2,695
Total Metals	***7.87***	**18,472**
PET Containers	**0.88**	2,068
HDPE Containers	**0.84**	1,964

Material	Planning Unit/ Municipality Percentages	Waste Stream Estimate (tons)
Other Plastic (3-7) Containers	**0.20**	469
Film Plastic	**5.62**	13,176
Other Plastic		
Durables	**3.08**	7,222
Non-Durables	**1.68**	3,935
Packaging	**1.30**	3,053
Other Plastic (Total)	**6.06**	14,210
Total Plastics	***13.59***	**31,887**
Glass Containers	**3.88**	9,110
Other Glass	**0.34**	797
Total Glass	***4.22***	**9,907**
Food Scraps	**14.07**	33,009
Yard Trimmings	**10.10**	23,707
Total Organics	***24.17***	**56,715**
Clothing Footwear, Towels, Sheets	**4.00**	9,379
Carpet	**1.59**	3,726
Total Textiles	***5.59***	**13,105**
Total Wood	***3.28***	**7,705**
C&D Materials	**3.50**	8,217
Other Durables	**1.58**	3,707
Diapers	**1.80**	4,215
Electronics	**1.61**	3,789
Tires	**1.54**	3,616
HHW	**0.39**	917
Fines	**0.14**	324
Total Miscellaneous	***10.56***	**24,784**
Total	**100.00**	**234,624**

2.5.2 Recycling Analysis

As indicated throughout this section, precise data on materials recovered is not available to the Town at the present time. As such, we will consider two different approaches to provide a materials analysis to serve as a baseline to guide future waste management programs and efforts within the Town. While perhaps not especially rigorous and exact, the estimates provided herein are useful for planning purposes.

The first approach is to examine the recycling efficiency of the residential and small amount of commercial waste that is collected under the Town's supervision. This is the waste collection described in Section 2.2.1.1., and materials diversion described in Section 2.3.3.1, which is estimated to be a total of 130,088 collected (municipally controlled MSW and yard waste) from an adjusted population of 190,093. The population is adjusted to account for the residential population residing in multi-residential complexes, which is in served by private commercial carters. To determine an estimate of the waste generation in each recyclables category, the inputs for NYSDEC model presented in Tables 2-14 and 2-15 were adjusted to reflect just the land usage and quantities associated with this collection. Then, using the estimated composition of this waste stream, it was possible to estimate the recovery efficiency of the Town's recycling process by dividing recyclables collected by the Town in 2013 by the estimate of the total waste stream tonnage.

From the results of this process, as shown below in Table 2-16, it is clear the Town's yard waste and metal recycling programs are exceptionally effective. This is due primarily to the HRRF. Strict waste controls prevent yard waste from being disposed of at the plant, and recovery of the metals from the ash generated accounts for a large portion of the total amount of metal recycled on an annual basis. Also, it is encouraging to see that the recycling efficiency on glass is so high, suggesting that the Town is collecting over 20% of the mandated containers, especially considering the diversion of these materials through the Bottle Bill.

Table 2-16
2013 Huntington Recycling Efficiency
Municipal Collection Districts

CATEGORY	GENERATED RECYCLABLES (TONS/YEAR)	COLLECTED RECYCLABLES (TONS/YEAR)	RECYCLING EFFICIENCY (%)
Total Paper	39,278	10,241	26
Total Metals	10,272	3,995	39
Total Plastics	17,663	1,768	10
Total Glass	5,498	3,200	58
Total Yard Waste	13,710	20,113	>100
Total Textiles	5,517	5	.1
E-Waste	2,067	145	7
Total Miscellaneous	12,379	68	.1
Totals	**106,384**	**39,535**	**37**

The second approach is to use the model for Planning Unit Compositional Analyses provided by the NYSDEC estimate the overall recycling efficiency of the entire Town. This is combining the waste collection estimates presented in Section 2.2.1.3 and recycling collection estimates presented in Section 2.3.3.2 with the actual data described in Section 2.2.1.1. and Section 2.3.3.1. In totality, the waste generated Town-wide was estimated to be a total of 234,624 tons (MSW and yard waste) collected annually from an overall population of 203,447.

As per the Agency's guidance, the waste inputs for the model include the addition of recovered materials in the amount of 39,535 tons from actual municipal collection, and an additional 53,870 tons self-reported by private haulers for a total annual tonnage of 328,029. Total estimated diversion amount used for the input is 93,405 tons, which includes the totals described in Section 2.3.3

As detailed material diversion rates are generally not available, the remaining categories and sub-categories have been estimated based on the data presented in Table 2-16 and national recycling trends reported for the year of 2013 by the U.S. EPA. This is appropriate as the overall recycling rates estimated for the Town in 2013 are in line

with the rates reported by the U.S. EPA for 2013. State and local laws mandating specific disposal of materials, such as various types of "Take-Back" programs are taken into account, as well the strict local control at the HRRF on prohibited wastes. For example, a very high recovery rate for items such as automotive batteries, mixed C&D and household hazardous waste (HHW) can be safely assumed.

This table will be used as the basis for the simplified projections presented in Section 4, as well as a foundation for future initiatives and goals discussed in Section 6 and 7.

Table 2-17
Estimated Town-wide Recycling Efficiency

Material	Tons Generated	% of Total	Tons Diverted	% Diverted
Newspaper	13,129	4.00%	8300	63.22%
Corrugated Cardboard	29,873	9.11%	12000	40.17%
Other Recyclable Paper				
Paperboard	8,273	2.52%	3800	45.93%
Office Paper	6,743	2.06%	2500	37.08%
Junk Mail	7,721	2.35%	1200	15.54%
Other Commercial Printing	6,444	1.96%	800	12.41%
Magazines	3,080	0.94%	900	29.22%
Books	1,432	0.44%	0	0.00%
Bags	1,316	0.40%	350	26.60%
Phone Books	980	0.30%	160	16.33%
Poly-Coated	669	0.20%	0	0.00%
Other Recyclable Paper (Total)	36,657	11.18%	9710	26.49%
Other Compostable Paper	21,073	6.42%	5900	28.00%
Total Paper	**100,732**	**30.71%**	**35,910**	**35.65%**
Ferrous/Aluminum Containers				
Ferrous Containers	3,422	1.04%	1600	46.76%
Aluminum Containers	1,626	0.50%	700	43.04%
Ferrous/Aluminum Containers (Total)	5,048	1.54%	2300	45.56%
Other Ferrous Metals	17,009	5.19%	4500	26.46%
Other Non-Ferrous Metals				

Material	Tons Generated	% of Total	Tons Diverted	% Diverted
Other aluminum	768	0.23%	200	26.03%
Automotive batteries	1,893	0.58%	1700	89.80%
Other non-aluminum	1,106	0.34%	100	9.04%
Other Non-Ferrous Metals (Total)	3,768	1.15%	2000	53.08%
Total Metals	**25,825**	**7.87%**	**8800**	**34.08%**
PET Containers	2,891	0.88%	800	27.67%
HDPE Containers	2,746	0.84%	600	21.85%
Other Plastic (3-7) Containers	656	0.20%	200	30.50%
Film Plastic	18,422	5.62%	1000	5.43%
Other Plastic				
Durables	10,097	3.08%	2300	22.78%
Non-Durables	5,502	1.68%	1400	25.45%
Packaging	4,268	1.30%	1100	25.77%
Other Plastic (Total)	19,867	6.06%	4800	24.16%
Total Plastics	**44,581**	**13.59%**	**7400**	**16.60%**
Glass Containers	12,736	3.88%	4100	32.19%
Other Glass	1,115	0.34%	300	26.91%
Total Glass	**13,851**	**4.22%**	**4400**	**31.77%**
Food Scraps	46,150	14.07%	10	0.02%
Yard Trimmings	33,144	10.10%	22675	68.41%
Total Organics	**79,294**	**24.17%**	**22685**	**28.61%**
Clothing Footwear, Towels, Sheets	13,112	4.00%	5881	44.85%
Carpet	5,210	1.59%	0	0.00%
Total Textiles	**18,322**	**5.59%**	**5881**	**32.10%**
Total Wood	**10,772**	**3.28%**	**6747**	**62.63%**
Miscellaneous Recyclables				
C&D Materials	11,489	3.50%	8430	73.38%
Other Durables	5,183	1.58%	1500	28.94%

Material	Tons Generated	% of Total	Tons Diverted	% Diverted
Diapers	5,905	1.80%	4	0.07%
Electronics	5,281	1.61%	1400	26.5%
Tires	5,052	1.54%	4500	89.1%
HHW	1,279	0.39%	925	72.3%
Soils and Fines	452	0.14%	390	85.0%
Total Miscellaneous	**34,651**	**10.56%**	**17,149**	**49.49%**
Total	**328,029**	**100.00%**	**108,972**	**33.22%**

2.5.3 Construction & Demolition Debris Composition Analysis

The difficulties with quantifying and categorizing C&D debris were discussed in Section 2.2.5. Two different composition analyses are presented herein to further illustrate this point. Tables 2-18 and 2-19 are adapted from the NYSDEC Detailed C&D Composition Model. Generation rates have been adjusted based on local land use and building permits analysis (building permit analysis performed by Suffolk County Planning Department based on U.S. Census data). The C&D generation total presented in Section 2.2.5 has been used as the input for Table 2-19.

Table 2-18
2013 Huntington Waste C&D Composition
NYSDEC model

	C&D DEBRIS GENERATED									
Material	**Residential**				**Non- Residential**				**Infra-structure / Other**	**Planning Unit %**
	35.00%				**25.00%**				**40.00%**	
	New Construct'n	Renovat'n	Demolit'n	Combined Resident'l	New Construct'n	Renovat'n	Demolit'n	Combined Non-Resident'l	Infra-structure/ Other	
	5.00%	**50.00%**	**45.00%**	**100.00 %**	**13.00%**	**48.00%**	**39.00%**	**100.00 %**	**100.00%**	**100.00%**
Concrete/ Asphalt/ Rock/Brick	9.80%	16.10%	21.50%	18.22%	30.70%	19.10%	23.10%	22.17%	46.00%	30.32%
Wood	29.90%	19.10%	25.70%	22.61%	22.70%	12.40%	24.20%	18.34%	10.50%	16.70%
Roofing	6.00%	22.00%	6.10%	14.05%	2.10%	21.20%	5.10%	12.44%	0.00%	8.03%
Drywall	15.60%	7.90%	5.10%	7.03%	4.60%	6.40%	4.30%	5.35%	0.00%	3.80%
Soil/Gravel	11.30%	7.10%	18.50%	12.44%	13.10%	6.50%	15.60%	10.91%	38.00%	22.28%
Metal	5.30%	11.30%	5.20%	8.26%	12.00%	15.50%	11.10%	13.33%	2.40%	7.18%
Plastic	1.50%	0.70%	0.30%	0.56%	0.50%	0.70%	0.30%	0.52%	0.30%	0.45%
Corrugated/ Paper	9.30%	2.90%	3.10%	3.31%	7.10%	4.60%	4.20%	4.77%	0.30%	2.47%
Other	11.30%	12.90%	14.50%	13.54%	7.20%	13.60%	12.10%	12.18%	2.50%	8.78%
Total	**100.00%**	**100.00 %**	**100.00 %**	**100.00 %**	**100.00%**	**100.00 %**	**100.00 %**	**100.00 %**	**100.00%**	**100.00%**

Table 2-19
Assumed 2013 Baseline Huntington Waste C&D Composition
NYSDEC model (tons)

Material	Tons Generated	% of Total
Concrete/Asphalt/Rock/Brick	29,830	30.32%
Wood	16,430	16.70%
Roofing	7,896	8.03%
Drywall	3,734	3.80%
Soil/Gravel	21,922	22.28%
Metal	7,066	7.18%
Plastic	438	0.45%
Corrugated/Paper	2,431	2.47%
Other	8,643	8.78%
Total	**98,392**	**100.00%**

As a contrast to the model, below in Table 2-20 is presented the information garnished from the compilation of annual data supplied in Annual Report Forms to the NYSDEC from C&D handlers in Suffolk County, for the year of 2013.

Table 2-20
Huntington Waste C&D Composition derived
from 2013 Annual NYSDEC Reports
for Suffolk County Handlers

Material	Tons Generated	% of Total
Aggregate & Concrete (RCA)	46,704	2.54%
Asphalt	170,783	9.30%
Brick	16,883	0.92%
Brush/Stumps	196,957	10.72%
Bulk Metal	68	<1%

Material	Tons Generated	% of Total
Concrete	353,596	19.25%
Mixed C&D	502,852	27.38%
Masonry	51,347	2.80%
Mixed Fill	127,953	6.97%
Paper/Cardboard	1,394	0.08%
Rock	5,913	0.32%
Roofing Shingles	2,957	0.16%
Clean Soil	132,108	7.19%
Wood Chips	129,630	7.06%
Wood (unadulterated)	25,952	1.41%
Emergency Debris	22,005	1.20%
Other	49,404	2.69%
Total	**1,836,505**	**100.00%**

There are a few necessary observations that examination of the data in Table 2-20 presents:

- Quantities reported in the Brush/Stumps, Wood Chips, and Emergency Debris categories are likely higher than in an average year for Suffolk County, as Superstorm Sandy hit Long Island in late 2012. Much of the clean-up continued into 2013. However, it is useful to study years with large amounts of storm clean-up so that all levels of government can better understand the challenges Debris Management presents.
- The large amount of mixed C&D, 502,852 tons (27.38%) is concerning because recovery of mixed materials is far harder than those separated at its source. Possible remedies to encourage source-separation of materials at construction sites are discussed in Sections 6-8.
- The categories for annual reporting are different than those used by the NYSDEC, and a number of literature studies, for modeling purposes. This makes it harder for municipalities to evaluate the outcome of any new initiatives they undertake, and to compare actual data with published studies.
- As discussed in Section 2.2.5, the aggregate numbers are so much higher than what would be expected based on national and regional studies, that it is likely that C&D is being "double-counted", even though it is listed by handlers as being "direct haul"
- A simpler State annual reporting format that takes into account the observations listed above may have the potential to collect better data from these types of entities, which often have limited office staff.

3.1 Solid Waste Management Program Overview

The solid waste program of the Town of Huntington provides a variety of direct solid waste and recycling services to its 203,447 residents. Residents of four incorporated villages located within the Town are serviced by the Villages – their programs are described in Sections 3.1.1-3.1.7. The Town of Huntington's current solid waste management system provides a stable platform for managing the planning unit's solid waste and recyclables waste stream in compliance with New York State regulations and policies in a cost efficient manner.

In Huntington, as in almost all of the thirteen towns and two cities of Suffolk and Nassau Counties, waste services are provided to the residential waste generator primarily through the public sector. Most of the towns and cities on Long Island do not provide waste services to the commercial and/or institutional sector, and Huntington is no exception, though their program does include service to the Business Improvement Districts (BIDs) in the Huntington and Huntington Station downtown areas.

Key elements of the Town of Huntington's solid waste program include:

- The collection of residential solid waste and recyclables by a combination of public employees and private haulers operating under contract to the Town.
- Independent curbside collection of solid waste and recyclables is managed by each Incorporated Village, the majority of whom use contracted carters.
- Licensing of private carters hauling commercial and industrial waste generated within the Town.
- The operation of the Town's Recycling Center.
- The monitoring of the closed and capped East Northport Landfill.
- A long term agreement for the use of the Huntington Resource Recovery Facility (HRRF) operated by Covanta Energy for the disposal with energy recovery of nonhazardous, non-recyclable solid waste. The facility, while owned by Covanta, is located on the Town's property and property is leased to Covanta. The Town has a full-time employee designated to be a liaison to the facility.
- A long term Municipal Cooperation Agreement (MCA) with the Town of Smithtown allowing the Town of Huntington to use Smithtown's Transfer Station for C&D at the Municipal Services Facility and the Town of Smithtown to use Huntington's Resource Recovery Facility.

- The Wastewater Disposal Division runs sewage treatment and collection operations of the Huntington Sewer District, the Centerport Sewer District, and the Waste Water Disposal District.
- The Department of Environmental Waste Management enforces Town Codes pertaining to solid waste.
- The Department of Environmental Waste Management manages and creates comprehensive public education programs to further their goals pertaining to waste prevention, recycling, environmental protection (i.e. reduction of toxicity of waste stream) and proper disposal of materials.

3.1.2 Existing Solid Waste Facilities Inventory

The solid waste programs and facilities available to and planned by the Town of Huntington are intended to provide a comprehensive and integrated solid waste disposal and recycling system. The existing solid waste management system has proven to be a viable solution to the Town's long term solid waste needs. The Town's solid waste management facilities and programs include the following:

- A residential curbside collection program for household waste, yard waste, bulk waste, electronic waste and recyclables providing collection services for approximately 69,000 households[1] (The fleet for the municipal component of this program is operated out of public works yard located on Boxer Court)
- Utilization of the Huntington Resource Recovery Facility through a long term agreement with Covanta
- A closed municipal landfill in East Northport
- The Town Recycling Center located at 641 New York Avenue in the hamlet of Huntington
- Single stream recycling program that is currently contracted to OMNI in Westbury, NY
- A yard waste collection program that is currently contracted to Power Crush in Kings Park, NY
- Town Sanitation forces conduct residential electronic waste pick-ups upon request
- An advanced code enforcement system that includes Sanitation Inspectors who use mobile offices, including vehicle-installed laptops and printers that take advantage of web-based waste management software applications, to monitor commercial, residential and liquid waste code enforcement. The inspectors

have the ability to monitor the GPS units that are installed in all Town and contracted sanitation vehicles, as well as access to an iPad application which allows them to manage waste related service issues input by waste management staff or residents via a web page or smart phone app.

The following table provides a brief inventory of the Town's solid waste management facilities.

Table 3-1
SWM Facility Inventory Table

Facility Name	Facility Types	Expected Life	Operating Status
Huntington Resource Recovery Facility	Waste to Energy (WTE) Facility	Potentially viable until 2030 with major upgrades	Fully operational. Operated by Covanta under agreements described in Section 1 and 3.
Town of Smithtown MSF	Yard Waste Processing	Upgraded 2010; viable indefinitely with municipal support	Receives residential yard waste dropped off by Huntington residents under agreements described in Section 1 and Section 3. Accepts drop-offs of white good and scrap metal as well.
Huntington Recycling Center	Town Recycling Center	Viable for the present. Further studies in regards to possible capacity upgrades as Town recycling efforts increase are described in Sections 6 & 7	Serves as a transfer station for receipt of recyclables and HHW, as described in Section 3
East Northport Landfill	Closed Landfill	Not currently in use.	Monitoring per Part 360 closure requirements continues.
Waste Management Administration	Administration of Municipal Collection programs and other Waste Management Services	Viable Indefinitely	Located in Town Hall. Staffed with an interim director, a recycling coordinator, sanitation inspectors, and clerical staff

Facility Name	Facility Types	Expected Life	Operating Status
Boxer Court Fleet Facility	Public Works Yard	Viable Indefinitely with municipal support	Serves as a fleet storage and maintenance yard for vehicles used for municipal curbside collection
Huntington Wastewater Treatment Facility	Sewage Treatment Plant	Continuously upgraded; viable indefinitely with municipal support	Fully operational; serves Huntington Sewer District
Village of Northport	Sewage Treatment Plant	Upgraded as needed, viable indefinitely with municipal support	Fully operational, serves Village of Northport and Centerport Sewer District
Village of Northport DPW Yard	Municipal Transfer Station	Viable Indefinitely with municipal support	Handles municipally generated yard waste and C&D

3.1.3 Waste Management Administration

The Department of Environmental Waste Management is currently headed by a Director who reports directly to the Town Supervisor. Assisting the Director with administration of programs is a Deputy Director, a Recycling Coordinator, and two administrative assistant positions. A list and description of all the positions under the control of the Director follows in Table 3-2. There are currently 64 active titles within the Department.

Table 3-2
Waste Management Personnel

Quantity	Staff Location	Title	Description
3	Boxer Court	Auto Mechanic III	Maintenance and Repair of Refuse Fleet vehicles
1	Boxer Court	Auto Mechanic IV	Maintenance and Repair of Refuse Fleet vehicles
1	Boxer Court	Dispatcher	Dispatch communications to Refuse fleet, schedule E-Waste, input complaints
16	Boxer Court	HEO II	Primary/Alternate drivers for Sanitation Trucks

Quantity	Staff Location	Title	Description
25	Boxer Court	Refuse Laborer	Back men for Sanitation Trucks
1	Boxer Court	Sanitation Site Crew Leader III	Foremen for Refuse Personnel
1	Boxer Court	Sanitation Supervisor	Supervisor for All Municipal Refuse Employees
1	Recycling Center	Executive Assistant	Special Projects for Director/Organic Garden Manager
3	Recycling Center	HEO II	Operators of Heavy Equipment/Roll Off trucks
2	Recycling Center	Laborer	General Laborer duties
1	Recycling Center	Recycling Operation Supervisor	Supervisor for all Recycling Center personnel & Landfill Landscape Maintenance Blower Maintenance
1	Resource Recovery	Environmental Assistant	Tracks Disposal tonnage, Liaison between Huntington, Smithtown and Covanta
1	Resource Recovery	Laborer	Inspects incoming loads at RRF for non-acceptable material
	Resource Recovery	Resource Recovery Service Manager: Stipend	Manages Spot Waste Accounts, oversees Capacity Marketing Program
1	Town Hall	Confidential Secretary	Responsible for annual carter permitting, all solid waste billing for RRF, back door collections, log refuse district complaints from residents
1	Town Hall	Deputy Director of Waste Management	Assists Director with all operations as needed
1	Town Hall	Director of Waste Management	Responsible for all personnel and operations at RRF, Sewer, Recycling Center, Landfill, and Refuse District
1	Town Hall	Recycling Coordinator Aide	Draft/Evaluate Recycling Bids, oversee recycling & HHW contracts, liaison between contract carters & TOH, Prepare all Federal/state/local solid waste/recycling reports; apply for Fed/State grants as available; assist Recycling Supervisor w/ site work/maintenance/training as needed
1	Town Hall	Sanitation Inspector I	Field work to investigate complaints for Private Carters, write summons for code violations town-wide (Part-time 17hrs/week)

Quantity	Staff Location	Title	Description
1	Town Hall	Senior Account Clerk	Processes all PO's for Refuse District, Landfill, RRF and Administration; Supervises all Sewer District PO's, audit all tipping fee accounts receivable, log and assign refuse district complaints from residents; manage and reconcile cash receipts from recycling center; handle all admin correspondence and special projects for Director as needed
1	Town Hall	Senior Sanitation Inspector	Field work to investigate complaints for Private Carters, write summons for code violations town-wide

3.1.4 Sources of Waste

The modern structure of waste management on Long Island has its origin in the adoption of the Long Island Land Burial Law (ECL §27-0707) by the State of New York in 1983. That legislation recognized the critical importance of the deep flow recharge area of the Long Island aquifer and called for the cessation of landfilling of municipal solid waste in Nassau and Suffolk Counties by December 1990. Prior to the opening of the Huntington Resource Recovery Facility in December 1991, municipal solid waste generated within the Town was landfilled in the East Northport Facility, which has been closed since September 1989. Also, the Town of Smithtown constructed "Cell 6" in 1991 at their Old Northport Road Municipal Services for the disposal of residentially-generated C&D with an agreement allowing the Town of Huntington shared use of the facility. Cell 6 has since been closed and capped, though the arrangement with the Town of Smithtown to accept C&D from Town of Huntington residents still exists.

Residential Waste

Residential waste collection and a small amount of commercial waste collection from the downtown Huntington and Huntington Station business districts have existed for well over 50 years within the Town of Huntington. Up until 1993, the Town had multiple collection districts at different rate structures. Effective January 1994, however, the Town merged all districts into one single Consolidated Refuse District, which allowed the Town to establish a uniform billing system for all residents.

Within the District is twice/week solid waste collection, a weekly single stream recycling collection, electronic waste ("E-Waste") collection by request, and 32-48 yard waste collections per year.

Commercial and Institutional Waste

All commercial and institutional waste outside of the Huntington and Huntington Station BIDs is collected and disposed of by private carters who do have to be licensed by the Town in order to operate within its geographic borders. This includes private carters operating within the four incorporated Villages. The Villages, however, do not have independent licensing requirements.

Lists of currently licensed solid and liquid waste haulers within the Town are provided in Appendix L.

Construction and Demolition Debris

The Town of Huntington neither operates a C&D transfer station nor receives or processes C&D in any way. It is unable to be effectively processed at their Resource Recovery Facility, but the Town has a Municipal Cooperation Agreement with the Town of Smithtown for use of their Transfer Station. Huntington residents may drop off their C&D debris to the Smithtown Landfill, but commercially generated C&D is disposed of at other transfer stations and landfills as contractors are not permitted to dispose of C&D at the Smithtown facility.

The Town of Huntington does license all carters who privately haul C&D within the Town. This would likely not include minor amount of demolition waste hauled by residential contractors on their work trucks each day, but the C& D transported under these licenses likely represents a significant portion of the C&D waste stream generated. For the year 2015, 48 carters were licensed by the Town to haul C&D.

Liquid Waste & Biosolids

Two public and many private sewage treatment facilities exist within the Town of Huntington. Refer to map produced by the Suffolk County Department of Economic Development and Planning in 2012. Associated tables can be found in Appendix M. These facilities primarily treat sewage discharge from the residential, commercial and industrial properties within their district areas of service. Processing and disposal of

biosolids from the Town plants is discussed in 3.1.17; the Town has no jurisdiction over the disposal of biosolids from the other plants.

The Town also licenses hauler of liquid waste on annual basis. Refer to Appendix L. for a list of all licensees for the year of 2015. The primary two types of liquid waste generated within the Town are from industrial processes and residential septic systems. There is no further information on this waste stream at this time; future efforts to improve this are discussed in Section 6.

3.1.4 Curbside Collection System for Residential Waste

The Town provides collection services for residential waste and recyclables generated within the Consolidated Refuse District, which services approximately 58,000 tax parcels. After the residential waste has been collected by a contract carter or municipal personnel, it is directly transported to the Huntington Resource Recovery Facility (Covanta Waste to Energy Plant) for disposal. Table 3-3 below lists the tonnages received by RRF in 2014, broken down by month.

Table 3-3
2014 MSW Recovered at RRF

Month	Tonnage
January	7,967.13
February	6,209.59
March	7,678.43
April	9,547.61
May	10,426.12
June	9,818.01
July	10,021.03
August	9,174.33
September	9,639.52
October	9,112.44
November	8,204.06
December	9,975.94
Total	**107,774.21**

Please see attached Appendix J which is a copy of the Town's recycling calendar informing residents of the schedule for recycling collections. The Town has provided recycling stickers for residents to place on any rigid container less than 39 gallons and weighing 50 lbs or less when full. Residents can add extra containers as necessary. In 2010, the Town's contract carters collected over 51,882 tons of residential waste from homes in the Town. Similarly, Town, Village, and Municipal contract carters collected over 9,287 tons of paper/cardboard as well as 5,306 tons of commingled recyclables from homes.

Each of the Incorporated Villages offer a curbside collection program for municipal waste. All of the Villages, with the exception of Huntington Bay, contract carters to collect the

waste and dispose of it at the HRRF. Huntington Bay's contracted carter is not required to dispose of waste at the HRRF, and the destination varies with each new bid.

3.1.5 Collection System for CII Waste

The Town of Huntington does not provide collection services for the collection of wastes from the commercial, industrial or institutional sectors (CII), with the exception of the small commercial routes previously described within the Huntington and Huntington Station downtowns. Collection of CII wastes has historically been provided by private sector carting companies based both in and outside of the Town. All commercial, industrial, and institutional establishments are required to make individual arrangements with private carters for the collection of commercial waste and recyclables. Nonresidential waste collection services by private carter are provided by roll-off trucks or front-end loaders rather than the rear loader packer trucks commonly used for residential collection,

3.1.6 Recyclables Currently Collected and Processed

The Town has had a comprehensive recycling program established since 1972. Chapter 117 of Town Code requires all waste generators to source-separate recyclables. This includes institutional and commercial businesses and facilities. The Town's website contains items to educate and inform residents of what materials are recyclable and when to set their recyclables out for collection, in addition to instruction as to how to prepare other waste types for collection and/or proper disposal.

The Town has a curbside recyclables collection program for all residents and businesses served by the municipal refuse collection program in the downtowns of Huntington and Huntington Station. They also operate a recycling center on New York Avenue in the hamlet of Huntington. At the time of the Town's 2013 Solid Waste Management Plan Compliance Report, the residential recycling program was currently achieving a recycling/waste reduction rate of approximately 25.2%.

All of the incorporated Villages also offer curbside collection of recyclables. Most of the Villages are currently offering a single stream program.

3.1.6.1 Acceptable Items for Municipal Recycling

Lists of both recyclable and non-recyclable items established by the Town can be found below.

Regular Curbside Collection Recyclables

- Mixed paper
  - *Newspaper*
  - *Magazines*
  - *Mail (junk & personal)*
  - *School & office papers*
  - *Scrap paper, envelopes, greeting cards*
  - *Circulars & catalogs*
  - *Cereal and other grocery boxes*
  - *Paperback books, other books with no covers, telephone books*
  - *Detergent boxes & shoe boxes*
- Cardboard
  - *Shipping and other corrugated boxes*
  - *Kraft paper*
- Glass
  - *Empty jars & bottles (rinsed)*
  - *Lids & tops are recyclable but should be loose in recycling container*
- Metal
  - *Empty tin & aluminum food and beverage cans (rinsed)*
  - *Aerosol cans*
  - *Disposable aluminum pans & trays*
  - *Clean aluminum foil*
  - *Empty oil cans*
  - *Empty pain cans*
- Plastic
  - *All plastic food, beverage, soap, shampoo, conditioner, detergent, bleach, and cleaner bottles and containers with #1 through #7 accepted (rinsed)*

Drop-Off Recyclables

- E-waste (an appointment can also be scheduled for curbside collection)
  - *Computers, computer peripherals, monitors, electronic keyboards, electronic mice or similar pointing devices*

- *Televisions, VCRs, DVD players, digital converter boxes, cable or satellite receivers*
- *Cathode ray tubes*
- *Small scale servers*
- *Digital videorecorders, portable digital music players, electronic or videogame consoles*
- *Facsimile machines, document scanners, printers*
- *Cell phones (can only be dropped off at Recycling Center)*

- Textiles
  - *Clothing*
  - *Hats, belts, handbags, socks, paired shoes*
  - *Sheets, quilts, blankets, bedspreads, curtains towels, drapes*

- Metal
  - *Hangers*
  - *Durable cookware*
  - *Small appliances*
  - *White goods (also collected by the Town and Villages curbside by appointment (with the exception of Asharoken)*
  - *Bicycles*
  - *File cabinets*
  - *Assorted bulk metal items*

- Yard waste

- Auto, marine, & rechargeable batteries

- Propane tanks sized up to 25 lbs

- Various Household Hazardous Waste (5 gallon maximum per visit)
  - *Used auto fluids (brake fluid, antifreeze, transmission fluid, motor oil & filters)*
  - *Pest killers (bug/rodent, weed, insecticides, herbicides, pesticides)*
  - *Household chemicals (bleach, ammonia, fertilizer, pool chemicals, spot removers, oven cleaners, varnish)*
  - *Oil based paint, paint stripper, paint thinner*
  - *Flammable liquids*
  - *Flares*
  - *Gasoline*
  - *Kerosene*
  - *Fluorescent lamps*

- *Mercury*
- *Thermometers, thermostats*
- *Waste oil*

Unacceptable as Recyclables

- Mixed paper
  - *Tissues*
  - *Paper towels*
  - *Soiled paper*
  - *Hardcover books*
  - *Spiral notebooks*
  - *Milk & juice containers*

- Cardboard
  - *All wax coated cardboard and soiled cardboard food boxes*

- Glass
  - *Ceramics*
  - *Porcelain*
  - *Mirrors*
  - *Plated glass*
  - *Lightbulbs*

- Plastic
  - *Plastic bags & plastic wrap*
  - *Plastic toys*
  - *Flower pots & plant containers*
  - *Tupperware or reusable plastic housewares and items without a resin code symbol*

- Containers with hazardous residue, medical waste

3.1.6.2 Current Recycling Quantities

Current quantities of recycling collected by the Town and its incorporated villages are presented in Table 3-4 below.

Table 3-4
2014 Recycling Quantities

	Tonnage
MIXED ONP, OCC, AND PAPER	
Municipal Refuse Trucks	1,441.73
Contract Carters	7,081.55
Recycling Center	415.03
Village of Asharoken	57.63
Village of Huntington Bay	90.00
Village of Lloyd Harbor	213.35
Village of Northport	493.01
TOTAL	**9,792.30**

CORRUGATED	
Reported from Cell Six	0.00
Recycling Center	152.71
Municipal Refuse Trucks	232.53
Village of Northport	53.26
TOTAL	**438.50**

SCRAP METAL	
Autos from General SVC	12.00
Taken Directly to Recycler	240.00
60% Removed from ORRF	4.90
40.2% of Scrap/Grizzly from HRRF	2,916.89
Village of Northport	51.10
Recycling Center	93.60
Town of Smithtown Transfer Station	19.58
Highway Department	93.00
Street Lighting/General SVCS	123.00
TOTAL	**3,554.07**

BATTERIES	**6.62**

MIXED BOTTLES, CANS AND PLASTIC	
Municipal Refuse Trucks	984.57
Contract Carters	3819.59
Village of Asharoken	33.63
Village of Huntington Bay	48.00

Village of Lloyd Harbor	148.33
Village of Northport	320.03
TOTAL	**5,354.15**

MIXED PLASTIC & CANS	
Recycling Center	**71.38**

GLASS	
Recycling Center	**53.54**

YARDWASTE	
Powercrush	16,141.31
Town of Smithtown Transfer Station	1,056.69
Village of Northport	344.43
TOTAL	**17,542.43**

TEXTILES:	**4.71**

OIL/ANTIFREEZE/GAS	
Recycling Center	31.00
Highway	3.92
Hart Bus	5.10
Boxer Court	3.11
Sewer	0.81
Ice Rink	0.00
TOTAL	**43.94**

E-WASTE	**184.88**

CUMULATIVE TOTAL	**37,046.52**

3.1.7 Yard Waste Curbside Collection

The Town has a notable waste diversion program, which has as its centerpiece a ban on the collection of grass clippings. Currently, this has resulted in a 10% reduction of the residential yard waste stream. The Town also offers assistance to home composters, and advocates for waste reduction through its mailings, website, and public education programs.

The Town's Sanitation Department is currently responsible for the collection of yard waste throughout the Town. There are between 32 and 48 Yard waste collections made per year. The Town's Curbside Yard Waste Collection Rules are posted on the Town's

website. In accordance with Town code, grass clippings are not included in collection, and the Town actively publicizes a "Just Mow It" program which provides instructions via the Town website and other media on how to cut grass in an environmentally friendly manner.

3.1.8 Village Yard Waste Practices

The incorporated Villages conduct independent yard waste programs. The Village of Asharoken collects yard waste from residents once a month on a pre-scheduled date. There is no fee for pick up, and yard waste goes to Ketcham Group for processing and disposal. Winter Bros. Waste Systems services the residents of the Village of Huntington Bay for all disposal needs, including the collection and processing of yard waste. Private carters service the Village of Northport and pick up yard waste on the residents' second (2^{nd}) garbage collection day of the week. Residents of the Village of Lloyd Harbor are responsible for the removal of all yard waste.

3.1.9 Huntington Resource Recovery Facility (HRRF), a Waste-to-Energy (WTE) Facility operated by Covanta

On September 20, 1989, the Town of Huntington entered into a long term solid waste disposal Municipal Cooperative Agreement (MCA) allowing Smithtown equal use of the Huntington Resource Recovery Facility (HRRF) (also known as the Covanta Waste to Energy (WTE) Facility) for the disposal of non-processible waste. The MCA also allowed the Town of Huntington use of Smithtown's Cell 6 for C&D; however, Huntington now utilizes Smithtown's Transfer Station at the Municipal Services Facility for C&D as Cell 6 is closed and capped. This agreement recently expired on October 12, 2012. Subsequently, a successor agreement for the continued use of the Huntington Covanta WTE facility was negotiated by the two towns, and a new agreement was recently executed extending the term until December 31, 2019. There are also contract provisions, which if elected, would extend the agreement out until 2024.

There is a Municipal Cooperative Agreement between the Town of Smithtown and the Town of Huntington defining their partnerships in regards to solid waste, which has similar terms and time periods as the agreement with Covanta. Both are proud to have

recognized at an early date the need for regional cooperation and initiatives which reduce the amount of solid waste being landfilled.

Under the MCA, the Towns of Smithtown and Huntington participate in the use of the Huntington RRF with no priority afforded to the waste from either Town. All residential waste generated in Huntington is delivered to the Huntington RRF for disposal. The plant is located at the former Huntington Landfill site off Old Northport Road in the Town of Huntington. See Appendix N for an aerial photo showing the location of the Huntington RRF. The facility processes about 937 TPD of Municipal Solid Waste which generates up to 25 megawatts of renewable energy. A portion of this energy runs the RRF, and the balance is sold to the Long Island Power Authority. The RRF also extracts metals from the bottom ash after the combustion process and markets the metals to recycling vendors. In 2014, over 7,259 tons of metal were recovered from the ash from Huntington's share of the combusted MSW. As of 2015, the ash is transferred to Brookhaven where much of it is used as daily cover material under a Beneficial Use Determination (BUD).

3.1.10 Recycling Center

The Town of Huntington Recycling Center is located on New York Avenue in Huntington, NY. The resident drop-off area is located at the site where residents can dispose of various types of recyclables (see 3.1.10 below). Curbside single stream recycling is sent to OMNI Recycling of Westbury which acts as a Materials Recovery Facility (MRF) where all of the recyclables are separated, processed, and baled. All of these materials are currently being sold into markets, except for glass. The glass processed in the MRF is transported to the Town of Brookhaven for disposal. The Town of Brookhaven has been granted a Beneficial Use Determination from NYSDEC to use all of the crushed glass in the landfill environment. Increased awareness of the Town's recycling efforts coupled with ever expanding programs has greatly increased the volume of residential traffic at the Town of Huntington Recycling Center.

3.1.11 Resident Drop-Off Area

The Town has provided a resident drop-off area at the New York Avenue Recycling Center as a convenience to residents who wish to drop-off and dispose of recyclables, E-waste, waste oil, bulk metal, auto and marine batteries, clothing and textiles, and

household hazardous waste. Grass clippings, which are prohibited from being collected as curbside yard waste, can also be dropped off at the Recycling Center at a cost of $2 per bag. This service supplements the curbside collection services all homeowners receive in the Town of Huntington. This facility is open five days a week all year long.

3.1.12 Bulk Metal Storage Area

Residents can dropoff a variety of metal items at the Recycling Center. The Town has a bulk metal rolloff where hangers, cookware, small appliances, white goods, bicycles, file cabinets, bulk items, and miscellaneous metals are collected by Town employees and are temporarily stored until removal from the site by the recycling vendor.

3.1.13 Household Hazardous Waste Management

The Town of Huntington established a permanent household hazardous waste containment and receiving facility in 1992 to receive deliveries of household hazardous wastes and batteries from residential sources. Removal of household toxics from the waste stream reduces the potential for adverse environmental impacts from these materials. Trained Town personnel receive and package HHW deliveries for storage, and Radiac Research Corp. staff handle the removal, transport, and processing of the household hazardous items.

3.1.14 Pharmaceutical Waste Program

Sanitary waste systems throughout the community are not capable of adequately treating or removing most pharmaceutical products, and products disposed of in such systems can consequently contaminate the local water supply or area surface water bodies. To alleviate such impacts, the Town of Huntington promotes a drop off pharmaceutical waste collection and disposal program. Under this program, resident may safely dispose of unwanted medications at any Suffolk County Police Department location, the most convenient for residents being the Second Precinct in Huntington Station.

3.1.15 "Take Back" Programs

The Town currently partners with and monitors a number of types of businesses that are mandated by New York State, Suffolk County and other local laws to ensure materials like motor oil, tires, and supermarket plastic bags are taken back and disposed

of properly. (Refer to the Town's "Take Back Recycling Guide – Appendix O.) They also have recently partnered with electronics stores, such as Staples, to encourage them to "take back" E-waste.

3.1.16 E-Waste Programs

In addition to the retail take back programs available through stores required by the New York State Electronics (E-waste) Disposal Law to take back e-waste through a drop off or a mail in program, the Town of Huntington also offers alternative electronics recycling methods. The Town has a no cost drop off site at the New York Avenue Recycling Center (also for use by all Village residents), or residents can schedule an appointment for curbside collection of electronics covered by the law. In addition to the list of equipment covered by the law (see 3.1.5 for details), cell phones will be accepted for electronics recycling at the drop off site. Small electric appliances (e.g.: vacuum cleaners, hair dryers, curling irons, toasters, toaster ovens, mixers, slow cookers, clothes irons, et al.) are not covered by the law. All E-waste collected by the Town is recycled by a private vendor selected through a public bid process.

The Village of Lloyd Harbor also offers scheduled e-waste by appointment curbside collections. The Village of Huntington Bay collects e-waste curbside once per month. The Village of Northport has regularly scheduled e-waste drop-off events.

3.1.17 Sewage Treatment & Biosolids

The Town of Huntington is served by two Sewage Treatment Facilities, the Huntington Sewage Treatment Plant and Village of Northport Sewage Treatment Plant. To best further commercial growth and increase the overall sustainability of the Town, it is anticipated these facilities will continue to grow and expand. Fostering growth of sewage treatment districts has recently been a popular planning initiative throughout Suffolk County, as it is presumed to best protect the drinking water supply Long Island sole-source aquifer from excess nitrogen and phosphate pollution.
The overall amount of sludge is first anaerobically digested at the plant, and dewatered, to reduce disposal volume. The Town is continuously seeking technological upgrades to cost-effectively reduce disposal volume, which since the waste is transported off-Island, also reduces the greenhouse gas emissions associated with transportation.

Biosolids waste generation and handling (refer also to Section 2.2.4) is currently bid out on an annual basis. The bid is structured to allow the successful vendor to process

and/or dispose of the remaining biosolids as determined by market conditions. The Town's Climate Action Plan (CAP) discusses numerous operational upgrades intended to reduce solid waste and greenhouse gas emissions from these facilities. Please refer to the CAP dated June 2015 included as AppendixP.

3.1.18 Animal Mortality Waste

The Town of Huntington does not currently have any involvement with the waste stream generated by animal mortalities. The HRRF does not accept either animal remains or ashes resulting from the cremation process. Any deceased animals found by the Town on roadways and other types of public property are picked up by the Town's Animal Control Division and stored in freezers for regular pick-ups by an outside firm that cremates remains. This outside firm is not located within the Town, nor are there any other animal crematories which are located within the Town.

3.1.19 Other Waste Streams

As the Town focuses its waste management resources primarily on residential waste collection, disposal and recycling, limited program data regarding construction and demolition debris, commercial waste and industrial waste is available. Small amounts of residentially-generated C & D can be brought to the Smithtown Municipal Services Facility in Kings Park, and any other C & D disposed of in roll-offs and/or by licensed commercial carters that are licensed by the Town. The Town also licenses private carters and roll-off containers, under a fee structure that increases with each vehicle and container operating within the Town. Otherwise, the Town currently has no involvement in the management of these waste streams. Refer to Sections 5, 6, and 7 for an evaluation of possible future initiatives which might serve to provide better data on waste stream generation rates to aid in the creation of targeted waste reduction programs.

3.2 Existing Efforts to Recover Recyclables

The Town of Huntington prides itself on a long-standing tradition of continuously updating, expanding, and promoting recycling and responsible use throughout its Town. Recently, the have launched a "Sustainable Huntington" initiative and completed a Climate Action Plan (CAP) to further promote this philosophy. The CAP is included as Appendix P. Presented in this section is a description of the Town's current recycling programs and services.

The Town of Huntington operates a single stream curbside collection of residential recyclables, which refers to placing all acceptable recyclables, such as bottles, cans, plastics, paper, and cardboard, in a single container for collection. The switch to a single stream recycling collection program is recent, and at this time, they have seen a modest increase of 9.8% (2015 actual quantity increase was 1,273 tons) to their reported existing reduction rate of approximately 25%, for a Town-calculated rate of 35%.

The Town also offers a Recycling Center allowing residents a location to drop-off recyclables. The Recycling Center accepts all of the same materials that are collected curbside as well as automotive and marine batteries, rechargeable batteries, and used motor oil. The center is available to residents including those from incorporated villages who may not have the same level of curbside recycling service as the Town. The Town also provides a no cost E-waste drop off site at the Recycling Center and curbside E-waste collection by appointment.

The Town continuously evaluates it curbside collection and drop-off recyclables programs to ensure they make it as convenient as possible for residents to recycle materials and prevent them from entering the waste stream. As referenced in their 2013 Solid Waste Management Program compliance report, "The Town of Huntington has in place a comprehensive program for managing municipal solid waste, including: recycling; residential curbside collection of recyclables (i.e., newspaper, corrugated paperboard, chipboard, junk mail, magazines and glass, metal, plastic containers and spent consumer batteries); commercial corrugated paperboard collection; commercial recycling; collection of office paper and household batteries generated at Town facilities, public schools and libraries; yard waste collection and composting (excluding grass) ; bulky metals collection and recycling; one (1) drop-off center for recyclables including waste oil, auto and household batteries, and plastic resins #1 - #7; permanent household hazardous waste receiving station; waste reduction programs, including backyard composting and "Just Mow It" grass recycling campaigns; tire recovery; a drop off site for textile recycling and

a recently added curbside electronics recycling collection. Material that cannot be reduced, reused or recycled is sent to the waste-to-energy (i.e., Resource Recovery) facility which generates electricity from the combustion of the material."

The Town has a very user-friendly website which contains an extensive page on "How to Recycle" many items, including those the Town cannot currently accept. The page contains information on "Take Back" programs, and offers a link to the Earth 911 app for iPhone, which connects consumers to businesses who will accept various types of recyclables.

3.3 Markets for Recovered Recyclables

3.3.1 Description of Market Services

The Town of Huntington contracts all of its recycling processing to outside vendors for municipally collected recyclables, and as such, relies upon the vendors to determine suitable markets for recovered materials. A table of current vendor contracts is provided below.

Table 3-5 Recyclables Vendors

Vendor Name	Facility Address	Product	Current Term Expires	Extension Remaining	Possible Last Term Expires
Omni Recycling of Westbury	9 Portland Ave Westbury, NY 11590	Single Stream Recycling	12/31/2016	none	12/31/2016
Power Crush, Inc.	140 Old Northport Rd Kings Park, NY 11754	Yard waste	1/3/2017	none	1/3/2017
NYSAHRC dba E-Works	142 Pine St Freeport, NY 11520	E-Waste	5/22/2015	2 - 1 year extension	5/22/2017
Radiac Research Corp.	261 Kent Ave Brooklyn, NY 11249	HHW	6/5/2016	1 - 2 year extension	6/5/2018
Omni Recycling of Westbury	9 Portland Ave Westbury, NY 11590	Discrete Recycling	9/4/2016	none	9/4/2016
DeMatteo Salvage Company,	90 Gleam St W Babylon, NY 11704	OCC	10/12/2016	none	10/12/2016

In addition to procurement of the services above, the Town Waste Management Department offers custom recycling program development services to businesses upon request, which often include an exploration of current markets and provide public education to businesses on current marketable materials.

3.3.2 Available and Potential Recyclables Markets

The Town will continue to monitor the ongoing development of recycling practices so as to identify any new recycling markets and opportunities to expand the Town recycling program in a cost effective manner. The Town relies heavily upon market development efforts of New York State government, the Federal government, and private enterprise. As such, the Recycling Markets Database provided online by the NYS Empire Development Corporation has been used to populate the market information presented below in Tables 3-5 through 3-12. The tables provide a selected directory of current, local markets for recyclables. The Town will continue to expand, update and use these databases to encourage commercial recycling efforts and for public education purposes as further described in Sections 6 & 7.

Table 3-6
Paper (ONP, OCC, Mixed)
Recycling Processors in Suffolk County

Company Name	Phone Number	City	State
Brookhaven Recycling & Waste, Inc.	631-475-4788	Coram	NY
Brookhaven Waste Management Division	631-451-6222	Yaphank	NY
Great Northern Fibers	631-643-7940	West Babylon	NY
e-Scrap Destruction, LLC	631-348-8801	Islandia	NY
East Hampton Recycling	631-324-7191	East Hampton	NY
Emil Norsic & Son, Inc.	631-283-0604	Southampton	NY
Island Recycling Solutions, LLC	631-702-2770	Bay Shore	NY
Islip Department of Environmental Control	631-472-7061	Holbrook	NY
Leteri Waste Management	631-368-5533	Kings Park	NY
Olympic Fibers Corporation	631-736-5600	Coram	NY
Omni Recycling of Babylon	631-694-1694	West Babylon	NY
Paragon Recycling and Transfer Corporation	631-249-1639	West Babylon	NY
Recommunity Recycling	631-286-4971	Brookhaven	NY
Smithtown Municipal Services Facility	631-269-6600	Kings Park	NY

Company Name	Phone Number	City	State
Southold Town Solid Waste District	631-734-7685	Cutchogue	NY
USA Environmental Resource Management Services, Inc.	631-269-0800	Kings Park	NY

Table 3-7
Ferrous and Non-Ferrous Metal Processors in Suffolk County

Company Name	Phone Number	City	State
Arrow Scrap Corporation	516-491-3041	Wheatley Heights	NY
Brookhaven Recycling & Waste, Inc.	631-475-4788	Coram	NY
Brookhaven Waste Management Division	631-451-6222	Yaphank	NY
Crestwood Metals	631-567-2727	Holbrook	NY
Great Northern Fibers	631-643-7940	West Babylon	NY
e-Scrap Destruction, LLC	631-348-8801	Islandia	NY
East Hampton Recycling	631-324-7191	East Hampton	NY
Emil Norsic & Son, Inc.	631-283-0604	Southampton	NY
Gershow Recycling	631-587-1991	Lindenhurst	NY
Gershow Recycling	631-385-1200	Huntington Station	NY
Gershow Recycling	631-234-1022	Bay Shore	NY
Gershow Recycling	631-289-6188	Medford	NY
Leteri Waste Management	631-368-5533	Kings Park	NY
Paragon Recycling and Transfer Corporation	631-249-1639	West Babylon	NY
PK Metals	631-732-6403	Coram	NY
Recommunity Recycling	631-286-4971	Brookhaven	NY
Smithtown Municipal Services Facility	631-269-6600	Kings Park	NY
Southold Town Solid Waste District	631-734-7685	Cutchogue	NY
USA Environmental Resource Management Services, Inc.	631-269-0800	Kings Park	NY

Table 3-8
Electronics Recycling Processors in Suffolk County

Company Name	Phone Number	City	State
Great Northern Fibers	516-491-3041	Wheatley Heights	NY
Arrow Scrap Corporation	631-451-6222	Yaphank	NY

Company Name	Phone Number	City	State
Brookhaven Waste Management Division	917-364-6232	Greenlawn	NY
Castle Ink Cartridges	631-567-2727	Holbrook	NY
Crestwood Metals	631-643-7940	West Babylon	NY
Great Northern Fibers	631-277-4283	Bohemia	NY
e-Green Recycling Management, LLC	631-348-8801	Islandia	NY
e-Scrap Destruction, LLC	631-234-7362 X11	Hauppauge	NY
E-Solutions USA, LLC	631-567-2727	Holbrook	NY
ecoTech Management	631-368-5533	Kings Park	NY
Leteri Waste Management	631-694-1694	West Babylon	NY
Omni Recycling of Babylon	631-732-6403	Coram	NY
PK Metals	631-586-0333	Bay Shore	NY
PSC Environmental Services	631-244-0051	Bohemia	NY
Relampit: Projector Bulb Recycling Program	631-269-6600	Kings Park	NY
Smithtown Municipal Services Facility	631-734-7685	Cutchogue	NY
Southold Town Solid Waste District	631-269-0800	Kings Park	NY
USA Environmental Resource Management Services, Inc.	516-491-3041	Wheatley Heights	NY

Table 3-9
Plastics Recycling Processors in Suffolk County

Company Name	Phone Number	City	State
Brookhaven Recycling & Waste, Inc.	631-475-4788	Coram	NY
Brookhaven Waste Management Division	631-451-6222	Yaphank	NY
East Hampton Recycling	631-324-7191	East Hampton	NY
Gardiner Plastics, Inc.	631-928-9098	Port Jefferson	NY
Gianco Environmental Services, Inc.	631-952-9900	Brentwood	NY
Island Recycling Solutions, LLC	631-702-2770	Bay Shore	NY
Leteri Waste Management	631-368-5533	Kings Park	NY
Omni Recycling of Babylon	631-694-1694	West Babylon	NY
Paragon Recycling and Transfer Corporation	631-249-1639	West Babylon	NY
PK Metals	631-732-6403	Coram	NY
Pure Tech Plastics, Inc.	631-755-1124	East Farmingdale	NY
Recommunity Recycling	631-286-4971	Brookhaven	NY
Smithtown Municipal Services Facility	631-269-6600	Kings Park	NY
Southold Town Solid Waste District	631-734-7685	Cutchogue	NY
Universal Composites, Inc.	631-969-1050	Bay Shore	NY

Company Name	Phone Number	City	State
USA Environmental Resource Management Services, Inc.	631-269-0800	Kings Park	NY

Table 3-10
Food Waste Processors in New York State

Company Name	Phone Number	City	State
Action Carting Environmental Services	973-623-7600	New York	NY
AquaTerraSys	978-430-4977	Bolton Landing	NY
Cayuga Compost	607-387-6826	Trumansburg	NY
Cornell University Farm Services Compost Facility	607-423-6145	Ithaca	NY
Delaware County Solid Waste Division	607-746-2128	Walton	NY
Lardon Construction Corporation Organic Management	716-822-4642	Blasdell	NY
McEnroe Organic Farm Associates, LLC	518-789-3252	Millerton	NY
Misty Hills Farm, LLC	518-279-3886	Troy	NY
Mother Natures Farms	845-225-7763	Carmel	NY
New York Biomass Trader	917-238-6218	New York	NY
Outstanding Renewal Enterprises, Inc.	212-477-4022	New York	NY
Valley View Organics, Inc.	917-226-1313	Putnam Valley	NY
Baskin Livestock	585-344-4452	Batavia	NY
Guptill Family Farm/Toad Hollow Farms	315-345-5451	Nedrow	NY
New York Biomass Trader	917-238-6218	New York	NY
Postma Brothers Farm	315-698-9342	New Berlin	NY

Table 3-11
Reuseable/Salvageable Remanufactuers in New York State

Company Name	Phone Number	City	State
ALPCO Recycling, Inc.	315-986-8900	Macedon	NY
American Recycling & Manufacturing Co., Inc. (ARM)	585-235-2210	Rochester	NY
ASI Systems Integration	516-488-1388	New Hyde Park	NY
Asset Management & Control, Inc.	845-236-6650	Marlborough	NY
Barn Shadow Enterprises	585-593-5075	Wellsville	NY
Bigwood, LLC	585-374-2699	Naples	NY
Brooklyn Flea	347-596-9614	Brooklyn	NY
Brooklyn Flea	347-596-9614	Brooklyn	NY
Bruin Computer Trading & Recycling	315-410-0050	Liverpool	NY

Company Name	Phone Number	City	State
CFY	404-367-9990	New York	NY
City Beautiful Carpentry	917-679-3572	Brooklyn	NY
Cornerstone Salvage Company	917-497-0584	Brooklyn	NY
Country Road Associates, LTD	845-677-6041	Holmes	NY
Davies Office Refurbishing, Inc.	518-449-2040	Albany	NY
Drum Service of Richmond, Inc.	718-494-0255	Staten Island	NY
eco | International	607-321-2079 X327	Vestal	NY
ecoTech Management	631-567-2727	Holbrook	NY
eWorks	516-992-4000	Brookville	NY
GE Elfun Computer Rehab of Schenectady, Inc.	518-385-9606	Schenectady	NY
Green Office Systems	718-418-1717	Brooklyn	NY
IFCO Systems North America, Inc.	518-861-5410	Albany	NY
IT Asset Management Group (ITAMG)	516-681-3550	Plainview	NY
J.M. Murray Center	607-756-8070 X1345	Cortland	NY
J.M. Murray Center	607-756-8070 X1345	Cortland	NY
Levanna Restoration Lumber	315-252-6817	Auburn	NY
Michael McHale Designs	347-688-0070	New York	NY
New Energy Works Timber Framers	585-924-3860	Farmington	NY
NextWorth Solutions, Inc.	978-374-6398	Varies	NY
NextWorth Solutions, Inc.	978-374-6398	New York	NY
Northeast Surplus and Materials, LLC	315-476-4025	Syracuse	NY
Olde Good Things	212-989-8401	New York	NY
Ombligo, Inc.	718-384-0792	Brooklyn	NY
Ongweoweh Corp	607-266-7070	Ithaca	NY
Pallet Exchange, Inc.	716-823-2400	Buffalo	NY
Per Scholas, Inc	718-772-0654	Bronx	NY
PICS Telecom International	585-295-2000	Rochester	NY
Pioneer Millworks	800-951-9663	Farmington	NY
Power Pallet Incorporated	518-843-3100	Amsterdam	NY
Product Research Company, Inc.	607-729-6251	Binghamton	NY
Recycle Pink	914-226-8888	Yonkers	NY
Recycle Tech Solutions	315-635-5330	Rome	NY
Recycle-A-Bicycle	718-858-2972	Brooklyn	NY
Recycle-A-Bicycle	212-475-1655	New York	NY
Recycling Electronics and Computer Technologies, Inc. (REACT)	607-739-8401	Horseheads	NY
Redemtech	800-743-3499	Bronx	NY
RePlayGround	347-885-9368	Brooklyn	NY
Restoration Timber	877-980-9663	New York	NY

Company Name	Phone Number	City	State
Scout & Gather	347-961-8491	Brooklyn	NY
SilverFox Salvage	518-256-3955	Albany	NY
SunnKing, Inc.	585-637-8365	Brockport	NY
SunnKing, Inc.	585-637-9180	Brockport	NY
Sustainable Office Solutions	315-579-7283	Liverpool	NY
Tech Valley Recycling	518-877-9800	Clifton Park	NY
Tekovery, Inc.	914-226-8322	Yonkers	NY
The Hudson Company	845-848-3040	Pine Plains	NY
The Hudson Company	212-981-4559	Brooklyn	NY
TMRnyc (Total Metal Resource, Inc.)	718-384-7818	Brooklyn	NY
Uhuru Design	718-855-6519	Brooklyn	NY
VarData, Inc.	585-321-1950 X106	Rochester	NY
WeRecycle, LLC	914-530-2350	Mount Vernon	NY
Westchester PC-Renew	914-946-5511 X2	White Plains	NY
Xerox Corporation	585-422-0626	Webster	NY

3.3.3 Market Development Restrictions

Markets for recyclable materials continue to expand and increase as technological advances increase the outlets for materials such as Plastics #3-#7 and composted Source-Separated Organic Waste. The Town can do little to enhance these markets on their own, but will continue to expand its programs, adjusting collection efforts by monitoring current market trends. The past few years have seen significant advances and changes in the markets, and as this plan will remain in effect until the year 2026, it is anticipated that by that time, current challenges will have been met, and new challenges will exist.

3.4 Public Education Programs

The Town of Huntington Waste Management Department conducts comprehensive public education programs as part of their mission. Education programs are constantly re-evaluated, revised, and expanded as needs arise. This LSWMP contains numerous references to the programs; this information can be found within descriptions of waste handling program overview discussed in Sections 3.1-3, Section 5, and the

implementation activities described in Section 6 and Section 7. Samples of public materials are included as appendices within Volume II.

As of the year 2017, following is a summary of the major public education initiatives currently underway. Refer to Section 7 for future expansion plans:

- Provide tours of the Recycling Center for community groups
- Provide tours of the Covanta RRF for community groups
- Provide tours of the WWTP for community groups
- Host annual Earth Day festival educating families regarding recycling, e-waste, solar power, document shredding, book swaps, arbor plantings, maritime touch tank and marine life information
- Daily on demand solid waste and recycling phone support via the Sanitation Hotline
- Extensive environmental information and education on Town of Huntington website
- On demand investigation of solid waste violations via field inspections and in person instruction from Sanitation Inspectors
- Host educational slides and videos regarding solid waste, yardwaste, e-waste and recycling on Town cable channel
- Direct mailing of 28 page annual Refuse and Recycling Calendar to all residential households within the Town
- Attend seminars for community groups to discuss overview of Towns Solid Waste Management Plan

4.1 Estimates of Future Solid Waste Generation

A simplified projection of future quantities of solid waste generation in the Town was calculated by multiplying the projected population of the Town by the waste generation rates calculated from the information provided in Section 2. Any per capita rates provided in Table 2-13 have been repeated below. This projection would apply if the current per capita rates continued to remain constant, though it is the goal of the Town of Huntington to reduce the current generation rates and increase material diversion rates. This simplified projection is provided in Table No. 4-1 below.

Table 4-1
Estimated Future Waste Generation

Year	2013	2016	2020	2025	2030
Projected Total Town Population	203,447	205,300	207,900	212,100	215,400
	Generation Rate (lbs/ person/ day)	**Estimated Generated Tonnage**			
Residential MSW[1]	2.14	80,180	81,195	82,836	84,124
CII MSW	2.77	103,784	105,099	107,222	108,890
Total MSW	4.91	183,964	186,294	190,058	193,015
Organics[1]	1.41	52,829	53,498	54,579	55,428
C&D	2.65	99,288	100,546	102,577	104,173
Non-Hazardous Industrial Waste	0.05	1,873	1,897	1,935	1,966
Estimated Total Waste Generation	**9.02**	**337,955**	**342,235**	**349,148**	**354,581**

Year	2013	2016	2020	2025	2030
Materials Diverted					
MSW Recyclables[2]	0.52	19,599	19,847	20,248	20,563
CII Recyclables[2]	1.45	54,361	55,049	56,161	57,035
Organics[2]	0.54	20,296	20,553	20,968	21,295
C&D[2]	0.84	31,472	31,871	32,515	33,021
Non-Hazardous Industrial Waste[3]	0.02	598	605	618	627
Total Diverted	**3.37**	**126,326**	**127,926**	**130,510**	**132,541**
Net Waste Generation[4]	**5.65**	**211,628**	**214,309**	**218,638**	**222,040**

Note(1): The rates presented in Table 2-13 have been adjusted to reflect that the organic waste estimate was derived out of the total Residential MSW rate.

Note(2): Rates calculated based on information presented in Section 2.2.6, Section 2.4 and Section 3

Note(3): In keeping with non-hazardous industrial waste data presented in Beyond Waste, these numbers assume a recycling rate of 30% for this waste stream

Note(4): A more detailed version of this table and these projected rates is included in Section 7. The more detailed version is composed of three different tables looking at various aspects of the waste stream, and presented in accordance with recommendations of Beyond Waste.

As shown in Table 4-1 from Section 1 of the document, the Town's population has not grown significantly in 40 years and furthermore is not projected to increase very much in the next 10 years. Accordingly, it appears that the generation of solid waste in the Town of Huntington has plateaued and will not increase significantly over the next 10 year planning period much above the quantities of waste generated today. Furthermore, we are cautiously optimistic that waste generation quantities may actually decrease to lower amounts then those shown in Table 4-1 due to advances in recycling, product stewardship, and waste reduction programs. For a more detailed view of what future waste generation and recovery rates could look like, please refer Sections 6 & 7 as specific steps to design and implement programmatic changes to create projected increases in recovery rates are further discussed. Included in Section 7 is table extracted from an application of the NYSDEC Combined Composition and Projection Analysis model to the Town's waste streams to further demonstrate the Town's recovery goals.

4.2 Anticipated Changes to the Planning Unit

4.2.1 Expected Residential Development

The Town of Huntington is largely built-out, and has very little vacant residential land. According to the Huntington 2020 Comprehensive Plan Update, adopted in December 2008, preserving the character of single-family residential neighborhoods while allowing for some redevelopment of high-density residential developments along commercial corridors or in unincorporated hamlet centers is a future goal of the Town. However, the population attracted by any new residential developments would represent only a fractional increase to Huntington's existing residential population. It is likely increases in the amount of residential municipal solid waste generated could be offset by increased recycling rates due to the Town's switch to single-stream recycling, and by continuing the Waste Management Division's comprehensive public outreach programs.

A preliminary map of planned future development is provided in Section 4.2.4

4.2.2 Proposed Commercial Development

As with residential development, the Town of Huntington's commercially zoned properties are largely developed. According to the Huntington Comprehensive Plan Update, what little vacant parcels exist are likely classified as such temporarily while awaiting redevelopment. The only major changes to commercially zoned land may occur along Jericho Turnpike, where several prior retail developments have become obsolete and are currently under-utilized or out of service altogether. To further the goals for a "Sustainable Huntington" as outlined in the 2020 Plan, it is likely these sites may become developed in a mixed use manner or perhaps become sites for dense residential developments, in order to preserve the traditional character of Huntington's single family neighborhoods and downtown business districts.

Of concern also are major regional development initiatives in neighboring Towns which may negatively impact existing retail uses within the Town of Huntington. As

such, no significant increases, or changes in waste composition, to the commercial waste stream are anticipated.

A preliminary map of planned future development is provided in Section 4.2.4

4.2.3 Planned Industrial Development

The most potential to increase industrial development exists along the Melville Employment Corridor[1], primarily situated along New York State Route 110. New industrial development is anticipated to be in the technology or biomedical sectors, lending to the creation of jobs that will attract either highly educated and/or highly skilled residents to the area. However, the capacity for increased development is limited by the amount of available vacant land. The Town will monitor any new industrial businesses that arise in order to maximize further solid waste reduction, reuse and recycling opportunities.

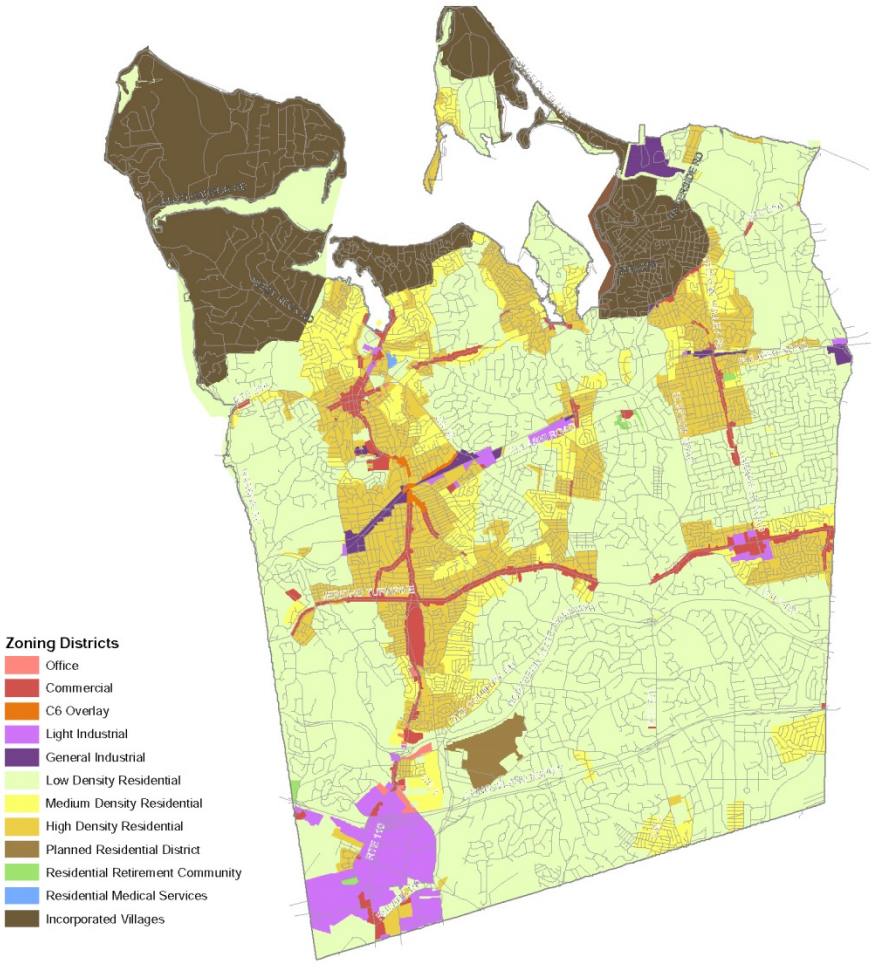
Note (1): The Town of Huntington completed and formally adopted its Horizons 2020 Comprehensive Plan Update in December 2008. This is the source for much of the future development patterns discussed herein.

4.2.4 Special Conditions that may affect any of these characteristics

The Town of Huntington Town Board has made sustainability a priority. As such, approaches to residential, commercial, and industrial development may change in the future. Illustrated below are generalized existing and future zoning maps for the Town which demonstrate some of the planning changes will which serve to increase opportunities for pedestrian and mass transit use, while reducing reliance on automobiles. As the Town works to decrease its carbon footprint and combat climate change through progressive zoning codes changes and development regulations, it is anticipated that opportunities to decrease municipal solid waste and increase recycling rates will also arise.

Figure 4-1

Figure 6.2 Generalized Existing Zoning

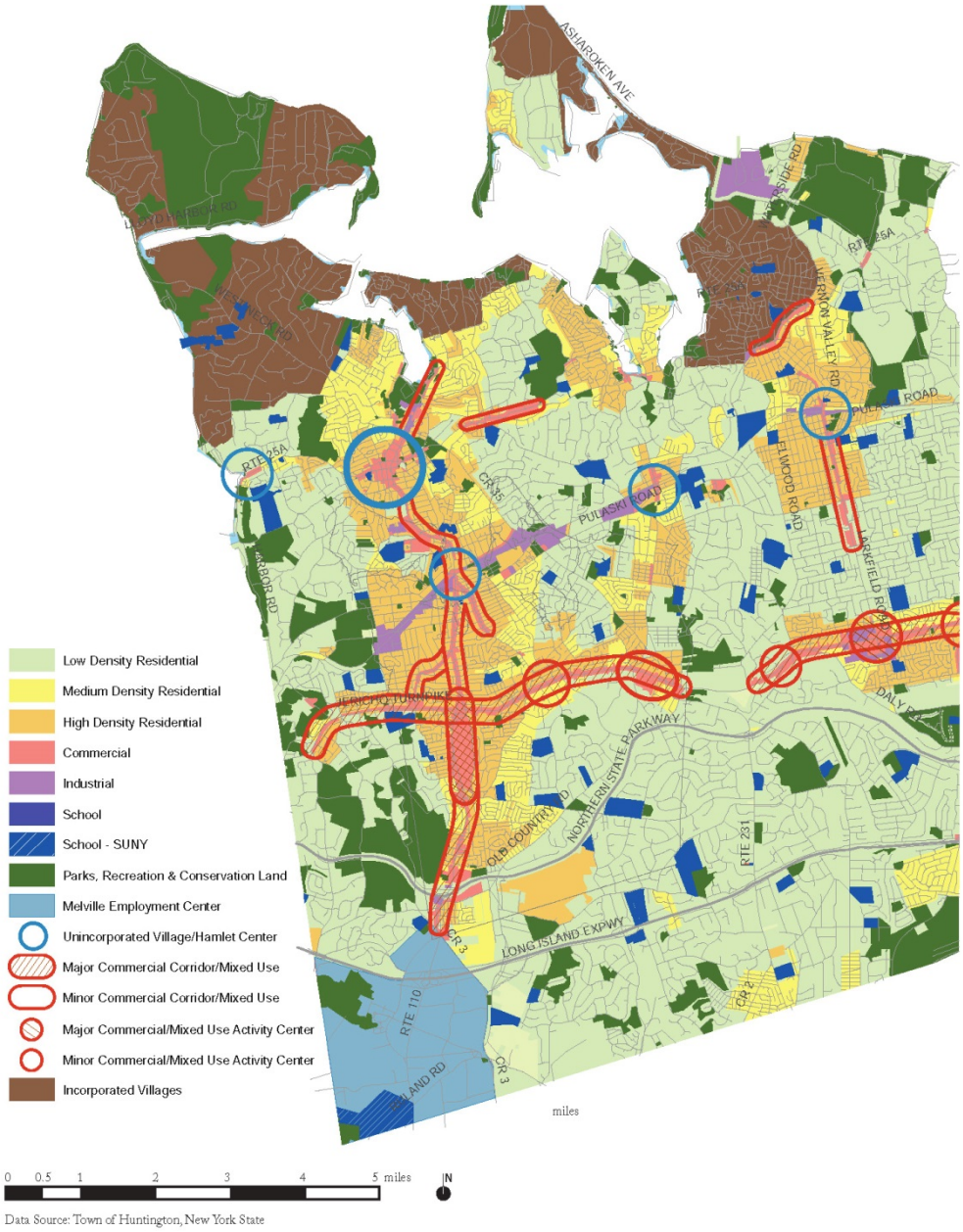


Data Source: Town of Huntington, New York State

Map Source: Horizons 2020 Huntington Comprehensive Plan Update

Figure 4-2

Figure 6.3 Generalized Future Land Use



Data Source: Town of Huntington, New York State

Map Source: Horizons 2020 Huntington Comprehensive Plan Update

4.3 Anticipated Changes to the Waste Stream in the Local Planning Unit

The Department of Environmental Waste Management seeks constantly to "explore and create new programs in recycling, waste reduction or removal, and wastewater treatment programs". The Department's mission statement includes several goals related to the reduction of waste and protection of the Town's natural resources. As the Department works daily to "further the Town's strategic goals of implementing energy efficient programs, provide *(sic)* education and …further *(sic)* the Town's mission of fostering a sustainable Huntington", it is anticipated that over the next ten (10) years of the planning period that the Town will take advantage of newly developing solid waste technologies to cost-effectively reduce the per capita waste generation rates of its population.

4.3.1 Products in use today, and how they will be disposed of in the future

During the next twelve (12) year planning period, it is estimated that newspaper and office paper tonnages will continue to diminish as more people come to use E-News and Email services. The advent of public steward ship programs, such as for E-Waste, should serve to pull these wastes out of a municipality's management responsibility as they now are currently. Because there are no available quantitative estimates for the effects of such changes, no modifications were made to the waste composition estimates (as was the case in the NYSDEC Solid Waste Plan "Beyond Waste"). The Town is also interested in exploring programs to reduce the amount of organics in the waste stream.

4.3.2 Effects of Product Stewardship on the waste stream

The Town is interested in participating in the New York Product Stewardship Council. They have expressed interest on finding local ways to encourage paint recycling. Additional efforts to encourage local manufacturers to abide by the principles of product stewardship are discussed in Sections 6 & 7.

4.3.3 Anticipated Effects of the Changes on the Current and Proposed Management Practices of the Planning Unit

No significant changes in the existing management practices are anticipated. The Environmental Waste Management Department is staffed by proven professional solid waste professionals certified by the Suffolk County Department of Civil Service. They currently operate a viable solid waste and recycling system for Town residents that has received numerous accolades. Presently, Environmental Waste Management is a town department with over 60 employees, overseen by the Huntington Town Board, which is composed of elected officials. The Department consists of the following operational elements: the Administrative Division (program oversight – 7 employees), the Resource Recovery Facility (3 employees), the Consolidated Refuse District (waste and recycling collection – 48 employees), the capped and closed East Northport Landfill, the Town of Huntington Recycling Center (7 employees), and Smithtown's Cell 6 Facility. Additionally, the Department of Public Safety employs trained professionals to enforce litter ordinances, investigate hazardous materials spills, and handle clean-ups of private properties found to be in violation of property maintenance codes.

5.1 Storage, Treatment and Disposal of Residual Municipal Solid Waste

Currently in the Town of Huntington, Municipal Solid Waste (MSW) is collected from residences in the unincorporated areas of the Town in the solid waste collection districts by private carters under contract with the Town and hauled directly to the Huntington Resource Recovery Facility (HRRF). Residential MSW generated within incorporated villages is hauled to the HRRF under separate Village contracts.

The Town does not currently have an active role in the collection or disposal of the majority of commercial or industrial MSW generated, with the exception of the collection and disposal within the collection district which covers the older areas of the downtown Huntington and Huntington Station Business Improvement Districts (BIDs), which the Town collects using municipal staff. Private businesses throughout the Town currently contract independently for all waste collection. Private carters have the option of using the HRRF, and because of geographic proximity, many do, but there are other disposal options available to them, such as Covanta Resource Recovery Facilities in West Babylon and Hempstead, NY and other privately owned solid waste transfer stations.

The HRRF became operational late in 1991, with Ogden Martin Systems responsible for all operations. Since then, the agreement has been formally amended seven times over the years, ensuring that the Town's solid waste needs would continue to be met for the long term. At this time, Huntington has executed Amendment No. 6 to this agreement, effective October 28, 2012 through November 30, 2019. The current agreement is with Covanta (formerly known as Ogden Martin Systems), as the corporate name changed circa 2001. At the end of this initial period, the Towns have the option to extend the service agreement up to the year 2024, at which point the facility would revert to a private merchant operation. However, the Town of Huntington owns the land which the facility is situated, and that lease agreement can currently be extended up to the year 2034, this, among other factors detailed below, support the Town's understanding that the HRRF may continue to be their primary means of MSW disposal at minimum through the end of the planning period in 2026.

The HRRF currently consistently runs close to 100% capacity almost every day of the year. Whether the Covanta agreement with the Town of Huntington was in force or not, it would be to their advantage to keep the plant running at this capacity in order to ensure optimal

energy generation. The Town of Huntington is by far the largest customer within close geographic proximity to the plant. As such, it is anticipated the Town may continue to receive competitive disposal rates even when the facility goes merchant in 2024. If it indeed continues to be cost-effective, use of the HRRF as a primary means of disposal will continue. However, this Plan outlines a number of alternative strategies, including construction of a Town-owned transfer station, waste prevention and increased recovery of various materials, to ensure that the Town's solid waste needs will continue to be met.

Due to the long term contractual commitment by both parties for MSW incineration, an evaluation of alternative technologies to evaluate other primary disposal methods for municipal solid waste has not been studied in-depth. The Town, however, has a number of initiatives under their "Sustainable Huntington" program that may serve to reduce the amount of MSW generated in the future. The Town also will be continuing to rely on and expand upon existing public education and recycling initiatives. Additionally, the Town has elected to reference NYSDEC's "Generic Technology Assessment for Solid Waste Management" (available on NYSDEC's website) as a means of addressing alternative technologies for solid waste disposal. All of these options are presented in the remainder of Section 5.

5.1.1 Sizing and Available Capacity of Solid Waste Management Facilities

The Town's major solid waste facility, as discussed throughout this plan, is the Covanta-owned-and-operated Resource Recovery Facility. The waste pit at the facility can accommodate 4000-5000 tons of MSW at a time, while the tipping hall has a capacity to store an additional seven (7) days' worth of solid waste received. While Huntington is its primary customer, the Town of Smithtown is a major utilizer of the facility, and the facility does accept spot market waste and has a number of additional private disposal agreements. While Covanta and the Town have considered adding additional processing equipment into the existing building's footprint, their cost-benefit analysis of this option does not foresee the need for additional capacity through the end of this ten-year planning period. The facility is sized appropriately for the waste generated by all potentially realistic clients.

As indicated in Section 3, the Town does not process its recyclables, yard waste, or construction and demolition debris. All of these activities are contracted out. As such, the Town does not have an active role in managing the capacities of facilities that

process these waste streams. They do, however, take an active role in providing programs to manage and reduce various types of waste, and increase recycling rates. These programs should serve to ensure the amounts of waste generated do not significantly increase beyond what the private market services available to them will be able to support. The specific possibilities of employing new technologies or programs are explored further in the remainder of this section.

5.1.2 Cost of Alternatives

As discussed above, until 2024, there will not be any significant change in the costs to dispose of MSW at the HRRF, and it is anticipated for the duration of this planning period ending in 2026, that the Town will continue to receive competitive disposal rates at the facility. Disposal rates for all other waste streams are determined by the cyclical procurement process for waste management contracts. At this time, it is not anticipated that there will be any major regional factors in the next ten years that will substantially increase these costs, and the Town is anticipating that various new initiatives will curb growth of these waste streams.

A general cost-benefit analysis is included in the discussion of alternative technologies and programs that follow. The implementation plan in Section 7 will provide a timeframe for feasibility studies, including specific cost-benefit analyses, for any new options that the Town considers practical to pursue.

5.1.3 Existing Waste-to-Energy Technology

As discussed previously, MSW is combusted at the Huntington RRF and the heat generated is used to produce electricity. The combustion process reduces the weight of waste by up to 75 percent and the volume of waste by approximately 90 percent before disposing of the ash. In 2014, the Huntington RRF processed an average of 960 tons per day of Municipal Solid Waste, and exported 190,000 MWH of electric. The Town of Huntington's waste represents a little over one third of waste received. Waste generated within the Town of Smithtown, under the MCA described in Section 3, is slightly less than one third of waste received, and the remainder of waste received is either from private agreements or spot markets.

In addition to diversion of MSW from landfills and the revenue from electrical generation, waste-to-energy (WTE) has several environmental benefits. These benefits include reduction of greenhouse gases, recovery of ferrous and non-ferrous metals, and enhanced detection systems for unauthorized waste such as large e-waste items and radioactive material.

The WTE process produces a fraction of the greenhouse gases, such as methane (CH4) and carbon dioxide (CO2), associated with landfilling. WTE also avoids greenhouse gas emissions produced by the combustion of fossil fuels to generate electricity. By recovering ferrous and non-ferrous metals from waste, WTE reduces greenhouse gases produced from the production of the metals from raw materials. When compared to coal as a power source, WTE produces electricity at a net emission rate of negative 3,636 lbs. of CO2/MWh. In other words, on a lifecycle basis, for every ton of MSW burned at a WTE plant, approximately one ton of CO2 equivalent is reduced through reducing the use of coal.

The USEPA has recognized the benefits of WTE, indicating its preference for WTE over landfills in its Solid Waste Management Hierarchy. The New York State Energy Law Section 1-103(12) classifies "wastes" in the definition of a renewable energy resource. In addition, Section 27-0403 of the New York State Environmental Conservation Law found and declared that "development and implementation of local programs to conserve energy through sound solid waste management efforts can be of broad benefit to the state" and that "through utilization of resource reuse and other programs, primary raw materials can be conserved, energy savings can be gained, the amount of waste disposed of in landfills can be reduced, and, through proper management of the waste stream, improved operations at waste-to-energy facilities may be realized." In May 2010, Florida passed similar legislation that promotes the use of WTE.

As of December 2013, 31 states, the District of Columbia and two territories define MSW, when diverted to a WTE facility for energy recovery, as a renewable energy source. These states are listed in the Energy Recovery Council Fact Sheet for WTE and State Renewable Statues provided in Appendix Q. Similarly, the following regulations also recognize WTE as a renewable source of energy:

- Federal Power Act;
- Public Utility Regulatory Policy Act (PURPA);

- Biomass Research and Development Act of 2000;
- Pacific Northwest Power Planning and Conservation Act;
- Internal Revenue Code;
- Energy Policy Act of 2005;
- Executive Order 13123; and
- Federal Energy Regulatory Commission.

5.1.4 Environmental, Economic and Social Impacts of Technology

The Town of Huntington's existing solid waste management system offers an integrated solid waste system in compliance with New York State regulations and policies. The majority of their MSW that is not recycled or otherwise recovered is converted to renewable energy through combustion of the waste at the Huntington Resource Recovery Facility (HRRF). Metals recovered from the bottom ash are reclaimed and transported to metal recyclers. The residual ash is then transported to the Town of Brookhaven where much of it is used as daily cover material under a Beneficial Use Determination (BUD).

The plant is heavily regulated by NYSDEC, and its air emissions per unit of energy produced are much less than fossil fuel plants. The plant is managed daily in an ideal manner, and as such, they receive little, if any, complaints from plant neighbors. As the Town of Smithtown is a key partner, sharing in the original construction costs and continuing to pay disposal fees which support annual operations, the arrangement is an example of regional governmental partnership creating efficiency by combining needs through shared resources. Additionally, many of the carters who service Huntington residents and businesses use the CNG fueling facility located at the Smithtown

Their progressive recycling programs reduce environmental impacts of waste generated, while providing a funding stream to offset some of the costs of their waste management programs. In recent years with a switch to single-stream recycling, this revenue has seen a decrease, but the Town anticipates that a combination of collection bid specification modifications and possible program changes will reverse the downward trend.

Additionally, Covanta funds a NYSDEC Environmental Monitor position in the HRRF, and as such, a NYSDEC Environment Engineer is on-site regularly monitoring compliance with environmental regulations.

When evaluating alternative technologies and/or programs, the Town is keenly aware of its unique geographical and socio-economic position. As with other Towns in Nassau and Suffolk Counties, they are located on Long Island, which is geographically isolated from the remainder of New York State. The Island is densely populated, faced with high land values, and situated over a Federal designated sole-source aquifer, the region's only source of drinking water. Its developed land is located in close proximity to very sensitive estuarine ecosystems that play a key role in the environmental sustainability and food sources of the entire eastern seaboard of the United States. As such, there are significant financial, social, and economic barriers to the implementation of alternative waste management systems, and a detailed feasibility analysis of each technology would be beyond the scope of this Solid Waste Management Plan. However, the Town is eager to explore regional partnerships and solutions, and as such, they will include feasibility studies on a few new initiatives in Section 7.

General potential environmental, economic and/or social impacts will be included in the discussion of alternative technologies and programs that follow and further analysis of these issues would be performed prior to making the decision to pursue many of these activities. The implementation plan in Section 7 will provide a timeframe for feasibility studies, specific cost-benefit analyses and environmental review for initiatives that the Town chooses to pursue based on those further studies.

5.1.5 Impacts of Existing System on Neighboring Jurisdictions

The Town is bordered by Nassau County (Town of Oyster Bay) on the west, the Long Island Sound on the north, Town of Babylon to the south, and the Towns of Smithtown and Islip on its eastern boundary line. Besides the residential MSW which is processed within the Town boundaries at the HRRF, industrially and commercially generated MSW is collected by private carters and transferred out of the Town for processing, resulting in minor air, noise, odor and traffic impacts generated by the collection trucks. However, as Huntington's percentage of waste processed in these facilities is relatively

small, the overall contribution of these impacts into the locales of the facilities is likewise insignificant.

Historically, yard waste and C&D waste streams are transferred almost entirely out of the Town for processing, and hence, the associated nuisance impacts such as truck emissions, noise, odor and increased traffic adjacent to the processing facilities (i.e. at the neighboring Town of Smithtown's Municipal Services Facility) have a some impacts on area residents, but again, Huntington's share of these impacts is relatively minor compared to the totality of waste processed at various facilities. In addition, the Town of Smithtown benefits from Huntington's hosting of the RRF within its boundaries. Overall, Smithtown residents experience less environmental and social impacts from the processing of municipal yard waste and C&D from both Towns within their borders, than they would if MSW was also processed and/or disposed within their borders. With the exception of a minor amount of emissions and truck traffic that overflows into the Town from the HRRF, Smithtown residents suffer very little environmental or social impacts associated with MSW processing.

Lastly, a solid working relationship between the waste management departments of Smithtown, Huntington, and Brookhaven has arisen as a result of the regional co-operation relating to the HRRF. This partnership forms a foundation to explore possible future regional initiatives.

5.1.6 Available Capacity of Planning Unit

Please refer to Section 5.1.1 Sizing and Available Capacity of Solid Waste Management Facilities.

5.1.7 Contractual Requirements to Access Capacity

Please refer to Section 5.1.1 Sizing and Available Capacity of Solid Waste Management Facilities.

5.1.8 Impacts on Recyclables Recovery Efforts

As a result of the existing program processes all residential MSW, and a substantial portion of the commercial and industrial MSW to the HRRF, the Town has more control over recyclables recovery, as incoming garbage loads are monitored and inspected by Town personnel. Permitted hauler information is on file so direct contact and/or fines/summonses can be made in case of non-compliance. Thus, the Town's existing waste management system helps to support their progressive recovery rates.

5.1.9 Cost Analysis of Existing Solid Waste System

5.1.9.1 Estimated Costs for MSW & Recyclables Collection

The Town provides collection services for residential waste and recyclables generated within the Consolidated Refuse District, described in detail in Section 1. In addition to municipal routes that service approximately 12,500 residential and 1,100 commercial parcels, the Town has contracted for the collection of waste from about 44,688 homes with private carting companies who provide the collection services within this district. The Town's 2013 expenses for collection services was $19,409,262

5.1.9.2 Estimated Costs for MSW Disposal

The Town's 2013 expense for disposal services at the HRRF was $18,405,026. This figure represents the tipping fees paid to deliver waste collected by the Town as described in Section 5.1.9.1. This expense is offset by revenues associated with the HRRF and the Town's partnership with Smithtown in the amount of $21,650,039.

5.1.9.3 Estimated Costs for Recyclables Processing

The Town's costs for Solid Waste Recycling in 2013 was $512,745, which represents costs to operate the New York Avenue drop-off site and curbside collection of residential recyclables. The Town earned $622,165 in revenues for the sale of recycled materials in 2013. As of 2015, when the Town transitioned to single stream recyclables collection, this funding stream as decreased to approximately $67,000. Though the program no longer "pays for itself", it is important to note that for every ton of recyclables that is diverted from the HRRF, the Town avoids disposal costs of $80/ton. As such, encouraging recycling is financially advantageous for the Town.

5.1.9.4 Estimated Costs for Administration

The Town spent approximately $778,390 to cover the administrative expenses for the operation of the Town's solid waste and recycling programs. The majority of Huntington's waste management operations are managed leanly, with a low percentage of the overall budget going towards overhead.

5.1.9.5 Summary of Costs

A summary of cost for Huntington's Residential Solid Waste Program for 2013 is presented below in Table 5-1:

Table 5-1 Solid Waste System Expenses(1)

Program Element	2013 Actual Costs (dollars)
Consolidated Refuse District	19,058,606
Resource Recovery	18,405,026
Smithtown Landfill Cell 6(2)	278,871
East Northport Landfill(3)	64,881
Recycling Center/HHW	512,745
Administrative Costs(4)	778,390
Biosolids Disposal Fees	508,087
Total Program Expenses	**39,606,606**

Note (1): Source – Town Environmental Waste Management Department 2015 Budget Summary

Note (2): Huntington's share of Closure Costs, Post-closure maintenance, and municipal services operations for C&D, yard waste, scrap metal and white good recycling at Town of Smithtown MSF

Note (3): Source – Town's Post Closure maintenance costs

Note (4): Some administrative costs reported in the table above are for management of the Town's sewage treatment programs and facilities, but a full accounting of the Town's liquid waste disposal system would be outside of the purview of this Plan.

Table 5-2 Solid Waste System Revenues[5]

Program Element	2013 Actual Costs (dollars)
HRRF Tipping fees[6]	6,931,410
HRRF Refuse District Tipping Fees[7]	7,936,649
Town of Smithtown RRF & Ash Fees[8]	6,656,160
Resource Recovery Penalty Fee	25,433
Revenues from Recyclable Materials[9]	622,165
Total Program Revenues[10]	**$22,171,817**

Note (5): Source – Town Environmental Waste Management Department 2015 Budget Summary

Note (6): This represents tipping fees for solid waste delivered to the HRRF that is collected from various sources not part of the Consolidated Refuse District, i.e. in-Town commercially-generated waste, waste generated by other municipalities but hauled by private carters, and spot market waste accepted as capacity permits.

Note (7): This is essentially an internal transfer of Consolidate Refuse District fees for MSW disposal collected via property tax to the HRRF.

Note (8): Summary of total revenues related to partnership with Smithtown

Note (9): Please refer to discussion of this revenue in Section 5.1.9.3.

Note (10): This analysis excludes a State Aid grant for the Household Hazardous Waste program, and includes the 2015 decrease in recycling revenues due to single stream collection. The Town applies for the HHW grant each year. If available, funds are typically awarded towards the end of each year.

5.1.9.6 Financing Mechanisms and Sustainability Analysis

The net cost of Huntington's current solid waste management system for the year 2013 was $16,257,769 (excluding expenses and revenues associated with the sewer districts), which it raises from public taxation of residents. This represents approximately 42% of the costs of solid waste management programs. The system also receives funding from the partnership with Smithtown equivalent to approximately 17% of the overall solid waste expenses (or alternatively, about one third of the revenue received related to solid waste).

The remaining 40% of solid waste program costs ($14,993,879) are funded by revenue that is directly related to the HRRF. As the facility is anticipated to revert to a private merchant operation by the year 2024, serious consideration to the re-structuring of the Town's current waste disposal and financing mechanisms is underway. While the facility is likely to remain a viable disposal option, it will be just that – an option. And though the Town will lose approximately $15 million in revenue if is no longer an operational partner, this loss will be offset by two key funding streams: 1) The Town will retain ownership of the land the HRRF is situated on, and hence there will be revenues associated with leasing of the land to Covanta, and 2) The Town will be free of the $18+/- million service fee it is currently obligated to pay Covanta.

Section 5.2 will consider alternatives to the existing waste management system, present a comparison of their fiscal, social and environmental impacts to the Town's current utilization on the HRRF, and position the Town for future achievement of waste reduction goals that would be compatible with the Solid Waste Management Plan of New York State. The Town will be pro-actively exploring various alternatives and partnerships to ensure the financial sustainability of their waste management programs.

5.2 Alternative Programs for Management of MSW

5.2.1 Transfer Station

The Town of Huntington is actively considering options for continued, cost-effective programs to meet its solid waste disposal needs in light of the HRRF moving to private merchant operation by the end of the LSWMP Planning period. These options include the potential construction of a transfer station, as well as others such as continuing use of the HRRF under different financial arrangements, which are discussed elsewhere within this section. The potential transfer station option is described in this section but the concept is subject to further study and cost-benefit analysis.

Primarily, a transfer station would be to enhance recycling programs as further described in Section 5.3.1. However, in light of the HRRF moving to private operation prior to the end of the current LSWM planning period, the Town would like a reliable mechanism under its control to meet the solid waste disposal needs of its residents, and provide a source of funding to replace lost revenues from the RRF. The Town would consider making this facility available to the neighboring Town of Smithtown, in light of the current partnership.

The construction cost of a facility of this nature would be a high one-time cost, but is typically less expensive than other types of MSW disposal facilities, as the majority of the facility is a warehouse-type building with physical features to allow efficient receipt, processing, and transfer of solid waste. Very little expensive processing equipment is required. Their administrative staff has the knowledge and expertise to oversee a facility of this type, and to put into place policies and procedures to support the daily operations of the facility. Should the Town decide to accept MSW at a transfer station, they would likely contract with a private entity for daily processing operations.

It is anticipated that with efficient operation, both the Town's solid waste and recyclables handling needs could be met with a building footprint of 20,000 square feet, cited on a minimum of 3+/- acres. An approximate construction cost for planning purposes of this facility is $5 million, not including any planning, engineering or land acquisition costs. Hypothetically, if this operation was built on extant Town property, and if the disposal costs per ton of MSW could be reduced by $20/ton (from the current $80+/ton) as a result of the operation, the Town would be looking at a possible annual

reduction of MSW disposal costs in the neighborhood of $2 million. Further combined with possible increases in revenue from the sales of recyclable material (refer to Section 5.3.1), the reduction in annual costs associated with a municipally-controlled transfer station has the potential re-coup the capital costs incurred from construction in less than ten years.

Typical possible impacts from transfer stations include traffic generation, processing noise, waste odors, and vector infestation. However, prior to making the decision to pursue construction of a transfer station, a detailed feasibility study would be conducted to determine an appropriate size and specific management practices to minimize detrimental effects on the environment, including air or water quality. The feasibility study would analyze, for example, the costs and benefits associated with different solid waste management alternatives when the engineering details of the potential transfer station have been further advanced.

Through proper SEQRA review examining the facility, the Town would endeavor to plan and execute the project to balance social, economic, and other considerations, thereby minimizing or avoiding environmental impacts. For example, a significant key consideration is the fossil fuel use and traffic impact of transporting all of the Town's MSW to a remote location for processing and/or disposal. As the cumulative effect of said transport, and the cost, will be greater depending on the distance, disposal options that minimize travel distances associated with these activities are anticipated to result in more favorable environmental outcomes. .

The disposal options that would likely be considered would be the Huntington RRF, the Covanta facilities at either Babylon or North Hempstead, existing WTE facilities within New York State, or as a last resort, MSW landfills located either in upstate New York or Pennsylvania. The Town is proud that its waste has been diverted from landfills for well over twenty years, and would not easily concede to transporting its waste to a landfill, but as all of the WTE facilities in close proximity are essentially operated by the same entity, it is logically difficult to consider these WTE facilities as distinct options. But by constructing a transfer station, the Town would have more flexibility to explore the best available options than it does at the present time.

To further evaluate the possibility of constructing a transfer station, the Town will be conducting a feasibility study to evaluate potential locations, construction costs,

operational costs, socio-environmental impacts and potential disposal locations. Refer to Sections 6 & 7 for additional information.

5.2.2 Flow Control

Various Towns within the State of New York have explored and adopted legislation to govern all solid waste generated within their borders. "Flow Control" legislation has faced numerous hurdles in both the State and Federal Court systems. In 1994, in *C&A Carbone v. Town of Clarkstown,* the U.S. Supreme Court struck down a flow control law in Clarkstown N.Y. as violation of the Dormant Commerce Clause, as the subject facility was privately owned. However, in 2007, in *United Haulers vs. Oneida-Herkime*r, the U.S Supreme Court ruled that when a waste disposal facility is owned by a government, that flow control ordinances requiring all waste generators within a political boundary to use the facility are valid, as the ordinance does not discriminate between in-state and out-of-state businesses. Several Towns in upstate New York subsequently adopted local laws modelled after the Oneida-Herkimer Solid Waste Authority.

Flow control legislation can provide a variety of benefits to a municipality. For one, it provides a stable stream of waste so that economies of scale can be applied to operational expenditures. Secondly, ordinances could be crafted in a manner that would allow the Town of Huntington to gather much more data on the various types and quantities of waste generated within its borders, so that solid waste planning efforts could be more effective. And finally, by setting a known disposal price and providing a reliable disposal method to private businesses, the CII sector would have both a greater incentive and a greater ability to find new ways to reduce and re-use waste.

In conjunction with the feasibility study which will examine the costs and benefits of constructing and operating a transfer station for MSW (discussed above in Section 5.2.1), the Town of Huntington will explore various means to finance the construction and operation. Various types of flow control legislation will be explored in the feasibility study. Additionally, The Town of Huntington could consider adoption of alternative types of flow control legislation in advance of the 2024 privatization of the RRF, to raise funds for the future implementation of an alternative waste management system. One flow control program to consider would be similar to that in use in the neighboring Town of Smithtown. Their program is modelled after the plan in Tulsa,

Oklahoma, which has instituted a waste generation fee structure for non-residential solid waste.

Any type of flow control legislation, however, should be enacted with careful consideration for the potential economic impact on the CII sector and potential tax revenue loss should CII sector disposal costs rise to a level that businesses leave the Town. The Town intends to carefully study advantages and disadvantages of different regulatory and/or fee structures as further described in Sections 6 & 7.

5.2.3 Landfill

In 1983, New York State passed the "Long Island Landfill Law" (ECL 27-0704). This law placed stringent restrictions on landfills located on Long Island, especially in the deep flow recharge area of the Island's Federally-designated sole-source aquifer, the region's only source of drinking water. As such, construction of a new landfill is not an option.

5.2.4 Construction of a new Town-owned Conventional WTE Facility

The benefits of a conventional waste-to-energy facility are clearly detailed throughout this plan, notably in Section 3 and Section 5.1. The Town has used this technology successfully as the major component of its waste management system, and will continue to do so until at least 2024 when the facility transfers to private merchant operation. Should the Town wish to continue to utilize this technology as the primary method of disposing of MSW, the Town will have three options: 1) negotiation of cost-effective rates that would allow the Town to continue to use the existing WTE facility, 2) purchasing the existing WTE facility under the timeframe that the current agreements with Covanta prescribes, or 3) construction of a new WTE facility that the Town would own and operate.

It is anticipated that Option 1 will be achievable, and as such, the other two options would not be necessary. Option 2 would not be ideal, because although it may be cost-effective in the short run, the Town would then inherent a 30-year old plant which

would face inevitable maintenance and operational issues that they would unlikely not be able to generate sufficient annual operating revenues to address. Option 3 would be prohibited by the cost.

5.2.5 Emerging MSW Conversion Technologies

In December 2010, New York State adopted *Beyond Waste: A Sustainable Materials Management Strategy for New York State*. The plan explored a variety of emerging technologies for converting waste to energy resources. The plan details the advantages and disadvantages of some of the major technologies. The most significant conclusion of the plan is that most of these technologies are not able to operate at the scale that a municipality the size of the Town of Huntington would require. However, as the Town may be interested in evaluating their potential for future use in reducing the amount of waste that requires disposal, two options are considered below:

5.2.5.1 Pyrolysis

Pyrolysis is a continuously emerging waste management technology that can be used to produce bio-fuel or synthetic fuel by recycling a variety of different types of wastes, for example bio-solids or plastics. Its advantage is that it produces a fuel that may in the future be able to replace many applications of fossil fuels, of which there is limited supply and considerable associated environmental impacts.

Pyrolysis is an endothermic process that requires a source of heat to initiate the thermal reactions. Pyrolysis systems typically use drums, kiln structures, or tubes which are externally heated in a closed system (in the absence of oxygen). Pyrolysis systems operate at a range of temperatures (750°F to 1,650°F), depending on the inputs and the desired byproducts. At higher temperatures syngas is produced and is potentially reusable as a combustion fuel or as a heat source for the pyrolytic process. At lower temperatures, liquids or oils (typically light hydrocarbons) are more readily produced.

For MSW applications, the initial challenge is the heterogeneity of MSW and associated pre-processing requirements. This technology would best be utilized in

municipalities who are source-separating organics, or are able to implement a separate plastics collection and sorting operations, as the quality of the fuel generated depends greatly on the quality of the inputs.

Pyrolysis plants themselves can also produce environmental impacts, such as higher emissions than conventional waste-to-energy facilities, and produce residual wastes which need to either be disposed of, or processed with an additional technology to further recover energy.

5.2.5.2 Plasma Gasification

Plasma Gasification is a thermal conversion process which reduces waste volume and produces energy without the stigma of mass burn technologies, i.e. incineration. While the technology faced numerous problems twenty to thirty years ago upon its inception, its ability to process waste with little greenhouse gas emissions and small percentage of residuals have helped to sustain interest and research. At present, the advances in the technologies are supporting the construction of two 50MW gasification facilities in Europe. According to the plants' manufacturer, Air Products, each plant will reliably produce enough energy to power close to 50,000 homes, and will divert 350,000 tons of MSW from the waste stream. While Europe is a substantially different socio-economic landscape than the United States, the plants have received community support.

The drawbacks for operations in the United States would be the cost of this technology relative to other options such as landfills and conventional WTE. Additionally, the plant consumes energy sources that may not be readily available or available in a cost-effective manner.

5.3 Alternative Programs for Recyclables, Organics, Waste Reduction and Reuse

For well over twenty years, The Town of Huntington has been actively exploring and implanting a variety of programs in an effort to reduce the amount of waste generated

within its borders and increase the amount of re-useable materials that can be recovered. The Town's current recycling efforts are detailed in Section 3.

However, especially because of the unique geographic, environmental and socio-economic conditions the Town faces, the Town has launched a "Sustainable Huntington" Initiative which seeks to implement new procedures, policies and programs which will help the Town conserve natural resources, reduce waste, and overall be part of the solution to the problem of climate change.

As such, the Town employees a Chief Sustainability Officer, and has created an Advisory Committee on Energy Efficiency, Renewables, and Sustainability (ACEERS). The Town has become an active participant in the New York State Climate Smart Communities Program that is sponsored by the New York State Energy Research and Development Authority (NYSERDA), and as such, the ACEERS functions as Huntington's Climate Smart Community (CSC) Task Force. In June 2015, the Town, supported by the Sustainability Institute at Molloy College, the Town produced a Climate Action Plan (CAP). The Plan is included as Appendix P, and referenced throughout the remainder of this document.

5.3.1 Alternative Recyclables Recovery Program Strategies Evaluation

Following please find a discussion of various programs and procedures evaluated for consideration by the Town to increase their recovery rates of recyclable materials.

5.3.1.1 Education and Outreach Strategies

The Town has a well-developed, user-friendly website which provides comprehensive information to residents and businesses to support recycling and re-use that is directly accessible from the home page. The Town's full-time Recycling Coordinator produces numerous brochures, a recycling calendar and printed materials for use both online and for distribution at government buildings throughout the Town. The Town also sponsors an annual Earth Day event and partners with public schools to promote re-use and recycling.

All of these existing communication streams can be used to ensure the public has access to information on any initiatives the Town chooses to implement. For example, the Town's Waste Management Division created the "All in One" campaign to roll-out the Town's new single stream curbside collection program. At present, this campaign as resulted in a modest increase in the residential recycling rate of 9%, but the Town intends to continuously improve marketing efforts of this program so as to further increase the rate.

The Town also has several different types of specialized committees, such as the Conservation Advisory Board and Town Park Stewards, which have regularly scheduled public meetings at which the public can learn about the Town's initiatives and provide feedback. The 2015 CAP also recommends several different new venues to promote "green" living and recycling at on pages 36-38. It is anticipated that any new methods of public outreach will be coordinated across several Town departments, led by the Town Board.

5.3.1.2 Recycling Transfer Station

The Town is actively considering the construction of a recycling transfer station that would primarily serve as a facility where the Town, and carters under contract for recyclables collection, could deposit recyclables which would then be sold the high bidders for various recoverable materials. Currently, the Town is facing a few challenges, which have contributed to a substantial decrease in their recycling revenues. Without these funds, future implementation of new recycling programs or progressive materials management programs could be hindered.

For example, current bid specifications for recycling haulers mandate they utilized trucks powered by Compressed Natural Gas (CNG). However, CNG fueling infrastructure in proximity to the Town of Huntington is limited, and the Town has an extended geography, essentially forcing carters to utilize a recycling transfer facility either within the Town or within approximately ten miles of the Town's borders. This is turn limits the Town to dealing with just one purveyor of recoverable materials. The limited competition does not encourage high bid prices on recyclables.

Should the Town construct its own transfer station, however, it would then be able to increase the amount of feasible competitive bidders on the combined recyclables, which would likely lead to increases in recycling revenues. Not including land acquisition costs, it is anticipated the cost of a 10,000 square foot transfer station would be roughly $2.5 million. If utilization of this transfer station restored the $500,000 of lost annual recycling revenues, the transfer station would pay for itself in approximately five years. Concurrent use of the transfer station for MSW operations as described in Section 5.2.1 would further increase the rate of return.

5.3.1.3 Enforcement Strategies

The Town currently has a progressive enforcement program for all residential, commercial and industrial properties that utilizes tablets and mobile technologies to stream line enforcement and prevent unauthorized waste from entering the waste stream. The Town also uses enforcement actions as an opportunity to educate offenders and prevent future violations. Appendix K provides copies of the educational public notices that are provided to residents and businesses.

The Town feels its enforcement efforts are ideal at this point. While the current enforcement by sanitation inspectors is largely complaint driven, they are able to capture a large of amount of non-conforming activities because of their mobile offices, which also have the capability to monitor sanitation pick-up trucks via Global Positioning Systems (GPS). Adding more staff to this effort so that the benefits of their enforcement programs could be expanded into more commercial and industrial areas is a potential area for improvement. However, given the New York State 2% Tax Cap, it is very difficult for municipalities to hire new employees in the current economic climate. As such, the Town will continue to explore and implement new mobile technologies and software as it becomes available to create efficiencies and expand enforcement.

5.3.1.4 Commercial Recycling Pickup Program

Currently, the Town provides for recycling pickup for residences and BID properties only, although under the authority of Town Code Section 117-24A. “all generators of commercial or industrial solid waste and residences not receiving curbside collection service shall separate from their non-recyclable waste those

recyclable items, as designated by the Director, for which economic markets exist". The Town, however, makes available a "recycling toolbox" to businesses and private enterprise which operate large-scale venues within the Town. This is a voluntary program which makes the Town's Recycling Coordinator available to businesses the help them develop custom recycling programs tailored to their needs.

As an extension of these existing efforts, the Town could consider reaching out to the professional organizations to help organize pick-up programs for their members, and devise incentives to encourage member businesses within the Town to participate. They could also help these organizations create surveys and other self-evaluation tools that would help both the Town and businesses understand the metrics associated with the potentially recoverable waste they generate. Some potential partnerships to explore could include the Huntington Chamber of Commerce, the Melville-East Farmingdale Chamber of Commerce, and/or the Long Island Association.

Another additional avenue to explore could be partnerships with Industrial Development Agencies (IDAs), such as the Suffolk IDA. These authorities specialize in economic development and often provide tax incentives to new businesses relocating to the region. As recycling programs have the potential to both reduce costs and create efficiencies, promoting Huntington's existing Waste Management business service programs to potential new businesses interested in participating in IDA programs may be mutually beneficial.

Any new programs such as these face regulatory hurdles and possible opposition from the business community. One strategy the Town could utilize is to create an incentive for businesses to self-report the contents of on-site containers utilized for recyclables as part of the fee structure for commercial carter licensing. Devising new voluntary methods to obtain recycling data on commercial and industrial properties within Town, while concurrently increasing the recycling rates in these sectors, will be the subject of some exploratory efforts.

5.3.1.5 Source Separation and Collection Strategies (i.e. Single-Stream and Dual-Stream Recycling Comparison)

There has been a recent nationwide trend to move residential recycling programs away from source separated and dual-stream recycling collection/processing to single-stream collection/processing. Single-stream recycling (also known as fully commingled recycling) refers to a system in which all paper fibers and containers are mixed together in a collection truck versus being separated into individual commodities (i.e., newspaper, cardboard, plastics, glass, etc.) or commingled into two streams (fibers and rigid containers). The move to single-stream recycling is believed to offer economic savings, especially for collection. However, it has also led to questions regarding the quality of the recovered materials (especially fibers) and the amount of residuals requiring disposal after processing.

Advantages - Proponents of single stream note several advantages:

- Reduced sorting effort by residents may mean more recyclables are placed at the curb and more residents may participate in recycling
- Reduced collection costs because collection could be automated, and collection may be more efficient (less partially-full trucks on routes) because more materials are being collected on each pass
- Reduced solid waste disposal costs as less recyclables are now left in the MSW waste stream
- Since participation requires less work by residents, volumes per household may increase.
- Worker injuries may decrease because the switch to single stream is often accompanied by a switch from bins to a semi-automated cart-based collection
- Changing to single stream may provide an opportunity to update the collection and processing system and to add new materials to the list of recyclables accepted; Commercial carters may be able to increase recycling efforts, as it may be possible to collect recyclables more economically due to greater weights of material being available at each stop, and because of the need for businesses to reduce the sorting effort
- The number of containers required to comply with recycling regulations (3 for each stop, for instance: MSW, containers, paper) can be reduced to 2 containers (MSW, recyclables), also decreasing collection costs for commercial carters

Disadvantages - Disadvantages of single stream recycling include:

- Initial capital cost for new carts and collection vehicles (if automated collection were to be instituted), upgrading the processing facility and educating residents
- Processing costs may increase compared to multiple stream systems
- Reduced commodity prices due to contamination of paper and cardboard
- Increased "down cycling" of paper, i.e., use of high quality fibers for low-end uses like boxboard due to presence of contaminants
- Possible increase in residual rates after processing (due chiefly to increased breakage of glass)
- Potential for diminished public confidence if more recyclables are destined for landfill disposal due to contamination or unmarketability.

At the simplest level, single stream recycling trades partial sorting by residents for more intensive sorting at a processing center. The benefits (compared to source separation) are largely in the collection process, while the incremental costs are largely connected to processing. This can create pressure to maximize cost savings at the collection end and minimize the additional sorting costs at a Materials Recovery Facility (MRF). If this pressure is met by capital expenditures such as automated pickup and investment in modern sorting equipment, single stream may increase the overall effectiveness of the recycling program. However, if corners are cut – e.g., by excessive compaction in baling of mixed recyclables for transport, or by poor processing - single stream may harm recycling.

In Huntington, a single steam recycling program called "All in One" was recently instituted at the beginning of 2015. The Town is currently facing a loss of revenue as a result of its new program. Though recycling rates have risen approximately 10%, (for the year of 2015, a quantity increase of 1,273 tons) revenues from the sales of this material have decreased by approximately $500,000 per year. There are a few factors that have contributed to this. For one, the Town has an extended geography, which limits the amount of time trucks have to complete their route and deliver materials to a MRF. Additionally, current bid specifications for recycling haulers mandate they utilized trucks powered by Compressed Natural Gas (CNG). However, CNG fueling infrastructure in proximity to the Town of Huntington is limited, and the amount of miles that can be travelled by a fully fueled vehicle is not enough to traverse both their collection route, and then a far distance to a MRF.

These two factors combine to essentially forcing carters to utilize a recycling transfer facility either within the Town or within approximately ten miles of the Town's borders. This is turn limits the Town to dealing with just one purveyor of recoverable materials. The limited competition does not encourage high bid prices on sales of recyclable materials. Additionally, the carters contracted to collect and haul the materials have no profit incentive to handle them in such a way to maximize re-useable materials.

As such, the Town anticipates making changes to bid specifications to reverse the downward trend revenue generation, and also to reduce the likelihood of material contamination. The Town Waste Management Department is also actively collecting data and monitoring results of this program to better understand any additional programmatic changes that might increase the quantities of recovered materials, and evaluating new public information programs aimed at reducing contamination. . At this time, it is anticipated that the single-stream program will continue.

5.3.1.6 Additional Materials to Recover

Bulky Rigid Plastics

A benefit of the single-stream program is that it allows the Town to consider accepting additional materials for recycling. Until recent years, municipal recycling of non-bottle, bulky plastics was not considered viable. But over the past ten years, both consumer demand for products constructed of recycled materials, as well as technological advances, have helped increase the markets for this material. According to the Association of Postconsumer Plastic Recyclers (APR), recycling of rigid plastics tripled between 2007 and 2012.

A search of the Empire State Development's recycling markets database in 2016 indicates that three other municipal entities in New York State currently have bulky rigid plastic recycling programs, and there are three end users/manufacturers who can consume this material in New York State. The Town will monitor the markets, and the resources provided by both solid waste management associations and plastics recycling industry councils to develop an effective strategy to implement a viable program.

Boat Shrink Wrap

The Town is open to initiating a seasonal boat shrink wrap recycling program at the Town's three public marinas and five public boat ramps, as well as providing a drop-off bin at the Town's Recycling Center. If successful, the program could be extended to private marinas and facilities within the incorporated villages on a voluntary basis.

However, the costs and benefits of such a program would have to be evaluated first. The Town does not have a good way of estimating how many boat owners would use the program, and consequently, how much waste could potentially be recovered. The New York State Department of Motor Vehicles issues registrations for boats that are kept in New York State for at least 90 consecutive days each year, were manufactured in 1987 or later, and have a length of at least fourteen feet, and it is probable the Town could obtain statistics on how many registrations are active within Huntington. However, there is no correlation statistics available on how many residents actually use their boats in the Huntington facilities, nor data available on how many non-residents would launch for the first time in the season at Huntington. The North shore of Long Island tends to be chilly in the spring, and may not be the launch pad of choice early in the season.

The best way to evaluate the potential reduction of waste would be for the Town to conduct a pilot program.

Textiles

The Town Recycling Center currently accepts clothing and other textiles. They estimate between 50-90% of clothing is re-used in its original form, and the remaining material is transformed into other products. The Town has investigated acceptance of rugs into this program, but has learned that they need to be picked up at the point of generation to prevent them from becoming wet, and thus, un-useable. As such, they are considering the feasibility of partnering with larger installation contractors, such as big box home stores, to capture this material.

Another option to expand textile recycling would be to add curbside collection by appointment, similar to the Town's new E-waste curbside collection program. Currently, several charitable organizations provide this type of service, so the Town will weigh the possibility of creating their own program versus forging partnerships with existing collecting agencies to coordinate collection events and maximize the amount of residences and frequency of collections.

5.3.1.7 "Take Back" Programs

As indicated in Section 3.1.14, The Town currently partners with and monitors a number of types of businesses that are mandated by New York State, Suffolk County and other local laws to ensure materials like motor oil, tires, and supermarket plastic bags are taken back and disposed of properly. (Refer to the Town's "Take Back Recycling Guide – Appendix O.) They also have recently partnered with electronics stores, such as Staples, to encourage them to "take back" E-waste. The Town Waste Management Department will continue to explore, implement and promote new partnerships with private industry. Given some recent State-wide issues with the e-waste market, all product stewardship/ take-back programs may need to be further publicized by the Town to offset any economic impacts that may come to the Town by allowing these items to be dropped off at the Town's recycling center.

5.3.1.8 Feasibility of Public Space and/or Event Recycling

The Town has attempted at past large scale events sponsored by the Town, including an Earth Day festival, to capture recyclables on a mass scale. Unfortunately, even though the efforts have been accompanied by bold signage and awareness efforts throughout the events, recyclable bins at such events were consistently contaminated by MSW. The Town has additionally considered encouraging the Business Improvement Districts (BIDs) to provide public recyclable containers in downtown areas. It is anticipated MSW contamination would be equally problematic.

Even though past efforts at event recycling have been unsuccessful, the Town has initiated a new pilot program for the summer of 2016 for the summer concert series held at Heckscher Park in downtown Huntington. The Town will place temporary containers with restricted lid access at strategic points throughout the event location. The Town will monitor this effort, and use the results to determine if future event recycling programs would be feasible.

5.3.1.9 Wastewater Treatment

The Town has a solid record of instituting energy efficient technologies within its Wastewater Treatment Plant, and in the CAP outlines several other initiatives under consideration which would improve the treatment of waste water and reduce toxicity of outputs. For example, the Town has contracted Removal & Replacement of Rotating Biological Conductor #1, currently used for scavenger waste pre-treatment, which would reduce the demand for electrical energy and chemical treatment. They also plan to replace Rotating Biological Conductor #2 prior to the end of 2016. Refer to Appendix P for the complete Climate Action Plan.

5.3.2 Organics Recovery Programs

The Town of Huntington recognizes the need to both reduce the amount of organic waste generated and divert organic waste from the waste stream. As the Town depends on revenue from the existing waste-to-energy recovery facility, they have a strong interest in reducing organic waste, such as food scraps, received at the plant in order to increase the electricity generation rate. However, currently there are no facilities on Long Island that could meet the capacity needs of Huntington's waste stream, and local land costs and existing dense development patterns, as discussed in Section 1, are significant deterrents to new organic recovery facilities being constructed within the Town boundaries.

As such, The Town of Huntington is interesting in exploring the feasibility of a regional composting initiative, potentially with one or more of the East End Towns. Possibly a regional arrangement would allow Huntington to contribute to the cost of construction and operation of an indoor composting facility outside of its borders. Should an

organics facility become available for use by the Town, the Town would have greater flexibility in developing programs to recover more organics.

5.3.2.1 Source Separation of Organic Materials

As discussed above, organic processing and recovery facilities are not currently available to the Town. As such, the remainder of Section 5.3.2 will focus on methods of reducing organic waste that is not dependent on such a facility. Should an organics processing facility of sufficient proximity and capacity become available for use by the Town of Huntington within the duration of the planning period, the Town will develop a pilot program to source separate and recover organic materials from residential households. For example, the Town may choose one type of organic waste, such as non-recyclable residential mixed paper or food scraps, and limit the pilot to 2-3 collection districts in order to evaluate the best collection practices and effective public communication, before further expanding the program. The Town may also choose to introduce a drop-off program for residential food scraps at its Recycling Center. But as this is currently not feasible due to not having access to a composting facility for food waste, further in-depth discussion will not occur at this time.

5.3.2.2 Minimize Yard Waste

The Town has already instituted a "Just Mow It" campaign that bans grass clippings from Town yard waste collection pickups, though clippings are accepted at the Recycling Center for a fee. Additionally, they do not accept stumps, sod, dirt/rocks, root balls, or tree limbs exceeding 6" in diameter – residents must process themselves, self-haul to the Smithtown MSF, or contract for private removal.

To minimize the generation of yard waste, the Town could explore forming partnerships with environmental education organizations such as the Cornell Cooperative Extension operating in Suffolk County to provide local seminars and internet-based resources to homeowners about proper plant maintenance to support healthy trees and shrubs, thereby reducing the amount of trimmings generated. Educational materials could also be disseminated regarding the re-use of trimmings to support the organic life cycle of garden and landscape features, which would

concurrently reduce dependence on nitrogen-based fertilizers. This is discussed further in Section 5.3.2.3

The Town could also consider working with area landscape companies to encourage and coordinate transplanting/donation of unwanted shrubs and plants to public spaces such as parks and schools. The Town already has a Conservation Advisory Board which oversees volunteers who are active in its Parks Systems, and the Waste Management Division works actively with public schools on recycling issues, though these entities do have a significant amount of other responsibilities. This could be problematic as care would have to be taken to ensure invasive species are not accidentally propagated, and transplants would require substantial maintenance to establish them in new locations.

The drawbacks to producing new programs such as these are the staffing resources available to develop, publicize and implement the programs. While the Town is fortunate to have the resources to support a full-time Recycling Coordinator, all potential new programs will have to be evaluated based on their potential to reduce waste generated, and priority will be given to those with the greatest potential waste reduction rates.

5.3.2.3 Backyard Composting

Composting of food scraps and yard waste by residents on a small-scale has the potential to significantly reduce the amount of organic waste entering the waste streams directly at its source. As organic waste can reduce the amount of electricity generated by the HRRF, and as such, has a direct economic impact on the Town, there is a higher cost-benefit rational to support backyard composting. However there are some obstacles to the creation of successful programs, especially in a densely populated urban environment.

The primary issue is to connect homeowners with suitable containers that will protect the compost from rodents and wildlife, and prevent nuisances to neighbors such as infestations, odors, and fires. While grant funding could be sought to subsidize the cost of containers, and regulatory measures taken to propose and enforce requirements, all of these actions require significant study and use of Town resources which may be better dedicated elsewhere.

A secondary issue is not only ensuring homeowners understand the proper ratios of various types of materials needed to produce successful compost, but ensuring regular maintenance such as turning and mixing. The amount of work needed by homeowners can be challenging in an area that is characterized by a high cost-of-living and typically requires a minimum of two household members to work outside of the home just to meet necessary living expenses. As such, backyard composting may not receive widespread enough public participation rates within the Town of Huntington to warrant the significant expenditure of Town resources starting the program up would require.

5.3.2.4 Targeted Food Scraps Recovery

As the Town currently offers customization of recycling programs to businesses, the Town is well-poised to work with large generators of food scraps such as supermarkets, restaurants, and healthcare institutions to both reduce food waste generated through self-evaluation and implementation of efficient practices and procedures, as well as helping businesses connect with private organic processing facilities and/or other businesses, such as agricultural entities, including wineries, that may have a use for food scraps in composting and/or other operations.

One example of a resource the Town could promote to businesses is the Empire State Development Organics Recycling Portal, located online at http://esd.ny.gov/businessprograms/organicsrecyclingportal.html . The portal contains information on technical and financial resources available to businesses seeking to divert organics out of the waste stream. Additionally, it features maps and contact information for organics recycling facilities located both in New York State and in adjacent states.

The drawbacks to producing new programs such as these are the staffing resources available to develop, publicize and implement the programs. While the Town is fortunate to have the resources to support a full-time Recycling Coordinator, all potential new programs will have to be evaluated based on their potential to reduce waste generated, and priority will be given to those with the greatest potential waste reduction rates.

5.3.2.5 Food Donation Programs

The NYSDEC recommends that food donation be a top priority in order to reduce organic waste. In Suffolk County, there are very few organizations that promote awareness of corporate food donation programs from entities like restaurants and supermarkets. However, Long Island Cares (The Harry Chapin Food Bank) operates a Store Pickup Program to food manufacturers, distributors, and supermarkets. The Town of Huntington is interested in doing more to promote the concept of food donation to reduce waste, but will require private sector and/or non-profit organization partnerships. As the potential for waste reduction in this arena is great, and the social and economic costs of supporting food donation are minimal, staff will focus on creating these partnerships and programs.

5.3.2.6 Biosolids Re-Use and Processing Options

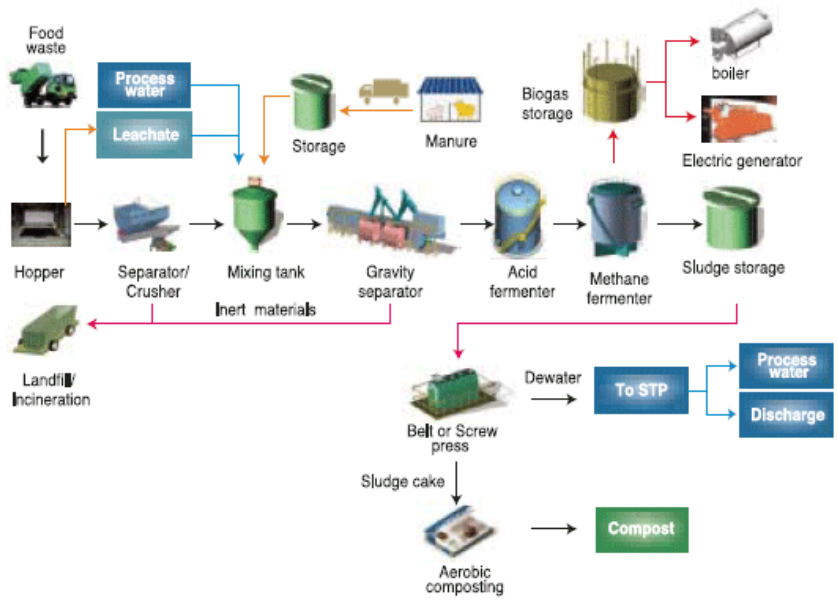
The Town is responsible for the management of sludge generated by the Huntington Sewer District Sewage Treatment Plant. In the past, the Town has explored various methods to re-use biosolids or reduce their volume. The Town considered reducing their volume by incinerating at the HRRF, but this was rejected and was further studied in 1993 by the consulting engineering firm of Dvirka & Bartilucci (Refer to Appendix R). They then instituted a pilot program which combined the biosolids with wood chips, and then processed this waste at the HRRF, but the effort was ultimately not successful. Currently, sludge generated is anaerobically digested at the treatment plant and dewatered on-site. The residual sludge is hauled off of Long Island for disposal. Refer to the 2014 Annual Report to the EPA Biosolids Center, included as Appendix F.

The Town has also explored biosolids re-use in compost products for use at Town parks and facilities in the past. Due to the resulting odors and dense residential population, the results were not successful. And, as much of Suffolk County is not covered by sewage treatment systems, and the County is dependent on their aquifer for drinking water, the Town does have plans to encourage the expansion of sewage treatment systems throughout the Town. The Town's CAP outlines several recent environmental accomplishments of their treatment facilities, and the Town pro-actively seeks to enhance treatment methods and technologies. The export of residual biosolids that can be re-used in off-Island communities for agricultural

purposes or landfill cover may be preferable than the alternative of proliferating individual in-ground septic systems which lead to greater groundwater pollution. However, as the Town explores sewage treatment options, planning for the increased recycling of biosolids produced in the future, as well as compliance with State and Federal biosolids regulations, will be incorporated into long term plans. The NYSDEC publication *Biosolids Management in New York State* (June 2011), as well as other current industry information, will be used as resources to guide the development of future programs.

5.3.2.7 Anaerobic Digestion Promotion

Anaerobic digestion of MSW is used commercially in Canada and Europe, mostly using source separated organic wastes. Typical organic wastes include kitchen waste, yard waste, and paper waste. For this process to be efficient with mixed MSW, pre-processing is required. A typical anaerobic digestion process flow chart is shown below:



The anaerobic digestion process produces gas that is approximately 50-70% methane. This gas (or biogas) requires cleanup and can be used in co-generation

engines to produce electricity or exported to a utility pipeline. The compost by-product is produced from the dewatered solids left from the anaerobic digestion process, which typically requires aerobic treatment for several weeks. Dewatering effluent can be recycled to the digester or discharged to a wastewater treatment plant.

Newer advances in the field of anaerobic digestion, including small scale digesters for on-site use by waste generators of specific materials, feature increased efficiency and reduction of undesirable by-products. It is also more likely than in the past that some of the resulting by-products may have some marketability, depending on the type of waste stream the technology is being applied to. While currently the construction of a large scale anaerobic digestion facility within the Town of Huntington would not be feasible due to cost, social, and environmental impacts, private manufacturers operating within the Town may wish to explore the technology on a small scale. The Town could consider zoning and land use regulation changes that would make free-market exploration of these technologies more feasible, as well as considering a "fast-track" building permit process to aid businesses with implementation.

5.3.2.8 Public Education Efforts

In recent years, the amount of biodegradable products on consumer markets has increased, and in many cases, costs have decreased. For example, the popularity of organic foods has increased consumer demand for product packaging that is as "Earth-friendly" as its contents. Non-profit organizations such as the Biodegradable Products Institute (BPI) or "WeHateToWaste.com" maintain online catalogs or "Green Guides" to connect consumers with biodegradable and compostable products. In preparation for future organics recovery efforts, the Town will consider the creation of a page on its website that raises awareness of the benefits of purchasing products that are more easily returned to earth's natural waste cycles.

A significant example of a product that could produce noticeable reductions in waste handled by the Town, and also increases in energy produced by the HRRF, are "Green" diapers. Currently available locally are cloth diaper services which provide weekly pick-ups and drop-offs, as well as private services which will pick-

up residentially generated compostable diapers and transport them to off-Island composting facilities. Helping consumers to be aware of alternatives to traditional products has little cost to the Town, and is in accordance with the Town's Sustainable Huntington initiative.

The Town has further agreed to publicize the Recycling Markets Online Databases provided by the Empire State Development Corporation on their website, which provide useful information to businesses and consumers on how to find businesses and/or organizations which can aid them in recycling a variety of products.

5.3.2.9 Other Strategies

The Town has considered several other strategies to address the challenge of reducing food waste in the waste stream. It is likely that prior to implementation of any one measure, the Town would procure a food waste generation and disposal study. This would include an inventory of all private sector operations generating food, send surveys and use other methods to estimate food waste generation within the Town, include public awareness efforts, and provide the Town with specific cost/benefits analyses of various recovery/processing methods.

Another consideration that would provide both additional data and oversight over the organics waste stream would be to institute a new type of license aimed at private companies, such as landscapers, which do not currently utilize trucks of sufficient size to trigger the requirement to apply to the Town's traditional carter license program. It is anticipated any registration fees associated with this program would be minimal, as the oversight and data gained by the Town would be valuable tools to help reduce yard waste generation and disposal rates, which would thus likely save the Town and/or its resident's money.

5.3.3 Waste Prevention Programs

This section details the various initiatives the Town is considering to prevent waste generation by residents and businesses.

5.3.3.1 Public Education Efforts

The Town seeks to augment its existing public education programs to more clearly communicate the benefits of waste prevention. Because currently the Town's waste disposal programs are effective and efficient, the average resident has no cause to consider the impact of their daily way of life on the environment and their tax bill. Repetitive actions such as excessive use of disposal items such as saran wrap, aluminum foil, and paper plates have no apparent consequences. Disposal of left-over food and failure to use every edible portion of produce seems suitable in households where food is plentiful.

In order to combat this complacency, the Town will be actively seeking new methods to raise awareness about the amount of waste prevention a typical resident can affect simply by making minor changes in their daily habits. Fueled by the Sustainable Huntington Initiative, the Town is exploring additional ways to engage the public in waste prevention efforts. Some of these are detailed in their new Climate Action Plan (CAP) – refer to Appendix P.

Additionally, the Town has successfully used its website to convey information in user-friendly manner to residents and businesses. To build on this, the Town will explore establishment and maintenance of social media accounts, such as Facebook and Twitter to disseminate existing marketing materials and to drive people to their website. However, for these efforts to be successful, this would require a substantial amount of staff time, or the Town would have to procure a public relations firm to do this work for them. Budgetary limitations, especially in light of the New York State property tax cap, may prevent consideration of new expenditures at this time.

5.3.3.2 Incentive Systems (i.e. Pay-As-You-Throw or Save Money and Reduce Trash (PAYT/SMART) Systems)

The Town would like to consider implementation of PAYT/SMART systems for residential waste, providing that they could be confident the system would be feasible for implementation in Huntington. Due to a portion of the Town being urban in character, and statistically populated by families with lower incomes, The Town would have to insure the program could be structured in a way to feasible for all residents. The benefits and disadvantages of various program elements are discussed throughout this section.

Currently in Huntington, businesses pay commercial waste carters for garbage collection based on the size of their trash containers and how many times per week those containers are emptied, and the carters which collect this garbage pay the Town per vehicle and container utilized. As such, there is a governmental system in place already that works in tandem with private markets to motivate businesses to save money by reducing waste. Residences, however, pay a flat fee in their annual property tax levy regardless of the amount of trash they place on the curb or how often it is collected, resulting in unrestricted amounts of household waste being placed on the curb for collection. Prior to the implementation of the Consolidate Refuse District, however, residents contracted their own trash disposal, and illegal dumping was prolific. Nevertheless, as Huntington evaluates their waste disposal options for beyond 2024, when the HRRF reverts to a private merchant operation, a PAYT/SMART system may be a useful waste management tool.

A fee-based for one, these types of incentive programs often result in less-than-optimal recyclables for processing, and recycling has long been the centerpiece of Huntington's Solid Waste Management programs. While a PAYT may reduce the amount of recyclables in the solid waste stream, it increases the likelihood of illegal dumping and amount of contaminated recyclables being introduced in the recyclables stream, and which can thereby decreases the overall recovery rate.

PAYT programs, also known as unit-based pricing or variable-rate pricing, provide a direct economic incentive for residents to reduce the amount of waste they generate. Under PAYT, households are charged for waste collection based on the amount of waste they throw away, akin to how most are charged for electricity, gas, and other utilities. As a result, residents may be motivated to increase the amount

they recycle, and to think about ways to generate less waste, as this will decrease their waste costs.

PAYT can be structured in several different ways. Some communities charge residents based on the volume of waste they generate. Under volume-based programs, residents are charged a fee for each bag or can they fill up. Communities also can require that residents purchase tags or stickers and affix them to their own containers. Other communities bill residents based on the weight of their trash-although, because of the cost of the equipment needed to weigh the waste and record the amount for billing purposes, weight-based programs are far less common. The program's rate structure would need to address not only the Town's cost for MSW collection and disposal, but also ancillary program elements (such as the cost of compostable and recyclable materials collection and processing, the STOP program, drop-off programs, the bulky collection program, etc.). The fees should also address start-up costs and outreach and education costs.

PAYT has shown the potential to improve MSW programs in several important ways. First, there can be significant economic benefits. Because of the incentive to generate less, communities have reported reductions in waste disposal as much as 25 to 35 percent, although a statistical evaluation of such data found the reduction due to PAYT alone was on the order of 15%. Reductions in Huntington's waste stream are likely to be less, as on average, 5% (one-third) of the waste reductions came from increased diversion of yard waste from disposal, and it appears the Town has close to 100% compliance with its program now.

Communities with PAYT also typically report significant increases in recycling rates (on average, an additional 5% diversion to recycling, which in Huntington's case represents approximately 5000 tons, an increase of nearly 25% to the Town's curbside collection program). Since it is far less expensive for the Town to handle curbside recyclables, this would decrease waste management program costs. However, these types of incentive programs often result in less-than-optimal recyclables for processing, and recycling has long been the centerpiece of Huntington's Solid Waste Management programs. While a PAYT may reduce the amount of recyclables in the solid waste stream, it increases the likelihood of contaminated recyclables being introduced in the recyclables stream, and which can thereby decreases the eventual recovery rate of materials sold.

PAYT offers each resident the opportunity to control waste costs, which is seemingly an important equity issue. This is balanced by other factors, such as equity issues in that waste generation is not very elastic with income, so that poorer residents may have greater proportionate waste bills. Renters may also have additional costs, as waste disposal costs are usually a hidden fee in rent, but it is not clear that landlords will decrease rents to account for the loss of a waste management fee. As the Town's population is diverse economically, and according to various statistics maintained by the U.S. Census Bureau, rental units account for between 20-35% of the Town's households, care would have to be taken to devise a system that would not disproportionately affect the Town's poorer residents.

The administration of a PAYT program requires selection of a bag or tag identifier to authorize collection by the carter serving the residents' homes. Because revenue from the sale of the bags or tags funds the program, at least in part, a convenient sale and distribution network must be assembled for residents. These distribution networks can involve Town facilities, participating retail establishments, or direct delivery mechanisms. Organization of distribution networks can be relatively simple in smaller communities. However, such an organization presents substantial challenges in a Town of Huntington's size, given a population of over 203,000, with over 55,000 households served by the Town, spread over a land area of 83 square miles. One possible solution for the Town to this issue would be to include the price of a minimal amount of bags in the annual tax levy, and devise a cost-effective monthly delivery and/or pick-up mechanism. Residents who go beyond the minimal provided would have to purchase additional bags elsewhere, but a system such as this would go a long way in making the program easier for senior citizens, most of whom, statistically, live on a fixed income and generate very little waste.

Another challenge to implementing a PAYT/SMART system in Huntington is the community's existing high tax burden and the fact that waste management collection is currently a very small percentage of high tax bills. Much of the research demonstrating the effectiveness of these types of systems has been performed nationally in communities where garbage collection is privately arranged, so the average homeowner can realize a much more direct economic benefit from waste reduction. In Huntington, however, even a savings of a few hundred dollars a year would likely not be considered a fair trade off for the extra amount of work this system entails for homeowners, who typically face tax bills

well in excess of $8000 per year. As such, it is imperative that careful thought, and perhaps public input, be put into the design of a system that makes it easy for busy families to use.

As such, it would be difficult to establish high participation in the program among residents, and leading to higher enforcement costs and increases in illegal waste dumping by individuals seeking to avoid or minimize the purchasing of disposal bags. In addition to the lost revenue caused by illegal dumping, litter may occur, which would need to be cleaned up by Town staff. Other costs will include the cost of inspectors to monitor residents to prevent illegal disposal practices. However, careful program design, including elements such as an efficient bag distribution network, and extensive public information, may potentially offset anticipated illegal dumping.

In conclusion, though there are challenges associated with community support, the high start-up costs, design of a bag distribution network, and the increases to enforcement costs and personnel necessary to monitor PAYT/SMART systems, the Town of Huntington may explore this tool further should the HRRF cease to become a viable disposal option post-2024.

5.3.3.3 Reduction of Disposable Packaging

The Town is considering implementation of various programs or local laws that would reduce the amount of waste generated by "disposable" packaging utilized in the food service and other service industries. The Town would possibly model their program after a local law passed by New York City in 2015 banning the use of plastic-foam (i.e. Styrofoam) food service containers.

While the Town has considered addressing single use plastic bags, currently, the County of Suffolk is considering legislation that would reduce, or possibly ban single-use plastic film bags (i.e. those commonly used in grocery stores) for all retail businesses within the ten Towns of Suffolk County. Should this legislation pass, businesses within Huntington would be subject to it. However, previous legislation by the County required these same retail businesses establish "Take Back" programs for plastic film, so it is unknown at this time if these businesses would continue to be required to provide recycling facilities for a material they would no longer be a generator of. In turn, the Town may then have to consider modifications to its recycling programs to ensure there are accessible methods

available to residents to recycle plastic film such as dry cleaning bags or packing material in online shipments from popular internet merchants such as Amazon.
In conclusion, the Town will continue to monitor trends in the packaging industry and identify methods to counteract the entry of disposal packaging into the waste stream.

5.3.3.4 Incentivize Recycling

Currently, the Town's carter licensing fee structure charges the same for hauling of containers filled with MSW as it does for recyclables. As discussed in Section 5.3.1.3, the Town could prevent waste by exploring fee-based methods to incentivize recycling.

5.3.3.5 Paperless Office Preference

As recommended by the CAP, the Town will be instituting a paperless office preference in Town offices. Once that program has been successfully implemented, the Town Waste Management Division can use that case study to add resources to their existing "recycling toolbox" for area businesses.

5.3.3.6 Toxic Waste Reduction & Product Stewardship Programs

The Town focuses significant efforts on its existing Household Hazardous Waste Collection and E-Waste collection programs. Their waste management staff keeps abreast of current waste management initiatives so that they can augment the list of materials accepted as recovery technologies change.
They currently use their Annual Recycling Calendar, which is mailed to all residential households, as a means for dispersing information about new types of toxic waste. For example, the July 2015 page contains awareness information regarding the mercury in compact fluorescent lights (CFLs) and reminds homeowners to bring them to the Town's Recycling Center for proper disposal. There is also easy-to-find guidance on the Town's website regarding hazardous waste such as prescription medications, "sharps", and smoke detectors.
The Town's recycling center accepts hazardous waste 5 days/week, from 9am-3pm, from residents in quantities of up to the equivalent of five (5) gallons per visit. The Resource Recovery Facility, which accepts all residential waste generated within the Town and a sizeable portion of commercial and industrial waste generated therein, has advanced detection systems for unauthorized waste. Due to the complexity and cost of transporting hazardous waste, and the Town's aggressive programming and enforcement at the HRRF in place, there are not a lot of

additional options for the Town to consider that would divert additional hazardous waste out of the waste stream.

As such, they are turning their focus to product stewardship efforts. For example, they are interested in promoting paint stewardship, but they lack the regulatory power to require manufacturers to participate in these initiatives. The Town would welcome state-level regulations similar to those passed in the states of Oregon and Connecticut to assist them in furthering stewardship goals. In the meantime, they are considering joining and becoming active in the New York Product Stewardship Council.

Additionally, Covanta, the owner/operator of the RRF, is an active proponent of product stewardship, and contributes extensively to the operations and activities of the Product Stewardship Institute. The Product Stewardship Institute works to promote product life-cycle design changes and legislation that will reduce waste at the source – the manufacturers.

5.3.3.7 C& D Reduction options

Currently, C&D generated commercially, or by residential contractors is disposed of privately. Small amounts of residentially-generated material are transported by residents to the Smithtown MSF. The Town has little, if any, handling of this waste stream or knowledge of specific metrics. As such, the first step for the Town to become involved in the management and reduction of this waste stream is to develop methods to engage businesses on a voluntary basis to provide metrics on the current types and quantities of waste generated, as well as their current disposal methods. A potential source of data may be capturing debris demolition and disposal information through the Town's building permit process. However, C&D debris is often generated by activities that are not subject to building permits, and even in cases where permitting is applicable, not all property owners will comply with the Town's permit regulations.

Additional means to obtain this information may include the annual mailing of surveys, the development of a web form to be regularly available on the Town's website, or through partnering with major home improvement retailers such as Home Depot or Lowes. A challenge the Town's Waste Management Staff will face is what type of incentive they can offer to property owners to induce voluntary participation, and how to launch this initiative within existing budgetary constraints of their current programs.

A further tool to monitor C&D generation and increase re-use of useable materials would be the consideration of new Town regulations to govern creation and disposal as suggested in the Town's CAP. Refer to Appendix P.

5.3.3.8 Non-Hazardous Industrial Waste Reduction options

Currently, any non-hazardous industrial waste not suitable for RRF is likely long-hauled or brought to Bergen Point, by private parties. The Town of Huntington has little, if any, handling of this waste stream or knowledge of specific metrics. In Section 2, it was estimated that this waste stream is likely less than 1% of all waste generated within the Town's borders. However, as studies indicate that up to 40% of this type of waste may be recoverable, the Town is interested in learning more about this waste stream, so that they may devise strategies in the future to encourage re-use or recovery of these materials.

As such, the first step for the Town to become involved in the management and reduction of this waste stream is to develop methods to engage businesses on a voluntary basis to provide metrics on the current types and quantities of waste generated, as well as their current disposal methods. Possible means to obtain this information is through the annual mailing of surveys, the development of a web form to be regularly available on the Town's website, or through the institution of a waste audit program. A challenge the Town's Waste Management Staff will face is what type of incentive they can offer to businesses to induce voluntary participation, and how to launch this initiative within existing budgetary constraints of their current programs.

5.3.3.9 Greenhouse Gas Emissions

As discussed above, the Town's Sustainable Huntington Initiative currently has significant administrative and community support, and includes several measures to increase the energy efficiency and reduce emissions from Town and private facilities.

Notably, The Town's CAP has identified a potential installation of a Micro Turbine for Combined Heat and Power at the Town of Huntington's Wastewater Treatment Plant. This would recover methane that is currently flared off and reduce the

electrical load of the plant by approximately 550,000 KWh, as well as provide waste heat that can be re-used by boilers, if converted to natural gas, which currently heat the digesters. As of 2016, the Town has actively been seeking grant funding that would support this effort, and create a micro-grid between Huntington Town Hall, the Wastewater Treatment Plant, the nearby YMCA, and Huntington Hospital.

5.3.4 Material Re-Use Programs

5.3.4.1 Re-Use/Donation of Textiles

The Town will continue to accept used clothing for donation at its Recycling Center, and explore creation of additional partnerships to capture more of this waste stream and provide the needy with clothing, such as through the sponsorship of winter coat drives.

5.3.4.2 Food Donation Programs

The Town will be exploring how to encourage food re-use and donation. Refer to Section 5.3.2.5

5.3.4.3 Local Tree Re-Use

The Town Waste Management Department, as recommended by the CAP, will be considering a program that connects local lumber mills with fallen or removed trees that could be a source for old-growth lumber, and re-used for flooring, paneling or other construction needs.

5.3.4.4 Building Material Re-Use

The Town currently, through their website and direct-mailed recycling calendar, directs residents to donate used building materials to the Habitat for Humanity ReStore. Should the Town construct a transfer station as discussed in Sections 5.2.1 and 5.3.1.2, this would give them a facility at which they could consider operating a materials exchange.

5.3.4.5 Incorporate Re-use into Town procurement and asset management

Currently, the Town does not have specific requirements to encourage purchase of used materials within purchasing specifications for a number of reasons relating to

New York State General Municipal Law, quality of goods, and ensuring the Town has sufficient funds to purchase the goods it requires. However, the Town is a member of the Buy Recycled Alliance of New York (BRANY), a program of the New York State Association for Reduction, Re-use and Recycling (NYSAR^3), and as such, seeks to uphold the Alliance's principals when feasible. Additionally, the Town makes every effort to connect surplus items with end users. It is possible for departments to transfer fixed assets between themselves, and the Comptroller's Office spearheads a public auction program for a variety of these items.

5.3.4.6 Promote Packaging Re-Use by Household Consumers

Many types of plastic packaging for home products such as textiles, linens, and children's clothing are re-useable for other home storage needs. Creation of a public awareness campaign to be featured on the Town's website and in their Recycling Calendar, and possibly even on Pinterest, that shares stories of household re-use is a possible avenue for the Town to encourage this packaging to be used, instead it being disposed, all while consumers continue to purchase other types of plastic storage containers that will eventually enter the waste stream.

5.4 Comparison of Existing Programs to Alternatives

The Town of Huntington is dedicated to aligning its solid waste management system with the goals outlined in *Beyond Waste*, the State's solid waste management plan. Their LSWMP is intended to be a living document and toolbox to continuously improve disposal options, reduce waste and increase materials recovery. The alternative MSW management systems described within Section 5 are summarized for comparison purposes as follows.

5.4.1 Summary Evaluation for the Management of MSW

The alternative systems provided herein demonstrate the Town's thoughtful approach to exploring alternative systems to use of their current WTE facility. A summary of the potential impacts of said systems is provided for comparison purposes in Table 5-2. The Town's approach to system selection will be further discussed in Section 6.

Table 5-3
Summary of Section 5
Comparison of Existing MSW System to
Potential Application of New Technologies and/or Programs

Solid Waste Management Technology	Financial Cost/Risk	Social Impact (odors, noise, etc.)	Emissions (GHG or other)	Land Area	Water Quality	Water/Energy Consumption	Resources Generated/ Recovered
Existing RRF (Conventional WTE)	Low-Med	Low	Medium	Low	Low-None	Medium	Medium
Transfer to MSW Landfill	Low	High	High	High	Medium	High	None
Transfer to WTE Facility	Med	Low-Med.	Medium	Low	Low-None	Medium	Medium
Construct New WTE Facility	High	Low-Med.	Medium	Low	Low	Medium-High	Medium-High
Pyrolysis	High	Low	Medium-High	Low-Medium	Low	High	Medium
Plasma Gasification	High	Low	Low-Medium	Low-Medium	Low	High	High
Waste Prevention	Low	Low	None	None	None	None	High

Solid Waste Management Technology	Financial Cost/Risk	Social Impact (odors, noise, etc.)	Emissions (GHG or other)	Land Area	Water Quality	Water/Energy Consumption	Resources Generated/ Recovered
Recycling	Low	Low-Medium	Low	Low	Low	Low-Medium	High

5.4.2 Summary Evaluation for Waste Reduction and Increase of Materials Recovery

The Town has included the evaluation of several new strategies to increase materials recovery, reduce the amount of organics in the waste stream, and reduce waste generation rates in Sections 5.3.1 through Sections 5.3.4. All of the potential initiatives discussed herein build on the Town's existing efforts, and serve to reduce the environmental, social, and economic costs of managing MSW. The programs and strategies evaluated throughout Section 5 that have been identified for further study and consideration will be subject of Sections 6 and 7, where-in prioritization mechanisms are applied, waste reduction estimates are provided and an implementation schedule is outlined.

6.1 Integrated Solid Waste Management System Selection

The integrated solid waste management program that is currently in operation will be continued as described throughout this LSWMP. The program that is in operation is currently successful in meeting the needs of the solid waste management within the planning unit, and compliance with the Town's existing LSWMP is summarized in Section 6.2.

Strategies to continue to provide a stable, reliable and cost effective platform for solid waste and recycling operations in the Town of Huntington have been described in Section 3 and Section 5, and are summarized within Section 6.3. This system is consistent with the New York State Solid Waste Management hierarchy of handling waste, having in place a core waste system which minimizes landfilling while relying on the preferred management strategies of waste reduction, recycling, composting, and recovery of energy. The system may face challenges depending on the future of the Covanta WTE partnership, and as such the Town of Huntington has adopted the following priorities in developing this update to its solid waste management plan.

Priority 1: To continue to manage waste in a manner that protects the environment and public health, and that conserves natural resources. Programs will continue to be managed in a cost-effective manner that maximizes environmental benefits and minimizes long-term financial liability for citizens, businesses, and taxpayers.

Priority 2: To expand waste reduction and materials recovery programs, with an increased focus on maximizing reduction of toxicity and volume of waste, and optimizing prevention, re-use, and recycling programs not only to address standard household waste, but with an expanded emphasis on the management of organic waste and waste generated by the CII sector.

Priority 3: To collect the data necessary to more fully understand, evaluate, and ultimately, reduce, waste streams that are not currently managed municipally.

6.2 Compliance with Existing LSWMP

Table 6-1 below summarizes the key specific initiatives of the 1995 LSWMP, and their current status. Initiative numbers are provided for ease of reference, however, there was not a numbering system utilized in the original Plan. The original "Project Schedule" is included in this Plan as Appendix S. Items that are not complete or abandoned are explained in the "Comments" column. Items that will be continued are repeated in Table 6-2 as Current Programs. Items to be refined are highlighted, and are further discussed in Section 6.4. Fourteen (14) of fifty-five (55) initiatives have been wholly completed; Twenty-six (26) of the initiatives either have seen some progress or are still viable, and will be either continued or refined. On the whole, the Town has achieved its major goals in regards to waste handling and recycling program expansion. Most of the items to be abandoned are no longer viable to due changes in the regulatory framework and progression of technology. To further illustrate current compliance, a copy of the Town's 2013 Compliance Report is included as Appendix T.

Table 6-1
Compliance With Existing LSWMP

No.	Solid Waste Planning Initiative	Planned Action Date	Date(s) Achieved	Comments	Status
1.01	Resource Recovery Facility becomes fully operational	December 1991	December 1991	The current Municipal Cooperation Agreement with the Town of Smithtown covers the same time period as Huntington's agreement with Covanta. Refer to Section 3.1.8	Complete
1.02	LSWMP Adopted by Town Board	March 1994	August 30, 1994	This occurred subsequent to NYSDEC Approval on July 11, 1994	Complete
1.03	Expand Mandatory Separation Ordinance to include flexible and other plastics	October 1996	2005	Films/flex not included in curbside collection due to processing issues. Materials are accepted at the New York Avenue Recycling Center.	Refine

Table 6-1
Compliance With Existing LSWMP

No.	Solid Waste Planning Initiative	Planned Action Date	Date(s) Achieved	Comments	Status
1.04	Expand Mandatory Separation Ordinance to include poly-coated paper and other paperboard	October 1996	Not implemented	In the late 1990s, markets did not support source-separation of this material. Current technology allows these materials to be recycled through the Huntington All-In-One curbside collection program. However, the Town is interested in exploring ways to increase recovery of this material.	Refine
1.05	Expand Mandatory Separation Ordinance to include household batteries	January 1995	July 1995	Curbside battery collection was discontinued due to updated formulation of batteries and NYSDEC guidance that alkaline batteries are no longer considered hazardous. All other batteries can be dropped off at Recycling Center or in some cases, are subject to "Take Back" program regulations.	Abandon
1.06	Expand Mandatory Separation Ordinance to include Construction & Demolition Debris	October 1995	Dec. 1991, July 2003	1991: Items that cannot be processed at the WTE facility such as porcelain fixtures, bricks, concrete debris and dirt/sand are not able to be collected curbside and must be self-hauled to Smithtown Cell 6 2003: C&D materials generated by home improvement contractors are required under Town Code §133-1.I. to dispose of waste themselves Current: residents currently must separate most C&D materials under the Town's stringent bulk pick-up policies	Refine
1.07	Enforcement Source Separation for Non-Participants, including reminders, notices and fines	October 1991	On-going	The Town has upgraded its enforcement for the digital age, including GPS tracking devices installed on all collection vehicles, and iPads with mobile software to issue notices and violations	Continue

Table 6-1
Compliance With Existing LSWMP

No.	Solid Waste Planning Initiative	Planned Action Date	Date(s) Achieved	Comments	Status
1.08	Modify Building Permits to require identification of C&D disposal/recycling locations, and to require recycling of demolition debris	December 1995	Not implemented	Related initiatives will be re-considered and further described in Sections 6.4 and 6.5	Refine
1.09	Modify hauler licensing regulations to include requiring that service providers to commercial/industrial waste generators to provide recycling services, and allow haulers to use Town contracted processing and markets under a signed contract paid to Town	December 1994	2004	License applications updated. **Haulers never were authorized to use Town of Huntington recycling contracts. The Town indicates that they did not specifically authorize the inclusion of this initiative in the prior LSWMP; its inclusion was an oversight as it would be legally complicated, if not impossible.	Complete
1.10	Modify hauler licensing regulations to mandate reporting on quantities of recyclables	December 1994	2004	Results of this program have not been ideal, and this is further discussed in Section 6.5	Refine
1.11	Expand Public Education Programs to include procurement and distribution of “recycling” stickers for collection containers	September 1993	ongoing		Complete
1.12	Expand Public Education Programs to include commercial recycling seminars	1995	1995 - ongoing		Refine
1.13	Programs to include commercial recycling seminars		1994	Hosted two commercial recycling seminars. Discontinued due to poor attendance.	Refine/combine with 1.12
1.14	Expand Public Education Programs to include school curriculum development	January 1993 (continued from prior planning period)	1993	Discontinued 1998 when Waste Reduction and Recycling became part of the NYS Dept. of Education K-12 mandatory curriculum; function has been assumed by educational institutions.	Abandon

Table 6-1
Compliance With Existing LSWMP

No.	Solid Waste Planning Initiative	Planned Action Date	Date(s) Achieved	Comments	Status
1.15	Expand Public Education Programs to include backyard composting demonstrations	April 1993 (continued from prior planning period)	April 1994 - 1997	Demonstrations have not been held since 1997 though public information is provided in the yearly recycling calendar distributed to all residents and on the website	Refine
1.16	Continue educational newsletters and presentations	Ongoing	Ongoing		Continue
1.17	Institute source separation and drop-off area for household hazardous waste	August 1992	1992 - ongoing		Complete
1.18	Waste reduction programs (e.g. environmental shopping)	June 1995	Not implemented		Abandon
1.19	Implement “Just Mow It” program	March 1993 (ongoing)	Ongoing	Ongoing	Complete
1.20	Implement and Enforce C&D Recycling Ordinance	1996	Not implemented	Not implemented	Refine
1.21	Determine actions to improve recycling participation rates and separation efficiencies by monitoring of set-outs and material tonnages	October 1992 (continued from prior planning period)	1992- On going	Sanitation Inspectors monitor this.	Continue
1.22	Monitor glass breakage and effect on marketing (i.e. monitor markets to ensure maximized recycling)	July 1991 (continued from prior planning period)	N/A	This is not an activity under the Town’s control, as the contracted recycling vendors would assesses operational procedures as they relate to markets and maximizing recycling.	Abandon

Table 6-1
Compliance With Existing LSWMP

No.	Solid Waste Planning Initiative	Planned Action Date	Date(s) Achieved	Comments	Status
1.23	In response to the introduction of new NYSDEC permit conditions requiring extensive reporting, dedicate full-time staff to enhanced record keeping and waste stream evaluation	July 1991	Not implemented	Due to fiscal constraints, rising health care and pension costs, and a generally poor local economic climate over the past 20 years, staff size has been reduced in all divisions of the Department of Environmental Waste Management, and it is unlikely that funds will exist to increase staff during the current planning period	Abandon
1.24	Establish auditing program for waste reduction and recycling	January 1995	n/a	Current enforcement efforts address the residential portion of the waste stream, and current procedures at the HRRF limit the amount of unauthorized materials that are accepted for processing at the plant. Voluntary versions of this concept may be evaluated to give the Town greater insight into waste and recycling trends in the CII sector.	Refine
1.25	Explore use of Smithtown's MRF for materials processing and marketing	(continued from prior planning period)	n/a	Various partnerships have been explored over the past twenty years, but at present, there are no arrangements to this effect, and Smithtown's MRF is currently not processing most recyclables as they are being trucked, after single stream curbside collection, to Brookhaven's more advanced facility. A general initiative regarding regional partnerships will be included.	Abandon
1.26	Explore private/regional and/or public options for mixed bulky waste recovery	June-December 1996	Ongoing	The Town currently processes mixed bulky waste at the HRRF, and more flammable types can be beneficial to increase the BTUs of the plant to ensure appropriate levels of energy recovery and reduction of residuals. Certain	Refine

Table 6-1
Compliance With Existing LSWMP

No.	Solid Waste Planning Initiative	Planned Action Date	Date(s) Achieved	Comments	Status
				types of bulky waste are currently accepted at the Recycling Center, and the Town's website provides a recycling guide to options and "take back" programs for additional items. Should the Town construct a transfer station, additional options would be open to them to explore the recovery of mixed bulky waste.	
1.27	If no private option for mixed bulky waste processing found, Town to begin mixed bulky waste processing	December 1997	n/a	Refer to Comments in No. 1.26	Combine with 1.26
1.28	Obtain proposals from textile markets	March 1995	1996	The Town currently accepts textiles at the New York Avenue Recycling Center	Complete
1.29	Open drop-off center for textiles	July 1995	1996	The Town currently accepts textiles at the New York Avenue Recycling Center	Complete
1.30	Procurement of markets for newspaper, corrugated, magazines and commingled containers (glass, metal and plastic); aluminum foil	June 1991	1991	Ongoing	Refine
1.31	Procurement of service to remove and market segregated recyclables from New York Avenue drop-off	June 1991	1991	Ongoing	Complete
1.32	Obtain proposals for private composting services of yard waste	October 1993	1994	Ongoing	Continue
1.33	Pursue inter-municipal agreements with other Long Island Communities to possibly trade leaves for MSW	(continued from prior planning period)	n/a	Tried and abandoned	Abandoned

Table 6-1
Compliance With Existing LSWMP

No.	Solid Waste Planning Initiative	Planned Action Date	Date(s) Achieved	Comments	Status
1.34	Consider source separation-based composting, depending upon available technology and costs	December 1995	n/a	This cannot be completed until a composting facility is available to the Town	Refine
1.35	Establish public drop-off sites for household batteries	January 1993	1995	Automotive, rechargeable and nickel cadmium batteries only are accepted; alkaline batteries are no longer hazardous waste.	Complete
1.36	Establish public drop-off sites for sorted nickel cadmium batteries	October 1993	1995		Complete
1.37	Explore implementing a rechargeable battery campaign and providing discount coupons	January 1995	n/a	Not feasible	Abandon
1.38	Explore curbside collection of household batteries	July 1995	1997	Tried and abandoned 2011. Curbside battery collection was discontinued due to updated formulation of batteries and NYSDEC guidance that alkaline batteries are no longer considered hazardous. All other batteries can be dropped off at Recycling Center or returned as per NYS regulations	Abandon
1.39	Evaluate on-call pick-up of HHW	January 1997	2014	On-call curbside collection of Electronic Waste was instituted in 2014 still ongoing. At present, there are no plans to evaluate expansion of this program to HHW. The drop-off program at the Recycling Center, combined with “take back” programs, and thorough detection of unauthorized waste at the HRRF ensures there is very little HHW in the waste stream.	Abandon

Table 6-1
Compliance With Existing LSWMP

No.	Solid Waste Planning Initiative	Planned Action Date	Date(s) Achieved	Comments	Status
1.40	Modify Town purchasing specifications to allow use of compost, mulch, aggregate, fill, paper, oil, tires and other products produced from recycled materials	December 1996	Ongoing	Site construction materials used on Town contracts are in accordance with bid specifications for each job; recycled C&D materials are used when the market and technical specifications support the application.	Refine and Combine with 1.41
1.41	Continue Membership in the Buy Recycled Coalition	Ongoing	Ongoing	(Membership is not active at this time, but the Town will be pursuing a membership in the New York State Association for Reduction, Reuse and Recycling (NYSAR^3)	Refine and Combine with 1.40
1.42	Encourage Village governments, institutions and local businesses to use recycled products	March 1994 (continued from prior planning period)	Ongoing	Village governments and other local political subdivisions (i.e. school districts) can currently purchase off of Town bids for goods, but they are independent entities so any other type of "encouragement" would not be feasible. However, this initiative will be refined into a public education initiative to both residents and the CII sector to provide facts about products made from recycled materials, many of which are Made in the USA, providing both local jobs and featuring reduced carbon footprints.	Refine
1.43	Support State and Federal efforts to expand markets	(continued from prior planning period)	n/a	The Town has continuously sought to expand, and will continue to expand, its materials recovery programs as markets for new materials have emerged. This will be abandoned in favor of more specific initiatives.	Abandon

Table 6-1
Compliance With Existing LSWMP

No.	Solid Waste Planning Initiative	Planned Action Date	Date(s) Achieved	Comments	Status
1.44	Identify processors and markets for electronic scrap	August 1995	Ongoing	On-call curbside collection of Electronic Waste was instituted in 2014. The Town's E-Waste is currently processed privately.	Complete
1.45	Receive bids from markets/processors of used tires	(continued from prior planning period)	n/a	Tires have been accepted at the HRRF for processing in small quantities in the past on a case-by-case basis, but have not been determined to be a viable material for regular combustion.	Abandon
1.46	Petition NYSDEC for permit modification to burn shredded tires	April 1993	Ongoing	Refer to 1.45	Complete
1.47	Consider accepting used tires at RRF	January 1994	Refer to 1.45	Refer to 1.45	Complete
1.48	Continue landfilling sewage sludge at out-of-state	(continued from prior planning period)	Ongoing	Only a portion of biosolids generated by the Huntington STP is landfilled. As additional composting and recovery options become available, the Town will explore increasing the recovery rates.	Abandon
1.49	Issue Request for Proposals to identify alternatives for sewage sludge disposal	Annually (Begin January 1994)	n/a	Refer to 1.48	Refine/Combine with 1.48
1.50	Consider alternative methods of sewage sludge disposal	Annually (Begin March 1994)	Ongoing	Refer to 1.48 & 1.49	Refine/ Combine with 1.49
1.51	Regulated medical waste will continue to be disposed of at the Babylon waste-to-energy facility	(continued from prior planning period)	Ongoing	The Town's only involvement in the regulated medical waste stream is ensuring it is detected and diverted by the unauthorized waste detection systems in place at the HRRF. All transportation, treatment and disposal of regulated medical waste is handled	Abandon and replace with education initiative aimed at waste reduction

Table 6-1
Compliance With Existing LSWMP

No.	Solid Waste Planning Initiative	Planned Action Date	Date(s) Achieved	Comments	Status
				completely within the private sector. As of 2015, no municipal waste combustion facilities in NYSDEC Region 1 reported accepting any treated regulated medical waste.	
1.52	Evaluate program expansion options for source separation of food waste, diapers and low-grade paper products	December 1995	n/a	Refer to 1.34	Refine, combine with 1.34
1.53	Evaluate program expansion options for mass composting	December 1995	n/a	Refer to 1.34	Refine, combine with 1.34
1.54	Evaluate program expansion options for ash recycling	Ongoing	Ongoing	Ash is currently re-used at the Brookhaven Landfill under a Beneficial Use Determination (BUD)	Refine
1.55	Evaluate Town landfill reclamation	December 1995 (continued from prior planning period)	n/a	Options are limited by NYSDEC regulations and the approved Closure/POMM plan for Town landfill, as well as the limited space (less than 4 acres) available to be reclaimed	Abandon

6.3 Solid Waste and Materials Recovery Current Programs

Table 6-2 is provided below to summarize current waste management program strategies which are to be continued, as described within Section 3.

Table 6-2
Current Programs

Solid Waste Program Element	Comments
Residential curbside collection program for household waste, yard waste, bulk waste, electronic waste and single-stream recyclables	Single-stream component of the recycling program is under constant evaluation, and multiple new recycling initiatives are presented in Section 6.4
Utilization of the Huntington Resource Recovery Facility through a long term agreement with Covanta	
Post-closure monitoring and maintenance of a closed municipal landfill in East Northport	
Operation of the Town Recycling Center located at 641 New York Avenue in the hamlet of Huntington	
Partnership with the Town of Smithtown for residential use of the MSF at Kings Park for yard waste, white goods, C&D, and scrap metal	
Continue public information on website and in educational newsletters and presentations	
Operation of the Huntington Wastewater Treatment Facility	Serves only a small portion of residents
Code enforcement, including enforcement of Source Separation for Non-Participants, including reminders, notices and fines	The Town has upgraded its enforcement for the digital age, including GPS tracking devices installed on all collection vehicles, and iPads with mobile software to issue notices and violations
Licensing program for commercial solid waste and liquid waste haulers	
Regional recycling and/or solid waste partnerships	Continually exploring new ways to cost-effectively provide services
Continue to publicize "Take Back" programs mandated by various regulatory agencies	

Table 6-2
Current Programs

Solid Waste Program Element	Comments
Continue to monitor disposal packaging trends and identifying methods to counteract the entry of disposal packaging into the waste stream and the physical environment	
Continue to determine actions to improve recycling participation rates and separation efficiencies by monitoring of set-outs and material tonnages	
Village curbside waste, recycling, and yard waste collection programs, including a Sewage Treatment Facility and DPW Yard operated by the Village of Northport	As further described in Section 3

6.4 Solid Waste and Materials Recovery Program Initiatives

Table 6-3 is provided in Section 6.4.1 to identify current and future strategies for the Town to reduce the quantities of various waste streams and increase material diversion rates. At the present time, very little information is available on future independent planning efforts within the incorporated Villages, as their resources do not currently permit dedication of staff to this effort. As initiatives arise, the Town will include future Village planning efforts in the bi-annual LSWMP compliance reports. Additionally, if they so desired, the Villages would have the opportunity to participate in many of the proposed Town programs.

Initiatives have been organized in a numbering system for ease of reference. All items that begin with "1.xx" have been continued from the prior LSWMP planning period; items beginning with "3.xx" originate with this plan update. Column headings are defined as follows:

A. Where possible, specific estimates of waste to be reduced are provided. Otherwise, the amount is designated in reference to the potential overall waste stream that is managed by the Town, should the initiative be in force for 10 or more years. An overall table of waste reduction estimates possible within this planning period is provided in Section 7. Approximate levels are defined as follows:

Low – less than 2% of overall waste stream (<6,750 tons[1])

Medium – 2.1-4% of overall waste stream (6,750-13,500 tons[1])

High – 4.1-10% of overall waste stream (13,500-33,700 tons[1])

Note (1) – calculated based on waste generation summary presented in Section 2.2.6

B. The levels of funding are defined as follows:

Light – under $2500, can be accommodated into existing departmental funding levels.

Low - $2500-$25,000 could be funded by re-prioritizing funds within existing Town Budget.

Medium - $26,000-$75,000 – would require advance planning to dedicate funds.

High – $75,000-$200,000 may require inclusion in long-term capital planning efforts and may require issuance of bonds.

Very High – over $200,000 – may require hiring of staff, issuance of bonds and/or tax levy increase.

C. The levels of demand on staff time are defined as follows:

Low – can be completed by existing personnel with re-prioritization of existing tasks.

Medium – may require abandoning current programs, finding new efficiency initiatives in other arenas, working with student interns or hiring part-time staff.

High –will likely require hiring of additional full time staff.

Keep in mind that the cumulative effect of pursuing multiple initiatives designated as "Low" or "Medium" could result in the necessity of hiring additional full-time staff.

D. The "Priority" column has been completed by the Town, using a combination of the factors estimated in other columns and local knowledge of what changes to their existing programs could reasonably be enacted in the face of current industry trends and their institutional structure. Principles of traditional cost-benefit analysis have been applied, with lower-cost items having a greater impact on the waste stream receiving higher priority ratings. The efforts producing this rating represent the integrated system selection for these items. The levels are as follows:

Low – A worthy pursuit, but unlikely to completed within the current planning period due to lack of resources. It is documented and included for future planning efforts, or in the case of unforeseen events which allow its consideration and/or completion. Items rated as "Low" will not be included in either the Implementation schedule or the Waste Reduction Estimates outlined in Section 7.

Medium – The Town does not foresee garnering the resources to complete these items within the next five years, but could likely garner institutional and financial support within the Planning Period. The priority of these items may change over the course of the planning period.

High – The Town is able to dedicate resources to these items, and they can likely be completed within the Planning Period.

6.4.1 Table of Initiatives

Table 6-3
LSWMP Initiatives

No.	Solid Waste Planning Initiative	Level of potential Waste Reduction	Funds Required	Demands on Staff Time	Priority	Comments
Solid Waste Processing						
3.01	Explore solid waste processing alternatives to prepare for HRRF return to private merchant operation	Varies	High	High	High	Refer to Section 5 for more in-depth discussion
3.02	Conduct a feasibility study to examine the costs and benefits of constructing a Town-owned Solid Waste Transfer Station	Low	Medium	Medium	High	All initiatives discussed in Section 6.4.2 are dependent on construction of a transfer station
3.03	Explore transfer station financing mechanisms such as various forms of flow control legislation in the report produced by Item 3.2	Medium	Low	Medium	High	
Recycling Program Expansion						
1.26	Explore private/regional and/or public options for mixed bulky waste recovery	Low	Low	Low	Low	
3.04	Conduct site selection analysis and conceptual engineering to support construction of a Town-owned Recycling Transfer Station within the current Planning Period	Medium	Very High*	Varies**	High	*Analysis in Section 5.3.1.2. suggests the revenue generation associated with this facility will eventually offset capital costs. **Depends on timing of construction, and whether current staff could be re-allocated from the HRRF after the plant goes merchant
3.05	Should Recycling Transfer Station be constructed, enact a number of new programs.	Various	Various	Various	Medium	Refer to Section 6.4.2 for details; priority is "Medium" as it is dependent on successful completion of Initiative 3.04

Table 6-3
LSWMP Initiatives

No.	Solid Waste Planning Initiative	Level of potential Waste Reduction	Funds Required	Demands on Staff Time	Priority	Comments
3.06	Monitor changes in recycling rates and revenue generation of the "All in One" recycling program. Revise annual bid specifications to encourage rate and revenue increases	Low	Light	Low	High	
3.07	Conduct a pilot program to place public recycling bins in certain areas within BIDs that are subject to municipal collection	Medium	Medium	Medium	Medium	Contamination has been an obstacle in the past.
1.03	Conduct a pilot program to test residential collection of non-bottle, bulky rigid plastics	Low	Low	Low	High	The Town is currently considering this.
3.08	Conduct a pilot program to test the feasibility of instituting a seasonal boat shrink wrap recycling program at Town Marinas.	Low	Low	Low	High	Education program would be needed to ensure the shrink wrap was not contaminated.
3.09	Should the pilot be successful, institute a permanent program at Town-owned marinas, and publicize the program benefits to private marinas.	Low	Light	Low	High	
1.54	Evaluate program expansion options for ash recycling	Medium	High	High	Low	
3.10	Contact recyclers of beverage/aseptic cartons to determine if a viable market for Huntington exists, and if so, design a pilot program to test inclusion of this material in current curbside recycling programs.	Low	Low-Medium	Medium	High	Use the NYS Empire Development Recycling Markets database as a starting point.
General Waste Prevention						
3.12	Evaluate various forms of flow control legislation to reduce dependency on the HRRF	Medium	Low	Low	High	

Table 6-3
LSWMP Initiatives

No.	Solid Waste Planning Initiative	Level of potential Waste Reduction	Funds Required	Demands on Staff Time	Priority	Comments
3.13	Add a page/main menu item to the Town website specifically to provide information to families with small children on recycling resources, containing information on topics such as cloth/compostable diaper services, using leftover food, toys/linens packaging re-use, and activities to teach kids about recycling	Low	Light	Low	High	
3.14	Join and become active in the New York Product Stewardship Council	Low	Low	Medium	High	
3.15	Consider use of Town Facebook, Twitter and other social media accounts to engage the public and drive them to information and resources on the Town's Environmental Waste Management website	Low	Low	Medium	High	The Town Supervisor's Office currently has staff resources to manage social media postings. Waste Management staff is considering creating "Recycling Tips" for regular posting.
3.16	Attempt to contact local lumber mills to determine if a proposal to connect mills with old-growth fallen or removed trees for re-use as flooring or paneling would be viable	Low	Light	Low	High	Proposal originated in the Town's Climate Action Plan.
1.40	Join and become active in the NYS Association for Reduction, Reuse and Recycling. Use resources obtained through membership to better evaluate the types of recycled products that might be cost-effective for the Town to consider modifying purchasing specifications to encourage.	Low	Low	Medium	Medium	
CII Sector Initiatives						

Table 6-3
LSWMP Initiatives

No.	Solid Waste Planning Initiative	Level of potential Waste Reduction	Funds Required	Demands on Staff Time	Priority	Comments
3.17	Work with Chambers of Commerce and BIDs to establish and participate in Recycling Committees that would perform voluntary surveys in the CII sector, and function as a mechanism to both provide recycling resources and create better communication on recycling issues between the Town and the CII sector	Low	Low	Medium	Low	
3.18	Should Chamber and/or BID Recycling Committees be established, provide municipal support necessary to assist in the creation of private recycling collectives that would simplify recycling for and reduce obstacles to recycling more in the CII sector	Medium	Low	Medium	Low	
1.12	Design an annual commercial recycling summit day; work with local business organizations to ensure relevancy and high participation rates	Medium	Low	Medium	Medium	Reach out to local manufacturers who are using recycling materials as sources for manufacturing to serve as event sponsors; focus on economic benefits of recycling
1.24	Create a "Waste Audit Toolkit" webpage for businesses featuring software tools and worksheets for download that would assist businesses to self-assess their waste streams, and learn about the cost reduction benefits associated with having professional waste audits performed.	Varies	Light	Medium	High	Use web pages created by other municipalities as a guide. For example, the Solid Waste Authority of Central Ohio (www.swaco.org) has a page to this effect.

Table 6-3
LSWMP Initiatives

No.	Solid Waste Planning Initiative	Level of potential Waste Reduction	Funds Required	Demands on Staff Time	Priority	Comments
1.42	Create public information campaigns to educate residents, political subdivisions and the CII Sector on the benefits of purchasing recycled products	Low	Medium	Medium	Low	Many products made of recycled materials are currently manufactured in the United States.
3.19	Work with the BIDs and Chamber of Commerce to provide greater public information to businesses on the economic benefits to recycling	Medium	Low	Medium	Medium	
3.20	Add a page/main menu item to the EWM Town website specifically to provide recycling resources to Businesses, incorporating existing information as well as a link to the Empire State Development Recycling Markets Portal	Medium	Light	Low	High	
3.21	Provide information on the Town's website aimed at the medical industry on organizations, such as Practice Greenhealth, that can assist entities such as hospitals and nursing homes with reducing the amount of Regulated Medical Waste generated, thus also reducing the toxicity of the waste stream	Low	Light	Low	Medium High	
Organics						
3.22	Explore Regional composting partnerships	High	Medium-Very High	Medium	Medium	All initiatives discussed in Section 6.4.3 are dependent on the availability of a local, regional-level organics composting facility with the ability to process food waste et al.

Table 6-3
LSWMP Initiatives

No.	Solid Waste Planning Initiative	Level of potential Waste Reduction	Funds Required	Demands on Staff Time	Priority	Comments
3.23	Should an organics processing facility of sufficient capacity and proximity become available, enact a number of new programs	Various	Various	Various	Medium	Refer to Table 6-5.
3.24	Procure a food waste generation and disposal study to inventory all CII sector operations generating food, send surveys, and use other methods to estimate food waste generation with the Town, include public awareness efforts, and provide the Town with specific cost/benefit analyses of various recovery and processing methods.	Medium	Medium	Low	High	
1.15	Create virtual demonstrations of various types of backyard composting demonstrations for posting on the Town's website. Promote with the Town's social media.	Low	Low	Low	High	
3.25	Expand Town's partnership with local food banks, and create a public education program aimed at getting employees of supermarkets, institutions, and other large-scale food waste generators appropriate training so that these entities could become food bank partners/participants	High	Medium	Medium	Medium	
3.26	Institute a Town-licensing or registration program for landscapers, so that generation data on residential and commercial yard waste can be captured, and disposal and/or recovery efforts can be monitored	Low	Medium	Medium	Low	

Table 6-3
LSWMP Initiatives

No.	Solid Waste Planning Initiative	Level of potential Waste Reduction	Funds Required	Demands on Staff Time	Priority	Comments
3.27	Partner with organizations such as Cornell Cooperative Extension to provide local seminars to homeowners aimed at managing plants and trees in a manner that minimizes yard waste, encourages back-yard composting, and reduces dependence on nitrogen-based fertilizers	Low	Low	Medium	Medium	
3.28	Add a page/main menu item to the Environmental Waste Management (EWM) Town website to provide links and promote the Empire State Development Organics Recycling Portal to food-waste generators	Medium	Light	Low	High	
3.29	Hire a consultant to conduct a feasibility study to evaluate zoning and land use regulation changes to promote the use of small-scale anaerobic digesters by local private operators, targeted towards major local generators of food waste	Low	Medium	High	Low	Inter-departmental initiatives can be highly demanding on staff time. This would involve a minimum of two other departments, and to implement outcomes of the study, require extensive public hearings.
Construction & Demolition Debris (C&D)						
1.08	Modify Commercial Building Permits to require identification of C&D disposal/recycling locations, and to require recycling of demolition debris	Medium	Low	Medium	Low	

Table 6-3
LSWMP Initiatives

No.	Solid Waste Planning Initiative	Level of potential Waste Reduction	Funds Required	Demands on Staff Time	Priority	Comments
3.30	Design an interdepartmental program for Waste Management and Building Department to jointly administer targeted towards small haulers (i.e. DIY-ers and/or small residential contractors hauling less than 10 cubic yards) of residential C&D so that generation data can be captured, and disposal and/or recovery efforts can be monitored	Medium	Low	Medium	High	Consider reducing and/or waiving fees for contractors who can demonstrate that they donate a certain percentage of debris for re-use to establishments such as Habitat for Humanity Re-Store. The goal of the program is to collect data and encourage recycling/re-use. Any additional revenue generated would be intended to offset the costs of administering the program only.
3.31	Explore ways to encourage, regulate and enforce source-separation of C&D materials at construction sites	Medium	Medium	Medium	Low	
3.32	Create literature for distribution with commercial and residential building permits, especially demolition permits, to encourage source-separation, recycling and re-use of C&D materials	Low	Low	Low	High	
Biosolids						
1.50	Consider alternative methods of sewage sludge disposal	Low	High	Medium	Medium	
3.33	Procure a consultant to produce an appendix to the Town's Climate Action Plan with a detailed analysis of biosolids reduction, recovery and recycling options	Low	Low	Low	Medium	Waste reduction is "Low" because biosolids generated by the Town are less than %.5 of the total waste stream

Table 6-3
LSWMP Initiatives

No.	Solid Waste Planning Initiative	Level of potential Waste Reduction	Funds Required	Demands on Staff Time	Priority	Comments
3.34	Procure a new belt de-watering press for sludge generated by STP	Low	High	Low	High	See above. This investment reduces disposal costs and greenhouse gas emissions by reducing wet volume to be transported to vendor for processing/disposal.
3.35	Monitor new technology in sludge dryers for a cost-effective option	Low	Light	Low	High	
3.36	Evaluate financing mechanisms to fund various biosolids reduction options	Low	High	Medium	High	
Greenhouse Gas Emissions						
3.37	Continue to expand recycling programs and prevent waste as outlined in this section	Varies	Varies	Varies	High	
3.38	Continue to enact the recommendations of the Town's Climate Action Plan	Low-Medium	Varies	Varies	High	
Regulatory Reports						
3.40	Prepare and submit biennial compliance reports to the NYSDEC. These reports will contain a comparison of current waste quantities and characterizations with the projection tables contained within this report at Table 4-1 and Table 7-4. Tables 4-1 and 7-4 will be refined with each biennial report as additional data becomes available. These reports will also serve as a mechanism for the Town to reach out to the Villages to facilitate Data Collection Initiative 4.03	N/A	Light	Medium	High	This initiative acknowledges Town participation in submission of LSWMP compliance reports in the new biennial format

6.4.2 Transfer Station Evaluation

Should the Town construct a transfer station, the following items detailed in Table 6-4 below will receive consideration and exploration. As they are dependent on a program which has not yet been commenced, they are neither included in Table 6-3 nor prioritized or included in the Section 7 Implementation schedule at this time. Rather, this table serves to justify both the expense and impact of proposed transfer station construction. The initiatives are part of the basis for the waste reduction predictions in Section 7. Column heading definitions are the same as defined in Section 6.4.1, with the exception that "Funds Required" and "Staff Time" includes only those resources that would be required after a Transfer Station was constructed and fully operational.

Table 6-4
LSWMP Initiatives
(Dependent on Town Transfer Station construction)

No.	Solid Waste Planning Initiative	Level of potential Waste Reduction	Funds Required	Demands on Staff Time
1.03	Expand Mandatory Separation Ordinance to include additional plastics (not including film due to processing issues)	Low	Light	Low
1.04	Expand Mandatory Separation Ordinance to include poly-coated paper and other paperboard	Low	Light	Low
1.06	Expand Mandatory Separation Ordinance to include Construction & Demolition Debris	Medium	Low	Medium
1.20	Implement and Enforce C&D Recycling Ordinance	Medium	Medium	Medium
1.30	Procurement of markets for newspaper, corrugated, magazines and commingled containers (glass, metal and plastic); aluminum foil	Low	Light	Low
3.39	Create a “home exchange’ program for re-useable C&D materials and/or bulky items such as furniture	Low	Low	Medium

6.4.3 Expanded Organics Evaluation

Should the Town gain access to a regional-level organics facility in Suffolk County, the following items detailed in Table 6-5 below will receive consideration and exploration. They are not prioritized or included in the Section 7 Implementation schedule at this time, but they serve to justify both the expense of a potential partnership and provide examples of mitigation for impacts of any proposed organics facility construction by others. As the likelihood of facility availability is unknown, these items are not part of the basis for the waste reduction predictions in Section 7. Column heading definitions are the same as defined in Section 6.4.1, with the exception that "Funds Required" and "Staff Time" includes only those resources that would be required after a Composting Facility of sufficient capacity and proximity was fully available to the Town.

Table 6-5
LSWMP Initiatives
(Dependent on Town access to Organics Facility)

No.	Solid Waste Planning Initiative	Level of potential Waste Reduction	Funds Required	Demands on Staff Time
(1.34)	Consider source separation-based composting, depending upon available technology and costs	High	Medium	Medium
(1.52)	Evaluate program expansion options for source separation of food waste, diapers and low-grade paper products	Medium	Low	Medium
(1.53)	Evaluate program expansion options for mass composting	Medium	Low	Low

6.5 Data Collection Efforts

As identified throughout Section 2 and Section 5, the Town's solid waste management planning efforts could benefit from improvements to data collection. Following in Table 6-6 are specific actions the Town could take to improve its understanding of the waste streams generated within its borders, and hence serve as a basis for future programming efforts. Note that many of these efforts will require the cooperation of multiple Town departments and outside agencies, and extracting data from existing governmental records can be complex. Column heading definitions are the same as defined in Section 6.4.1, with the exception that a "Timeframe" column has been added, with values defined as follows:

Short – initial database compilation could be completed in less than two years as the information is currently stored in a useable format by Town or County agencies; updates could be incorporated into current staff levels with re-prioritization of tasks.

Medium – initial database compilation may require 3-6 years as the information is currently collected by Town or County agencies, but would have to be translated into a useable format; updates could be incorporated into current staff levels with re-prioritization of tasks.

Long – initial database compilation will likely require 7 years or more, as the information is not currently collected by local agencies. Survey methods and/or other procedures requiring inter-municipal cooperation or public-private partnerships will have to be devised to begin data collection. These long-term collection efforts will entail a substantial planning effort, in addition to requiring a higher level of staff effort to update and maintain the data.

6.5.1 Table of Data Collection Initiatives

Table 6-6
Data Collection Efforts

No.	Description	Funds Req'd	Demands on Staff	Time-frame	Comments
4.01	Working from Suffolk County Planning Data, create and maintain an inventory of residential housing units in Apartment, Condominium and Town House complexes	None	Low	Short	
4.02	Using the housing unit inventory created in 4.1, create and maintain a database of those units serviced by commercial collection.	None	Low	Short	
4.03	Work with the Incorporated Villages to suggest data collection programs to provide more information on the residential and CII waste streams within their borders	None	Low	Medium	
4.04	Add a mandatory section to the Town's liquid waste hauler application to gather aggregate data on the annual quantities of both septic waste hauled and liquid waste from industrial processes.	Low	Medium	Long	May be perceived as adding a burden to applicants
4.05	Simplify and enforce the annual reporting mechanisms contained with the private carter license application, in an effort to collect more information regarding waste disposal and recycling in the CII sector	Low	Medium	Medium	Town will consider adding an online detailed data collection form for larger operators, and making a simple, multiple choice form for smaller operators.

Table 6-6
Data Collection Efforts

No.	Description	Funds Req'd	Demands on Staff	Time-frame	Comments
4.06	Create an inventory of CII space in the Town, broken down by specific uses and tabulated by square feet	Medium	High	Long	This data is available primarily from commercial sources at this point, and there is not one complete source for it.
4.07	Compile a list of manufacturers and industrial processors who operate within the Town, with detail about industrial processes necessary to support their businesses, as well as number of full and part-time employees	Low	Medium	Medium	Some data may be available from the Building and Fire Marshal Divisions of the Town. This incentive may be manageable due to relatively small amount of manufacturer s operating in the Town
4.08	Amend building, fire marshal and/or other permits commonly used by commercial entities to gather solid waste disposal and/or recycling data	Medium	High	Long	Involves interdepartmental communication and possible Town code changes
4.09	Evaluate revising Town Zoning Code to provide credit towards parking variances for multi-residential developments or expansions, in exchange for dedication of space to recycling collection bins	Low	Medium	Medium	
4.10	Town could consider revising fee structures of permits listed in 4.08 to the extent allowed under General Municipal Law to promote responsible solid waste management. For example, Town could	Varies	High	Long	May be too difficult to enact fairly, or in the cases of punitive measures, too onerous on the business community. But could become a source of revenue to dedicate

Table 6-6
Data Collection Efforts

No.	Description	Funds Req'd	Demands on Staff	Time-frame	Comments
	consider allowing businesses could save a small percent on an expansion permitting process if they were willing to provide a waste audit and submit evidence of meeting recycling targets, or, evaluate a hazardous storage permit fee surcharge related to land-filling of hazardous materials.				to expanding commercial waste data collection and/or expanding support for commercial recycling programs.
4.11	To better estimate food waste generation, consider capturing number of full and part-time employees on all Town public assembly permits	Low	Medium	Long	Involves interdepartmental communication
4.12	Create a voluntary supermarket registry database that would include annual survey efforts to capture number of full/part-time employees, square footage dedicated to food storage and display, and food waste disposal information	Medium	High	Long	The challenge to participation in this effort is devising a participation incentive
4.13	Request from Suffolk County that relevant agencies, such as Health Department and Public Works, combine existing data to produce an annual public report on biosolids produced from sewage treatment plants subject to their control	None	Low	Medium	Town can request only

Table 6-6
Data Collection Efforts

No.	Description	Funds Req'd	Demands on Staff	Time-frame	Comments
4.14	Modify purchasing specifications for Town contracts for MSW and recycling to require detailed disposal and recovery reports with each request for payment	Low	Medium	Medium	Reports from vendors should be in alignment with NYSDEC-provided waste generation models presented in Section 2.2.6
4.15	Explore viable incentives for inclusion in the container licensing process for carters (i.e. licensees) to self-report recyclables data in a format similar to the requirements of NYSDEC annual reporting	Medium	Medium	Long	
4.16	Request from New York State and the United States Federal Government that relevant agencies, such as those agencies governing waste management practices in parks, provide an annual public report on waste handling and recycling in their facilities.	None	Low	Medium	Town can request only

6.6 Waste Management Program Needs

All of the programs outlined in Sections 6.3-6.5 depend heavily on the Town's ability to continue to staff and fund the Town's Solid Waste facilities and the Department of Environmental Waste Management. In the current economic climate, raising additional funds to expand programs may be challenging, so the Town will be carefully evaluating new program initiatives to identify cost-effective efforts.

6.6.1 Infrastructure

The Town's waste management programs depend heavily on the current arrangement with the Covanta WTE Plant, and the existing New York Avenue Recycling Center. In order to support many of the initiatives described in Table 6-3 and Table 6-4, the Town requires a waste and/or recyclables transfer facility under its control. As indicated in prior sections, the Town will be conducting undertaking a planning effort to determine the feasibility of locating and constructing this facility.

6.6.2 Personnel

While many of the initiatives described in Table 6-3 can take place individually within existing staffing levels, the cumulative effect of trying to enact new initiatives simultaneously will place a strain on the current waste management administrative personnel. The Town intends to further evaluate the cost savings associated with various waste reduction measures in order to determine whether these savings would be sufficient to fund an additional staff member in the Environmental Waste Management department. Due to the New York State-mandated tax cap, hiring additional personnel without the prospect of additional revenues or decreased costs would not be an option, and thus may impact the ability of the Town to fully carry out new initiatives in this LSWMP.

6.6.3 Funding

While many of the initiatives described in Table 6-3 can take place individually within existing funding levels, the cumulative effect of trying to enact new initiatives simultaneously will place a strain on the current waste management

departmental budget. The Town intends to further evaluate the cost savings associated with various waste reduction measures in order to determine whether these savings would be sufficient to fund an additional materials recovery programs. Due to the New York State-mandated tax cap, enacting new programs without the prospect of additional revenues or decreased costs would not be option, and thus may impact the ability of the Town to fully carry out new initiatives in this LSWMP.

7.1 Program Summary

7.1.1 Overview

The Town of Huntington's existing solid waste system has been presented and analyzed in the preceding sections of this plan. Section 3 contains a detailed discussion of existing programs; Section 6 describes the selected solid waste system (refer specifically to Table 6-2), as well as new initiatives the Town will be exploring over the next 10 years and beyond.

The Town assembled a vision for the future of Huntington's materials management and recovery programs throughout Section 6, which focuses on maximizing waste reduction and materials recovery, while continuing to manage waste in a cost-effective manner that maximizes environmental benefits and minimizes long-term financial liability for citizens, businesses, and taxpayers. A key priority identified is the need for better data on existing waste streams, especially organic waste and the CII sector, so that the Town can look to further identify initiatives to reduce these waste streams in the future.

Section 6 described a variety of new initiatives that the Town Waste Management Department would recommend evaluating over the long term in order for the Town's strategies and programs to be in line with New York State's *Beyond Waste* Plan. The Town applied a systematic rating system, considering required funds, demands on staff time, and potential for waste reduction to prioritize the initiatives. Though all worthy pursuits, many of these are beyond the means of the Town at this time. As such, Section 7.2 lays out a program of implementation that the Town feels is realistic to achieve prior to the end of the planning period in 2026, within the current fiscal climate, and within the means of the available personnel resources. Section 7.2 contains an implementation schedule for those initiatives which ranked "High" according to the selected criteria. It is intended that the accomplishment of these measures will construct a foundation to better develop the other, lower-ranking initiatives into meaningful and realistic waste management programs in the subsequent planning period.

7.1.2 Highlights

The future of waste management in the Town of Huntington is highly dependent on the potential availability of the Covanta HRRF to the Town, and as this relationship may end prior to the planning period's termination in 2026, the Town is carefully considering a number of options to reduce its dependency on this disposal option. As emphasized in Section 6.4.2, the Town has a keen interest in constructing a transfer station and intends to conduct a feasibility study to fully evaluate this option. This transfer station may serve as point to collect and transfer MSW, or it may handle recyclables. Depending on the financing required and/or land available, the Town may consider one larger transfer facility which would handle both MSW and recyclables, or two smaller facilities dedicated to just one type of operation. Section 6.4.2 fully explored the new materials management and recovery programs that could become viable should a municipal transfer station come to fruition. Those initiatives are not repeated within the implementation schedule, but should the transfer station be constructed, they will be integrated into the current program plan.

Likewise, the Town recognizes the great importance of addressing the organics waste stream, especially in regards to food waste, low-grade paper products and other potentially compostable items such as baby diapers. It is difficult, however, to consider implementation of new strategies to address this waste stream without a high capacity facility located within a reasonable geographic range. As such, initiatives related to such a facility were treated separately in Section 6.4.3, and are not included in the implementation schedule at this time. Should a facility become available for use by the Town, these initiatives will be integrated into the current program plan.

7.2 Program Schedule

Following in Table 7-1, please find an implementation schedule for "High Priority" new waste management programs and strategies identified within Section 6. The implementation period covers from the present, up to and including the year of 2026. Item numbers beginning with "1" are continued from the prior planning period; item numbers beginning with "3" are new program-based initiatives which will result in waste reduction; and item numbers beginning with "4" are data collection initiatives which will serve as the basis for refinement and development of all current and future programs and strategies.

Every effort has been made to include waste strategies and programs that will improve the knowledge and management of all waste streams within the Town's borders, in accordance with the State's *Beyond Waste* SWMP. The implementation schedule has been carefully crafted to maximize the benefits of each new initiative, while working within the very real constraints faced by the limited staff and resources of the Department of Environmental Waste Management. Please refer further to Table 7-2, Implementation Matrix, to see a summary of the aspects of solid waste management and advanced materials recovery that will be completed each year of the Planning Period. The Town considers this schedule realistic, and will work to incorporate this LSWMP as a living document into their existing responsibilities.

Table 7-1
LSWMP New Initiatives

No.	Category	Solid Waste Planning Initiative	Proposed Completion Date	Comments
3.01	Solid Waste Processing	Explore solid waste processing alternatives to prepare for HRRF return to private merchant operation	2019	Current legal agreements expire November 30, 2019. Facility reverts to merchant operation in 2024.
3.02	Solid Waste Processing	Conduct a feasibility study to examine the costs and benefits of constructing a Town-owned Solid Waste Transfer Station	2019	The outcome of this task will determine if this is a viable project, the extent of SEQR review required, and the recommended timeframe for potential construction.
3.03	Solid Waste Processing	Explore transfer station financing mechanisms such as various forms of flow control legislation in the report produced by Item 3.2	2019	
3.04	Recycling Program Expansion	Conduct a feasibility study which includes site selection analysis and conceptual engineering to explore Town needs and potentially support construction of a Town-owned Recycling Transfer Station within the current Planning Period	2020	The outcome of this task will determine if this is a viable project, the extent of SEQR review required, and the recommended timeframe for potential construction.

Table 7-1
LSWMP New Initiatives

No.	Category	Solid Waste Planning Initiative	Proposed Completion Date	Comments
3.06	Recycling Program Expansion	Monitor changes in recycling rates and revenue generation of the "All in One" recycling program. Revise annual bid specifications to encourage rate and revenue increases	on-going	Market conditions will be a key factor in the duration and outcome of this task
1.03	Recycling Program Expansion	Conduct a pilot program to test residential collection of non-bottle, bulky rigid plastics	2019	Market conditions will be a key factor in the duration and outcome of this task
3.08	Recycling Program Expansion	Conduct a pilot program, and associated public education, to test the feasibility of instituting a seasonal boat shrink wrap recycling program at Town Marinas.	2021	Education program would be needed to ensure the shrink wrap was not contaminated
3.09	Recycling Program Expansion	Should the pilot be successful, institute a permanent program at Town-owned marinas, and publicize the program benefits to private marinas.	2023	Dependent on successful completion of Initiative 3.08
3.10	Recycling Program Expansion	Contact recyclers of beverage/aseptic cartons to determine if a viable market for Huntington exists, and if so, design a pilot program to test inclusion of this material in current curbside recycling programs.	2022	Use the NYS Empire Development Recycling Markets database as a starting point.
3.12	General Waste Prevention	Evaluate various forms of flow control legislation to reduce dependency on the HRRF	2019	

Table 7-1
LSWMP New Initiatives

No.	Category	Solid Waste Planning Initiative	Proposed Completion Date	Comments
3.13	General Waste Prevention	Add a page/main menu item to the Town website specifically to provide information to families with small children on recycling resources, containing information on topics such as cloth/compostable diaper services, using leftover food, toys/linens packaging re-use, and activities to teach kids about recycling	2020	
3.14	General Waste Prevention	Join and become active in the New York Product Stewardship Council	2021	
3.15	General Waste Prevention	Consider use of Town Facebook, Twitter and other social media accounts to engage the public and drive them to information and resources on the Town's Environmental Waste Management website	2018	Waste Management staff is considering creating "Recycling Tips" for regular posting
3.16	General Waste Prevention	Attempt to contact local lumber mills to determine if a proposal to connect mills with old-growth fallen or removed trees for re-use as flooring or paneling would be viable	2021	Proposal originated in the Town's Climate Action Plan.

Table 7-1
LSWMP New Initiatives

No.	Category	Solid Waste Planning Initiative	Proposed Completion Date	Comments
1.40	General Waste Prevention	Join and become active in the NYS Association for Reduction, Reuse and Recycling. Use resources obtained through membership to better evaluate the types of recycled products that might be cost-effective for the Town to consider modifying purchasing specifications to encourage.	2020	
1.24	CII Sector Initiatives	Create a "Waste Audit Toolkit" webpage for businesses featuring software tools and worksheets for download that would assist businesses to self-assess their waste streams, and learn about the cost reduction benefits associated with having professional waste audits performed.	2022	
3.20	CII Sector Initiatives	Add a page/main menu item to the EWM Town website specifically to provide recycling resources to Businesses, incorporating existing information as well as a link to the Empire State Development Recycling Markets Portal	2019	

Table 7-1
LSWMP New Initiatives

No.	Category	Solid Waste Planning Initiative	Proposed Completion Date	Comments
3.21	CII Sector Initiatives	Provide information on the Town's website aimed at the medical industry on organizations, such as Practice Greenhealth, that can assist entities such as hospitals and nursing homes with reducing the amount of Regulated Medical Waste generated, thus also reducing the toxicity of the waste stream	2024	
3.24	Organics	Procure a food waste generation and disposal study to inventory all CII sector operations generating food, send surveys, and use other methods to estimate food waste generation with the Town, include public awareness efforts, and provide the Town with specific cost/benefit analyses of various recovery and processing methods.	2022	
1.15	Organics	Create virtual demonstrations of various types of backyard composting demonstrations for posting on the Town's website. Promote with the Town's social media	2023	

Table 7-1
LSWMP New Initiatives

No.	Category	Solid Waste Planning Initiative	Proposed Completion Date	Comments
3.28	Organics	Add a page/main menu item to the Environmental Waste Management (EWM) Town website to provide links and promote the Empire State Development Organics Recycling Portal to food-waste generators	2019	
3.30	Construction & Demolition Debris	Design an interdepartmental program for Waste Management and Building Department to jointly administer targeted towards small haulers (i.e. DIY-ers and/or small residential contractors hauling less than 10 cubic yards) of residential C&D so that generation data can be captured, and disposal and/or recovery efforts can be monitored	2024	
3.32	Construction & Demolition Debris	Create literature for distribution with commercial and residential building permits, especially demolition permits, to encourage source-separation, recycling and re-use of C&D materials	2019	
3.34	Biosolids	Procure a new belt de-watering press for sludge generated by STP	2018 (?)	

Table 7-1
LSWMP New Initiatives

No.	Category	Solid Waste Planning Initiative	Proposed Completion Date	Comments
3.35	Biosolids	Monitor new technology in sludge dryers for a cost-effective option	2026	This activity will be ongoing throughout the Planning Period, and dependent on private sector technology developments.
3.36	Biosolids	Evaluate financing mechanisms to fund various biosolids reduction options	2023	
3.37	Greenhouse Gas Emissions	Continue to expand recycling programs and prevent waste as outlined in this section	2026	This activity will be ongoing throughout the Planning Period.
3.38	Greenhouse Gas Emissions	Continue to enact the recommendations of the Town's Climate Action Plan	2026	This activity will be ongoing throughout the Planning Period.
4.01	Data Collection Efforts	Working from Suffolk County Planning Data, create and maintain an inventory of residential housing units in Apartment, Condominium and Town House complexes	2020	Will improve knowledge and management of residential waste stream
4.02	Data Collection Efforts	Using the housing unit inventory created in 4.1, create and maintain a database of those units serviced by commercial collection.	2020	Will improve knowledge and management of residential waste stream
4.03	Data Collection Efforts	Work with the Incorporated Villages to suggest data collection programs to provide more information on the residential and CII waste streams within their borders	2021	

Table 7-1
LSWMP New Initiatives

No.	Category	Solid Waste Planning Initiative	Proposed Completion Date	Comments
4.04	Data Collection Efforts	Add a mandatory section to the Town's liquid waste hauler application to gather aggregate data on the annual quantities of both septic waste hauled and liquid waste from industrial processes.	2025	Will improve knowledge and management of non-hazardous industrial waste stream
4.05	Data Collection Efforts	Simplify and enforce the annual reporting mechanisms contained with the private carter license application, in an effort to collect more information regarding waste disposal and recycling in the CII sector	2019	Will improve knowledge and management of the CII sector waste stream
4.06	Data Collection Efforts	Create an inventory of CII space in the Town, broken down by specific uses and tabulated by square feet	2024	Will improve knowledge and management of the CII sector waste stream
4.07	Data Collection Efforts	Compile a list of manufacturers and industrial processors who operate within the Town, with detail about industrial processes necessary to support their businesses, as well as number of full and part-time employees	2025	Will improve knowledge and management of non-hazardous industrial waste stream
4.08	Data Collection Efforts	Amend building, fire marshal and/or other permits commonly used by commercial entities to gather solid waste disposal and/or recycling data	2023	
4.09	Data Collection Efforts	Evaluate revising Town Zoning Code to provide credit towards parking variances for multi-residential developments or expansions, in exchange for	2019	

Table 7-1
LSWMP New Initiatives

No.	Category	Solid Waste Planning Initiative	Proposed Completion Date	Comments
		dedication of space to recycling collection bins		
4.10	Data Collection Efforts	Town could consider revising fee structures of permits listed in 4.08 to the extent allowed under General Municipal Law to promote responsible solid waste management. For example, Town could consider allowing businesses could save a small percent on an expansion permitting process if they were willing to provide a waste audit and submit evidence of meeting recycling targets. Alternatively, an evaluation of a hazardous storage permit fee surcharge related to land-filling of hazardous materials.	2026	
4.11	Data Collection Efforts	To better estimate food waste generation, consider capturing number of full and part-time employees on all Town public assembly permits	2023	
4.12	Data Collection Efforts	Create a voluntary supermarket registry database that would include annual survey efforts to capture number of full/part-time employees, square footage dedicated to food storage and display, and food waste disposal information	2024	
4.13	Data Collection Efforts	Request from Suffolk County that relevant agencies, such as Health Department and Public Works, combine existing data	2021	

Table 7-1
LSWMP New Initiatives

No.	Category	Solid Waste Planning Initiative	Proposed Completion Date	Comments
		to produce an annual public report on biosolids produced from sewage treatment plants subject to their control		
4.14	Data Collection Efforts	Modify purchasing specifications for Town contracts for MSW and recycling to require detailed disposal and recovery reports with each request for payment	2018 (?)	
4.15	Data Collection Efforts	Explore viable incentives for inclusion in the container licensing process for carters (i.e. licensees) to self-report recyclables data in a format similar to the requirements of NYSDEC annual reporting	2024	
4.16	Data Collection Efforts	Request from New York State and the United States Federal Government that relevant agencies, such as those agencies governing waste management practices in parks, provide an annual public report on waste handling and recycling in their facilities.	2021	

Table 7-1
LSWMP New Initiatives

No.	Category	Solid Waste Planning Initiative	Proposed Completion Date	Comments
3.40	Regulatory Reports	Prepare and submit biennial compliance reports to the NYSDEC. These reports will contain a comparison of current waste quantities and characterizations with the projection tables contained within this report at Table 4-1 and Table 7-4. Tables 4-1 and 7-4 will be refined with each biennial report as additional data becomes available. These reports will also serve as a mechanism for the Town to reach out to the Villages to facilitate Data Collection Initiative 4.03	On-going	Based on final LSWMP adoption in 2018, first report is due 2020

A yearly matrix is provided below in Table 7-2, for ease of implementation by the Planning Unit. Due the near expiration of the current agreement with Covanta for use of the HRRF, the major solid waste processing initiatives would likely need to be completed by Environmental Waste Management staff prior to the end of 2019. As these changes will require significant demands of staff time, implementation of most new programs and strategies is targeted for completion in 2020 or beyond.

Years 2025 and 2026 were left light, so that the later years of the implementation could be flexible and allow for adjustment to accompany new programs related to either a Recycling Transfer Station or an Organics Processing Facility becoming available to the Town, as more specifically described in Sections 6.4.2 and 6.4.3. Those years would also begin the focus on creating an update for this Plan with a new implementation schedule beginning in

2027. As such, most data collection efforts are scheduled to be initiated prior to 2025, so that the results of these efforts will be available for use by the Planning Unit for the next Planning Period. Note that data collection efforts include items that address all of the waste streams generated within Town borders, including, but not limited, to waste generated within the CII sector and non-hazardous industrial waste.

Table 7-2
Implementation Matrix

Year	Initiatives to be Completed	Categories Addressed Each Year
2017	3.02, 3.06, 1.03, 3.15, 3.28	Solid Waste Processing, Recycling Program Expansion, General Waste Prevention, Organics
2018	3.03, 3.12, 3.20, 4.01, 4.02, 4.09, 4.14, 3.34	Solid Waste Processing, General Waste Prevention, CII Sector, Data Collection Efforts, Biosolids
2019	3.01, 3.13, 3.32, 4.05, 3.40	Solid Waste Processing, General Waste Prevention, Construction & Demolition Debris, Data Collection Efforts, Regulatory Reports
End of Current HRRF (Covanta) agreements		
2020	3.04, 3.16, 1.40, , 4.03, 4.13, 4.16	Recycling Program Expansion, General Waste Prevention, , Data Collection Efforts
2021	3.08, 3.14, 3.24	Recycling Program Expansion, General Waste Prevention, Organics
2022	3.10, 1.24, 1.15, 4.07, 4.08	Recycling Program Expansion, CII Sector, Organics, Data Collection Efforts

Table 7-2
Implementation Matrix

Year	Initiatives to be Completed	Categories Addressed Each Year
2023	3.09, 3.21, 3.36, 4.11	Recycling Program Expansion, CII Sector, Biosolids, Data Collection Efforts
2024	3.30, 4.06, 4.12, 4.15	Construction & Demolition Debris, Data Collection Efforts
Covanta facility reverts to merchant operation		
2025	4.04	Data Collection Efforts
2026	3.35, 3.37, 3.38, 4.10	Biosolids, Greenhouse Gas Emissions, Data Collection Efforts

7.3 Waste Reduction Predictions

7.3.1 Overview

To assist the Town of Huntington in formulating waste prevention and material recovery increase goals, each selected new initiative was categorized in Section 6 by its level of potential waste reduction. Herein a tabular summary (refer to Table 7- 3) of the potential for waste reduction is included, as well as detailed waste projections (refer to Table 7-4) which were derived by combining the simplified waste projections presented in Section 4 with the potential programmatic changes detailed throughout Section 6 and Section 7.

In addition for accounting for scheduled programmatic changes, the detailed waste projections contained within Table 7-4 factor in the typical waste quantity and material recovery trends the Town has experienced over the past five-ten years. For example, based on data presented in Sections 2 and Section 3, it is reasonable to anticipate a general increase in recyclables under the Town single-stream program of approximately 1200 tons per year, based on current public education programs, heightened consumer awareness, and continual expansion of recycling markets. A comparable increase has been factored into the recycling rates of the CII sector. All of these waste streams are presented in an amalgamated table in Section 7.3.3.

7.3.2 Waste Reduction due to Programmatic Changes

In Section 6, two levels of categorization were applied to each potential waste management initiative - 1) Type of Initiative, and 2) Level of Potential Waste Reduction. The approximate levels of potential waste reduction were defined as follows:

Low – less than 2% of overall waste stream (<6,750 tons[1])

Medium – 2.1-4% of overall waste stream (6,750-13,500 tons[1])

High – 4.1-10% of overall waste stream (13,500-33,700 tons[1])

Note (1) – calculated based on waste generation summary presented in Section 2.2.6, which was based on quantities recorded and estimated for the year 2013, and are subsequently used as the 2013 input for Table 7-4.

Following please find Table 7-3, a summary of the potential waste reduction from each selected programmatic change. More detailed projections are contained within Section 7.3.3.

Table 7-3
Waste Reduction due to Programmatic Changes

Implementation Year	Initiative Number	Category	Reduction Category	Comments
2017	3.02	Solid Waste Processing	Low	Transfer Station feasibility study will not generate immediate impact, but recommendations of study may be implemented prior to endo of planning period
2017	3.06	Recycling Program Expansion	Low	This could provide modest increase in general recycling rates as early as 2018
2017	1.03	Recycling Program Expansion	Low	This could provide modest increase in bulky plastics recycling rates as early as 2018
2017	3.15	General Waste Prevention	Low	Increased Public Education is factored into general trends of increased materials recovery
2017	3.28	Organics	Low	Increased Public Education is factored into increased organics recovery beginning in 2018

Table 7-3 Waste Reduction due to Programmatic Changes				
Implementation Year	**Initiative Number**	**Category**	**Reduction Category**	**Comments**
2018	3.03	Solid Waste Processing	Medium	Implementing recommendations of study conducted as Initiative 3.02 may result in significant waste reduction impacts prior to end of planning period.
2018	3.12	General Waste Prevention	Medium	Implementation of some type of flow control has potential to produce a significant impact, but as the methods and implementation timeframe have yet to be determined, this is not included in waste projection estimates.
2018	3.20	CII Sector Initiative	Medium	Increased Public Education is factored into general trends of increased materials recovery
2018	4.01	Data Collection Efforts	N/A	Will improve knowledge and management of residential waste stream
2018	4.02	Data Collection Efforts	N/A	Will improve knowledge and management of residential waste stream
2018	4.09	Data Collection Efforts	N/A	Will support recycling in new dense residential developments, which in some cases would be collected privately

Table 7-3
Waste Reduction due to Programmatic Changes

Implementation Year	Initiative Number	Category	Reduction Category	Comments
2018	4.14	Data Collection Efforts	N/A	Will improve knowledge and management of residential waste stream; may also lead to improved enforcement of Town recycling codes
2019	3.01	Solid Waste Processing	Varies	Refer to Section 5 for more in-depth discussion – for years 2020, 2025, and 2030, a 1% decrease in waste generation was applied to the simplified generation numbers presented in Section 4 to account for the combined impact of potential to reduce dependency on the HRRF
2019	3.13	General Waste Prevention	Low	Increased Public Education is factored into increased recovery of diapers, durable goods and packaging materials beginning in 2020
2019	3.32	C&D	Low	Increased Public Education is factored into increased recovery of C&D materials beginning in 2020. As all C&D is not included in Table 7-4, a recovery increase is shown in the summary Table 7-5

Table 7-3 Waste Reduction due to Programmatic Changes				
Implementation Year	**Initiative Number**	**Category**	**Reduction Category**	**Comments**
2019	4.05	Data Collection Efforts	N/A	Will improve knowledge and management of residential waste stream; may also lead to improved enforcement of Town recycling codes
2019	3.40	Regulatory Reports	N/A	
2020	3.04	Recycling Program Expansion	Medium	Construction of Town-owned recycling transfer has potential to produce a significant expansion in recycling programs, but as the construction timeframe has yet to be determined, this is not included in waste projection estimates.
2020	3.16	General Waste Prevention	Low	It is unknown at this time if outcome will lead to a reduction in wood recycling rates
2020	1.40	General Waste Prevention	N/A	This task is aimed at increasing the sustainability of general Town operations, and providing tools to Town Waste Management Personnel for future recycling program expansion

Table 7-3 Waste Reduction due to Programmatic Changes				
Implementation Year	**Initiative Number**	**Category**	**Reduction Category**	**Comments**
2018	3.34	Biosolids	Low	Though biosolids are not accounted for in the detailed waste projections in Table 7-4, an increase in biosolids recovery is shown beginning in 2020 in Table 7-6, summary projections.
2020	4.03	Data Collection Efforts	N/A	Goal is to provide tools to the Villages to improve their knowledge and management of their waste streams
2020	4.16	Data Collection Efforts	N/A	Goal is to provide Town better understanding of waste management practices of State and Federal agencies
2020	4.13	Biosolids	N/A	Should the associated entities respond to Town requests, this will improve knowledge of biosolids waste stream, and open dialogue with governmental entities who are not under direct control of any NYSDEC-designated Planning Unit
2021	3.08	Recycling Program Expansion	Low	As outcome of this pilot is uncertain, recovery increases are not factored into waste projections at this time.

Table 7-3 Waste Reduction due to Programmatic Changes				
Implementation Year	**Initiative Number**	**Category**	**Reduction Category**	**Comments**
2021	3.14	General Waste Prevention	Low	This task is aimed at increasing the general sustainability of manufacturing operations, and providing tools to Town Waste Management Personnel for future CII sector programs
2021	3.24	Organics	Medium	Based on increased consumer and CII awareness as result of Town programs and in general culture, as well as advances in waste processing technologies, a moderate increase in food scrap recovery is included in waste projections beginning in 2025
2022	3.10	Recycling Program Expansion	Low	As outcome of this pilot is uncertain, specific recovery increases due to this initiative are not factored into waste projections at this time, though it is likely recycling and re-use technology increases will support a trend in increased recovery of this material.

Table 7-3
Waste Reduction due to Programmatic Changes

Implementation Year	Initiative Number	Category	Reduction Category	Comments
2022	1.24	CII Sector Initiatives	Varies	Specific recovery increases due to this initiative are not factored into waste projections at this time, though it will support a trend in increased recycling by the CII sector
2022	1.15	Organics	Low	Based on increased consumer and CII awareness as result of Town programs and in general culture, as well as advances in waste processing technologies, a moderate increase in food scrap recovery is included in waste projections beginning in 2025
2022	4.07	Data Collection Efforts	N/A	Will improve knowledge and management of non-hazardous industrial waste stream
2022	4.08	Data Collection Efforts	N/A	Will improve knowledge and management of CII waste stream
2023	3.09	Recycling Program Expansion	Low	As outcome of this pilot is uncertain, recovery increases are not factored into waste projections at this time.

Table 7-3
Waste Reduction due to Programmatic Changes

Implementation Year	Initiative Number	Category	Reduction Category	Comments
2023	3.21	CII Sector Initiatives	Low	No impact on waste stream predictions; medical waste is not included in model. However, public education in the CII sector helps to support trend of waste prevention and increased material recovery, and targeting regulated medical waste can reduce toxicity in the waste stream
2023	3.36	Biosolids	Low	Though biosolids are not accounted for in the detailed waste projections in Table 7-4, an increase in biosolids recovery is shown beginning in 2025 in Table 7-5, summary projections.
2023	4.11	Data Collection Efforts	N/A	Will improve knowledge and management of organics stream
2024	3.30	C&D	Medium	A modest decrease in C&D is shown in waste projections beginning in 2030, as well as a minor increase in C&D recovery is shown beginning in 2025 in Table 7-6, other projections.

Table 7-3
Waste Reduction due to Programmatic Changes

Implementation Year	Initiative Number	Category	Reduction Category	Comments
2024	4.06	Data Collection Efforts	N/A	Will improve knowledge and management of CII waste stream
2024	4.12	Data Collection Efforts	N/A	Will improve knowledge and management of organics stream
2024	4.15	Data Collection Efforts	N/A	Will improve knowledge and management of CII waste stream
2025	4.04	Data Collection Efforts	N/A	Will improve knowledge and management of non-hazardous industrial waste stream
2026	3.35	Biosolids	Low	Though biosolids are not accounted for in the detailed waste projections in Table 7-4, an increase in biosolids recovery is shown beginning in 2030 in Table 7-6, other projections.
2026	3.37	Greenhouse Gas Emissions	N/A	This activity is included on this chart as a clear and present reminder of that the Town is committed to enhancing the multi-faceted environmental benefits of a sustainable waste management program

Table 7-3 Waste Reduction due to Programmatic Changes				
Implementation Year	**Initiative Number**	**Category**	**Reduction Category**	**Comments**
2026	3.38	Greenhouse Gas Emissions	N/A	This activity is included on this chart as a clear and present reminder of that the Town is committed to enhancing the multi-faceted environmental benefits of a sustainable waste management program
2026	4.10	Data Collection Efforts	N/A	Though outcome of this potential program is uncertain at this time, it has potential to both increase CII recycling rates and reduce toxicity in the waste stream.

7.3.3 Detailed Waste Stream Projections

The projections presented in this section are based on the 2016 version of the NYSDEC waste stream projection model. The model has been adjusted to reflect more accurately the population estimates and waste generation rates that were presented in earlier sections of the plan, and are based on the best available, local, specific data. Table 7-5 included below is a more detailed adaption of the simplified projections presented in Section 4 of this plan, and demonstrates the waste generation inputs that were used in Table 7-4. It should be noted, however, that the model does not account for the decreased use of items, such as newspaper and phone books, which would be expected over the duration of the planning period. And of course, consumer trends over the planning period may provide new unforeseen sources of waste, such as increases in plastic packaging, which are unpredictable at this time. It is reasonable to anticipate, given the historical data analyzed, that the general waste generation trend will continue to increase, even as its specific composition changes.

Though the starting point in indicated for the year of 2013 in the waste projection table is a diversion rate of 30.1%, it is emphasized that the Town feels it is likely that the actual recycling rates being achieved across all sectors within their geographic boundaries are closer the EPA estimate of the national average, 34.3%. However, as illustrated throughout this plan, currently the Town lacks sufficient data on the CII sector, and as such, has chosen to conservatively estimate the amount of CII sector recyclables for the years 2013 and 2016. However, beginning in 2020, it is anticipated that the results of data collection efforts and increased interaction with the CII sector through both public education programs and participation in various trade organizations, will begin to support more ambitious recovery goals.

Note that the 2016 numbers reflect an expected total increase in recyclables handled by the Town in an amount of 1200 tons, as well as similar percentage increases for the CII sector, due to the availability of single stream recycling. However, since contamination of recyclable paper is being cited as a frequent concern, the percentages of each type of paper recovered are slightly decreased to reflect the current trend. This trend is reversed in future projection years in anticipation of increases in technology, better behavior of consumers in the face of increased awareness, and stricter Town controls on single-stream collection and processing.

Projections for the years 2020, 2025, and 2030 reflect the programmatic changes detailed in Section 7.2 and Table 7-3, in addition to reflecting the results of increased data collection and general industry trends. For example, it is anticipated the newspapers and phone books will continue to be less of the waste stream due to their cultural decline as a medium. And as more attention is brought to the issue of environmental contamination, both by changing cultural norms and initiatives of County, State and Federal governments, increases in the percentage of recovery of items like plastic film and electronic waste are also included.

Every effort has been made to create a realistic projection for the Town, which faces increasing population, decreasing local revenues and limited personnel resources, while factoring in modest gains in the recovery of specific materials that both Town programs, general trends and recovery technologies will contribute to. It is also recognized, however, that there is a limit to what government programs can do to change consumer behavior. For example, it is surprising that local data indicates only about one third (1/3) of glass bottles, jars, and containers generated are recovered, especially in light of State and local regulations, as well as strict enforcement by the Town of their programs and HRRF protocols. This is a material that has been recyclable for many years, and included in initial consumer programs and public awareness dating back thirty years or more. While eventually a demographic shift may drastically increase recovery of materials such as this, it is unlikely that during the planning period any major gains will be made on "traditional" recyclable materials, even with the impact of planned new programs.

Following please find Table 7-4, detailing projections and goals for the estimated entirety of the MSW streams within the Planning Unit.

Table 7-4
Town of Huntington
Detailed Waste Projections and Recovery Goals

Town of Huntington																	
Municipal Solid Waste (MSW) Combined Composition Analysis and Projections																	
			2013			2016			2020			2025			2030		
		MSW Materials Comp. (%)	MSW Generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted
Material		100.00%	328,029	98,861	30.1%	331,049	104,870	31.7%	334,752	116,267	34.7%	341,515	128,885	37.7%	346,829	140,425	40.5%
Newspaper		4.00%	13,129	8,008	61.0%	13,250	7,950	60.0%	13,398	8,709	65.0%	13,668	9,363	68.5%	13,881	9,717	70.0%
Corrugated Cardboard		11.11%	36,434	14,938	41.0%	36,769	14,891	40.5%	37,180	16,731	45.0%	37,931	18,207	48.0%	38,522	19,261	50.0%
Other Recyclable Paper	Paperboard	2.52%	8,273	2,978	36.0%	8,349	2,922	35.0%	8,443	3,208	38.0%	8,613	3,704	43.0%	8,747	4,111	47.0%
	Office Paper	2.06%	6,743	1,888	28.0%	6,805	1,769	26.0%	6,881	2,064	30.0%	7,020	2,457	35.0%	7,129	2,780	39.0%
	Junk Mail	2.35%	7,721	1,200	15.5%	7,793	1,052	13.5%	7,880	1,300	16.5%	8,039	1,487	18.5%	8,164	1,633	20.0%
	Other Commercial	1.96%	6,444	800	12.4%	6,503	715	11.0%	6,576	881	13.4%	6,709	1,000	14.9%	6,813	1,117	16.4%
	Magazines	0.94%	3,080	900	29.2%	3,108	901	29.0%	3,143	949	30.2%	3,206	1,016	31.7%	3,256	1,081	33.2%
	Books	0.44%	1,432	0	0.0%	1,445	0	0.0%	1,461	0	0.0%	1,491	45	3.0%	1,514	76	5.0%
	Paper Bags	0.40%	1,316	316	24.0%	1,328	305	23.0%	1,343	349	26.0%	1,370	412	30.1%	1,391	487	35.0%
	Phone Books	0.30%	980	160	16.3%	989	168	17.0%	1,000	183	18.3%	1,020	255	25.0%	1,036	311	30.0%
	Poly-Coated	0.20%	669	0	0.0%	675	0	0.0%	682	0	0.0%	696	35	5.0%	707	71	10.0%
Other Recyclable Paper (Total)		11.18%	36,657	8,242	22.5%	36,995	7,834	21.2%	37,409	8,935	23.9%	38,164	10,411	27.3%	38,758	11,667	30.1%
Other Compostable Paper		6.42%	21,073	5,268	25.0%	21,267	5,104	24.0%	21,504	6,021	28.0%	21,939	7,240	33.0%	22,280	8,021	36.0%
Total Paper		32.71%	107,292	36,456	34.0%	108,280	35,779	33.0%	109,491	40,396	36.9%	111,703	45,221	40.5%	113,441	48,665	42.9%
	Ferrous Containers	1.04%	3,422	1,600	46.8%	3,453	1,692	49.0%	3,492	1,781	51.0%	3,562	1,852	52.0%	3,618	1,917	53.0%

Town of Huntington

Municipal Solid Waste (MSW) Combined Composition Analysis and Projections

			2013			2016			2020			2025			2030		
		MSW Materials Comp. (%)	MSW Generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted
Ferrous/Aluminum Containers	Aluminum Containers	0.50%	1,626	700	43.0%	1,641	739	45.0%	1,660	780	47.0%	1,693	830	49.0%	1,720	877	51.0%
Ferrous/Aluminum Containers (Total)		1.54%	5,048	2,300	45.6%	5,095	2,431	47.7%	5,152	2,561	49.7%	5,256	2,682	51.0%	5,338	2,795	52.4%
Other Ferrous Metals		7.19%	23,570	6,600	28.0%	23,787	7,850	33.0%	24,053	8,900	37.0%	24,539	10,061	41.0%	24,921	11,214	45.0%
Other Non-Ferrous Metals	Other aluminum	0.23%	768	200	26.0%	775	225	29.0%	784	251	32.0%	800	280	35.0%	812	309	38.0%
	Automotive batteries	0.58%	1,893	1,700	89.8%	1,910	1,729	90.5%	1,932	1,797	93.0%	1,971	1,853	94.0%	2,002	1,901	95.0%
	Other non-aluminum	0.34%	1,106	100	9.0%	1,116	123	11.0%	1,129	158	14.0%	1,152	207	18.0%	1,170	246	21.0%
Other Non-Ferrous Metals (Total)		1.15%	3,768	2,000	53.1%	3,802	2,077	55.0%	3,845	2,206	58.0%	3,923	2,340	62.0%	3,984	2,456	64.0%
Total Metals		9.87%	32,386	10,900	33.7%	32,684	12,357	37.8%	33,050	13,666	41.4%	33,717	15,083	44.7%	34,242	16,465	48.1%
PET Containers		0.88%	2,891	694	24.0%	2,918	846	29.0%	2,950	944	32.0%	3,010	993	33.0%	3,057	1,070	35.0%
HDPE Containers		0.84%	2,746	577	21.0%	2,771	665	24.0%	2,802	785	28.0%	2,859	915	32.0%	2,903	1,045	36.0%
Other Plastic (3-7) Containers		0.20%	656	184	28.0%	662	212	32.0%	669	234	35.0%	683	259	38.0%	693	277	40.0%
Film Plastic		5.62%	18,422	921	5.0%	18,591	1,673	9.0%	18,799	2,632	14.0%	19,179	3,452	18.0%	19,477	4,285	22.0%
Other Plastic	Durables	3.08%	10,097	1,817	18.0%	10,190	2,344	23.0%	10,304	2,885	28.0%	10,512	3,469	33.0%	10,676	3,950	37.0%
	Non-Durables	1.68%	5,502	1,320	24.0%	5,552	1,471	26.5%	5,614	1,572	28.0%	5,728	1,718	30.0%	5,817	1,803	31.0%
	Packaging	1.30%	4,268	1,067	25.0%	4,307	1,171	27.2%	4,355	1,372	31.5%	4,443	1,489	33.5%	4,513	1,579	35.0%
Other Plastic (Total)		6.06%	19,867	4,205	21.2%	20,050	4,986	24.9%	20,274	5,829	28.8%	20,684	6,676	32.3%	21,005	7,333	34.9%
Total Plastics		13.59%	44,581	6,580	14.8%	44,992	8,382	18.6%	45,495	10,424	22.9%	46,414	12,296	26.5%	47,136	14,010	29.7%
Glass Bottles, Jars and Containers		3.88%	12,736	3,693	29.0%	12,853	4,242	33.0%	12,997	4,939	38.0%	13,260	5,437	41.0%	13,466	5,790	43.0%
Other Glass (Flat glass, dishware,		0.34%	1,115	300	26.9%	1,125	304	27.0%	1,138	341	30.0%	1,161	371	32.0%	1,179	401	34.0%
Total Glass		4.22%	13,851	3,993	28.8%	13,978	4,545	32.5%	14,135	5,280	37.4%	14,420	5,808	40.3%	14,645	6,191	42.3%

Town of Huntington

Municipal Solid Waste (MSW) Combined Composition Analysis and Projections

		2013			2016			2020			2025			2030		
	MSW Materials Comp. (%)	MSW Generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted
Food Scraps	14.07%	46,150	10	0.0%	46,575	47	0.1%	47,096	141	0.3%	48,047	480	1.0%	48,795	2,440	5.0%
Leaves and Grass / Pruning and	10.10%	33,144	22,675	68.4%	33,449	23,080	69.0%	33,824	24,015	71.0%	34,507	25,880	75.0%	35,044	27,334	78.0%
Total Organics	24.17%	79,294	22,685	28.6%	80,024	23,127	28.9%	80,919	24,156	29.9%	82,554	26,361	31.9%	83,839	29,774	35.5%
Clothing Footwear, Towels, Sheets	4.00%	13,121	5,340	40.7%	13,242	5,985	45.2%	13,390	6,226	46.5%	13,661	6,625	48.5%	13,873	6,867	49.5%
Carpet	1.59%	5,210	0	0.0%	5,258	0	0.0%	5,317	159	3.0%	5,424	325	6.0%	5,508	441	8.0%
Total Textiles	5.59%	18,331	5,340	29.1%	18,500	5,985	32.4%	18,707	6,386	34.1%	19,085	6,951	36.4%	19,382	7,308	37.7%
Total Wood (Pallets, crates, adulterated and non-adulterated)	1.50%	4,920	2,559	52.0%	4,966	3,128	63.0%	5,021	3,264	65.0%	5,123	3,432	67.0%	5,202	3,590	69.0%
DIY Construction & Renovation Materials	1.28%	4,199	2,855	68.0%	4,237	3,136	74.0%	4,285	3,299	77.0%	4,371	3,585	82.0%	4,439	3,773	85.0%
Diapers	1.80%	5,905	4	0.1%	5,959	6	0.1%	6,026	12	0.2%	6,147	25	0.4%	6,243	31	0.5%
Electronics	1.61%	5,281	951	18.0%	5,330	1,279	24.0%	5,390	1,725	32.0%	5,498	1,979	36.0%	5,584	2,178	39.0%
Tires	1.54%	5,052	4,395	87.0%	5,098	4,588	90.0%	5,155	4,743	92.0%	5,259	4,891	93.0%	5,341	5,021	94.0%
HHW	0.39%	1,279	921	72.0%	1,291	968	75.0%	1,306	1,018	78.0%	1,332	1,066	80.0%	1,353	1,109	82.0%
Soils and Fines	0.14%	459	289	63.0%	463	334	72.0%	469	417	89.0%	478	435	91.0%	486	447	92.0%
Other Composite Materials - Durable and/or inert	1.58%	5,183	933	18.0%	5,231	1,255	24.0%	5,289	1,481	28.0%	5,396	1,754	32.5%	5,480	1,863	34.0%
Total and Miscellaneous	8.34%	27,358	10,348	37.8%	27,609	11,567	41.9%	27,918	12,695	45.5%	28,482	13,734	48.2%	28,926	14,422	49.9%

SUMMARY WASTE GENERATION AND RECOVERY GOALS

Population	203,447	205,300	207,900	212,100	215,400
MSW Generated (tons)	328,013	331,033	334,736	341,499	346,812
Per Capita MSW Generated (lbs/person/year)	3,225	3,225	3,220	3,220	3,220

Town of Huntington																
Municipal Solid Waste (MSW) Combined Composition Analysis and Projections																
		2013			2016			2020			2025			2030		
	MSW Materials Comp. (%)	MSW Generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted
Per Capita MSW Generated (lbs/person/day)		8.83			8.84			8.82			8.82			8.82		
MSW Diverted (tons)		98,861			104,870			116,267			128,885			140,425		
Per Capita MSW Diverted (lbs/person/year)		972			1,022			1,118			1,215			1,304		
Per Capita MSW Diverted (lbs/person/day)		2.66			2.80			3.06			3.33			3.57		
MSW Disposed (tons)		229,152			226,163			218,469			212,614			206,387		
Per Capita MSW Disposed (lbs/person/year)		2,253			2,203			2,102			2,005			1,916		
Per Capita MSW Disposed (lbs/person/day)		6.17			6.04			5.76			5.49			5.25		

To illustrate the inputs used in the adaption of the NYSDEC Model presented above, Table 7-5 below recaps the information presented in Sections 1-4. The table is adapted from Table 4-1, and contains the pertinent summary information generated in Table 7-4. Detailed estimates based on specific local data and the 2010 census data were prepared to more accurately reflect the anticipated population, waste generation, and material recovery trends that will be experienced by the Town of Huntington. A significant change due to strict protocols at the HRRF was that was made at this point for modeling purposes was the adjustment of waste composition percentages. A total of 4 percentage points were deducted from the materials Wood, C&D, and Soils/Fines. These points were divided by 2, and added into Corrugated Cardboard and Other Ferrous Metals, respectively. Additionally, a baseline recovery of 5,456 tons of Wood, C&D, and Soils/Fines was included in the 'Diverted Materials' columns, again to more accurately reflect local conditions and overall recovery rates that have been documented in earlier sections of this Plan.

Table 7-5
Waste Projections
Summary of Inputs and Calculations
for Table7-4

Year	2013	2016	2020	2025	2030
Projected Total Town Population	203,447	205,300	207,900	212,100	215,400
	Generation Rate (lbs/ person/ day)	**Estimated Tonnage**			
Materials Disposed					
Residential MSW	2.14	80,180	81,195	82,836	84,124

Year	2013	2016	2020	2025	2030
Projected Total Town Population	203,447	205,300	207,900	212,100	215,400
	Generation Rate (lbs/ person/ day)	**Estimated Tonnage**			
CII MSW	2.77	103,784	105,099	107,222	108,890
Organics	1.41	52,829	53,498	54,579	55,428
Residential MSW, CII MSW, and Organics (Totaled for Input into NYSDEC Waste Projection Model)	234,624	236,793	239,792	244,636	248,442
1.All MSW and Organics Waste Disposal, adjusted for future trends	234,624	236,793	237,394	242,190	245,958
Estimated Waste Disposal Rates, calculated in Table 7-4 (lbs/person/day)		**6.32**	**6.26**	**6.26**	**6.26**
Materials Diverted					
MSW Recyclables	0.52	19,599	19,847	20,248	20,563
2. MSW Recyclables, adjusted for past history and future trends	19,422	19,599	20,244	20,653	20,974
CII Recyclables	1.45	54,361	55,049	56,161	57,035
3. CII Recyclables, adjusted for past history and future trends	53,870	54,361	56,150	57,284	58,176
Organics	0.54	20,296	20,553	20,968	21,295
4. Organics, adjusted for past history and future trends	20,113	20,296	20,964	21,388	21,721

Year	2013	2016	2020	2025	2030
Projected Total Town Population	203,447	205,300	207,900	212,100	215,400
	Generation Rate (lbs/ person/ day)	**Estimated Tonnage**			
Baseline Diversion Allowance for Wood and C&D, due to inclusion in NYSDEC model	5,456	5,456	5,456	5,456	5,456
Total of all MSW, Organics, and C&D diverted, adjusted for future trends and programmatic changes	98,861	99,712	102,814	104,781	106,327
MSW Generation Input for Table 7-4 (1+2+3+4)	328,029[1]	331,049	334,752	341,515	346,829
MSW Diverted, calculated from Table 7-4	98,861[1]	104,870	116,267	128,885	140,425
All MSW and Organics net per capita generation rate (calculated in Table 7-4)	**6.17**	**6.04**	**5.76**	**5.49**	**5.25**

Note (1): These amounts are actual calculated waste and recyclables for year of 2013

As further demonstration of the Town's dedication to the long-term goals of *Beyond Waste*, an additional table detailing the C&D, Biosolids, and Non-Hazardous Industrial Waste, derived from the summary simple table in Section 4 and the programmatic changes detailed in Sections 7.2 and 7.3, is provided for reference below. It is understood from *Beyond Waste* that at this time, the NYSDEC has not presented quantitative, but rather only qualitative goals, for these components of the waste stream. As such, the per capita rates presented in Table 7-5 can stand on their own for comparison with State goals.

Table 7-6
Other Waste Streams
Goals and Projections

Year	2013	2016	2020	2025	2030
Projected Total Town Population	203,447	205,300	207,900	212,100	215,400
	Generation Rate (lbs/ person/ day)	**Estimated Generated Tonnage**			
C&D	2.65	99,288	100,546	102,577	104,173
C&D, adjusted for future programs (inclusive of amounts in NYSDEC MSW waste projection model)		99,288	100,546	102,577	103,131
C&D, per capita generation rates		2.650	2.650	2.650	2.624
Non-Hazardous Industrial Waste	0.05	1,873	1,897	1,935	1,966
Biosolids Generated after Anaerobic Digestion and De-Watering (Dry Tons), adjusted for new processing technologies	0.03	924	915	906	897
Biosolids, per capita generation rates		0.025	0.024	0.023	0.023
Materials Diverted					
C&D	0.84	31,472	31,871	32,515	33,021

Year	2013	2016	2020	2025	2030
Projected Total Town Population	203,447	205,300	207,900	212,100	215,400
	Generation Rate (lbs/ person/ day)	**Estimated Generated Tonnage**			
C&D, adjusted for future programs and portion included in the NYSDEC MSW waste projection model		38,070	39,170	40,617	41,821
C&D per capita diversion rate		1.016	1.032	1.049	1.064
Non-Hazardous Industrial Waste	0.02	598	605	618	627
Non-Hazardous Industrial Waste per capita diversion rates	0.02	0.020	0.020	0.020	0.020
Biosolids likely diverted for Beneficial Use (Dry Tons - based on anticipated future market conditions)		0	137	226	314
Biosolids per capita diversion rates		0.000	0.004	0.006	0.008
Summary Other Waste Streams net per capita generation rates		**1.69**	**1.67**	**1.65**	**1.60**

Though the reduction in per capita net waste generation rates throughout this section is substantial and significant, it is recognized that the goals of *Beyond Waste* are more aggressive. The Town is committed to living up to its moniker of "Sustainable Huntington", and is confident that the data and study that it will devote to understanding the various components of the waste stream generated within its geographic borders within the current planning period will lead to future programs to further decrease waste generation and increase materials recovery, narrowing the

gap between the State goals and potential Planning Unit achievements by the end of the subsequent planning period. Also, it is noted that the Town's goal of reaching a 34.7% materials diversion rate for 2020 is in line with the US EPA's goal of reaching 35% in 2020, outlined in their *Resource Conservation Challenge (RCC).* Most importantly, the programmatic changes and implementation schedule presented in the Plan are realistic and achievable by the Town, and will facilitate more aggressive goals and accomplishments in the future.

8.1 Local Laws in Effect to Support the Plan

The Town is in compliance with all applicable Federal and State statues in regards to local legislation supporting the solid waste system and associated materials recovery, including, but not limited to, New York State General Municipal Law 120-aa. Local laws and ordinances governing the collection of solid waste and licensing of solid waste haulers, including the mandatory source separation of recyclables and use of the Resource Recovery Facility are codified in the Town of Huntington Code Chapter 117: Solid Waste Management: Collection, Recycling and Disposal and Chapter 195: Waste Management. The Department of Environmental Waste Management is vested with authority under Chapter 27. Sewer Use Management is governed by Chapter 164. Sanitation inspectors enforce all of the codes referenced herein, as well as Chapter 133: Littering and Dumping, and the portions of Chapter 124: Housing Standards and Property Maintenance, which relate to proper waste storage and disposal.

8.2 Legal Constraints to the Selected System

There are no laws within the jurisdiction in the Town of Huntington that would prevent or impede the implementation of the comprehensive LSWMP, or inhibit Town programs.

8.3 Potential New Local Legislation

The majority of new initiatives described within Section 6 could be implemented with little, if any, changes to Town Code. Notable exceptions would be the implementation of any type of flow control and/or "Pay-As-You-Throw" (PAYT/SMART) programs.

The implementation schedule provided in Section 7 focuses on "high priority" initiatives. For the most part, an initiative could not receive a "high priority" rating in Section 6 if significant legislative changes were required, because those types of changes are beyond the immediate jurisdiction of the Department of Environmental Waste Management, and depend on an extensive public hearing process. Should the Town elect to construct a municipal waste and/or recyclables transfer station, or enters into a partnership with an organics processing facility, however, some code changes may be necessary to fully support the new programs that would follow from use of the new facilities.

9.1 Public Comment Period

9.1.1 Overview

New York State Environmental Conservation law provides for a thirty (30) day public comment period during which the plan will be made available to the general public for review and comment. All public comments received, and appropriate responses, will be documented within the LSWMP.

9.1.2 Public Notice

The public comment period was advertised in the Town's official newspaper, as well as on the Town's website. A paper copy of the LSWMP was available for review in designated Town offices; an electronic copy was posted on the Town's website.

9.1.3 Public Comments and Town Responses

No public comments were received.

9.2 SEQR Assessment

The Town of Huntington undertook a SEQR Type I Coordinated Review process to assess the environmental impacts of the LSWMP pursuant to all applicable New York State regulations. Lead agency coordination letters (see following pages) were sent to each of the incorporated villages that are located within their Planning Unit, as well as the NYSDEC. No objection to the Town being designated Lead Agency was received, and thus the process continued.

Parts 1, 2, and 3 of the Full Environmental Assessment Form (FEAF) were completed to examine the possible environmental impact of the LSWMP. It was documented throughout the SEQR process that the focus of the LSWMP was to evaluate, and ultimately, implement initiatives that will expand material recycling programs and prevent waste. Please refer to following pages for the completed FEAF and associated documentation of the SEQR Determination.

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Sponsor Information.

Name of Action or Project: Town of Huntington Local Solid Waste Management Plan Update		
Project Location (describe, and attach a general location map): Town of Huntington		
Brief Description of Proposed Action (include purpose or need): The Town of Huntington is updating their Local Solid Waste Management Plan in accordance with Environmental Conservation Law (ECL) Article 27-0107 (1)(a). This law requires that entities that operate municipal solid waste disposal facilities must have an approved Solid Waste Management Plan (SWMP) describing the management, handling and disposal of solid waste and recyclables. The Town of Huntington has prepared an updated SWMP in accordance with the ECL Article 27, its implementing regulations located at 6NYCRR Part 360 and New York State Department of Environmental Conservation (NYSDEC) guidance documents. This SWMP establishes the structure of the Town of Huntington's solid waste and recycling management programs for a 10 year planning period from 2016- 2026; it continues and builds upon programs and policies enacted as part of the Town's existing SWMP adopted in 1994. The SWMP proposes programs and policies for the Town of Huntington "Planning Unit " which consists of the Town of Huntington and the four incorporated Villages located within the Town, who can participate if they so choose. The SWMP includes a comprehensive assessment of the Planning Unit's population, solid waste management streams, current and projected loads of solid waste and recyclables, and selects a mix of continued activities and feasibility studies to manage these issues. Table 7-1, attached, sets out the initiatives to be explored as part of the SWMP.		
Name of Applicant/Sponsor: Department of Environmental Waste Management	Telephone: 631-351-3186 E-Mail: mlaux@huntingtonny.gov	
Address: 100 Main Street		
City/PO: Huntington	State: NY	Zip Code: 11743
Project Contact (if not same as sponsor; give name and title/role):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Council, Town Board, or Village Board of Trustees ☑Yes ☐No	Town of Huntington Town Board LSWMP Adoption	Spring 2019
b. City, Town or Village Planning Board or Commission ☐Yes ☑No		
c. City Council, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☑Yes ☐No	Villages of Asharoken, Huntington Bay, Lloyd Harbor and Northport LSWMP Adoption	Spring 2019
e. County agencies ☐Yes ☑No		
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	NYSDEC LSWMP Approval	Summer 2019
h. Federal agencies ☐Yes ☑No		

i. Coastal Resources.
i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes ☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes ☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes ☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☑Yes ☐No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☑Yes ☐No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☐Yes ☐No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☐Yes ☑No

If Yes, identify the plan(s):

There are multiple special planning districts within the Town of Huntington.

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes ☑No

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
N/A -Project is a planning document.

b. Is the use permitted or allowed by a special or conditional use permit? ☐ Yes ☐ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? Multiple school districts within the Town of Huntington.

b. What police or other public protection forces serve the project site?
Multiple within the Town of Huntington.

c. Which fire protection and emergency medical services serve the project site?
Multiple fire and emergency medical services within the Town of Huntington.

d. What parks serve the project site?
There are multiple State, County and Local parks within the Town of Huntington.

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)?

b. a. Total acreage of the site of the proposed action? _____ acres
b. Total acreage to be physically disturbed? _____ acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? _____ acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☐ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☐ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will proposed action be constructed in multiple phases? ☐ Yes ☐ No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____ year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

f. Does the project include new residential uses? ☐Yes ☐No
If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				
At completion of all phases				

g. Does the proposed action include new non-residential construction (including expansions)? ☐Yes ☐No
If Yes,
i. Total number of structures _____
ii. Dimensions (in feet) of largest proposed structure: _____height; _____width; and _____ length
iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐Yes ☐No
If Yes,
i. Purpose of the impoundment: _____
ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐Other specify:
_____
iii. If other than water, identify the type of impounded/contained liquids and their source.
_____
iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres
v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length
vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):
_____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? ☐Yes ☐No
(Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite)
If Yes:
i.What is the purpose of the excavation or dredging? _____
ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?
- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.
_____
_____
iv. Will there be onsite dewatering or processing of excavated materials? ☐Yes ☐No
If yes, describe. _____
_____
v. What is the total area to be dredged or excavated? _____ acres
vi. What is the maximum area to be worked at any one time? _____ acres
vii. What would be the maximum depth of excavation or dredging? _____ feet
viii. Will the excavation require blasting? ☐Yes ☐No
ix. Summarize site reclamation goals and plan: _____
_____
_____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐Yes ☐No
If Yes:
i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____
_____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

_____

_____

_____

_____

iii. Will proposed action cause or result in disturbance to bottom sediments? ☐Yes☐No

If Yes, describe: _____

iv. Will proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes☐No

If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____

_____

- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

_____

c. Will the proposed action use, or create a new demand for water? ☐Yes☐No

If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☐Yes☐No

If Yes:

- Name of district or service area: _____
- Does the existing public water supply have capacity to serve the proposal? ☐Yes☐No
- Is the project site in the existing district? ☐Yes☐No
- Is expansion of the district needed? ☐Yes☐No
- Do existing lines serve the project site? ☐Yes☐No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes☐No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

_____

- Source(s) of supply for the district: _____

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐Yes☐No

If, Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

_____

vi. If water supply will be from wells (public or private), maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☐Yes☐No

If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____

_____

_____

iii. Will the proposed action use any existing public wastewater treatment facilities? ☐Yes☐No

If Yes:

- Name of wastewater treatment plant to be used: _____
- Name of district: _____
- Does the existing wastewater treatment plant have capacity to serve the project? ☐Yes☐No
- Is the project site in the existing district? ☐Yes☐No
- Is expansion of the district needed? ☐Yes☐No

- Do existing sewer lines serve the project site? ☐Yes ☐No
- Will line extension within an existing district be necessary to serve the project? ☐Yes ☐No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☐No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge, or describe subsurface disposal plans):

_____

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☐Yes ☐No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or _____ acres (impervious surface)

_____ Square feet or _____ acres (parcel size)

ii. Describe types of new point sources. _____

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

_____

- If to surface waters, identify receiving water bodies or wetlands: _____
- Will stormwater runoff flow to adjacent properties? ☐Yes ☐No

iv. Does proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☐Yes ☐No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐Yes ☐No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

_____

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

_____

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

_____

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☐No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☐No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☐No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☐No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☐No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend ☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of semi-trailer truck trips/day: _____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐Yes ☐No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☐No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

iii. Will the proposed action require a new, or an upgrade to, an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: _____
- Saturday: _____
- Sunday: _____
- Holidays: _____

ii. During Operations:

- Monday - Friday: _____
- Saturday: _____
- Sunday: _____
- Holidays: _____

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☐Yes ☐No

If yes:

i. Provide details including sources, time of day and duration:

ii. Will proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐Yes ☐No

Describe:

n.. Will the proposed action have outdoor lighting? ☐Yes ☐No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐Yes ☐No

Describe:

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐Yes ☐No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures:

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐Yes ☐No

If Yes:

i. Product(s) to be stored

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally describe proposed storage facilities:

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☐No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☐No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction:
- Operation:

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction:
- Operation:

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☐ No
If Yes:
i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____
ii. Anticipated rate of disposal/processing:
- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☐ No
If Yes:
i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month
iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No
If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.
i. Check all uses that occur on, adjoining and near the project site.
☐ Urban ☐ Industrial ☐ Commercial ☐ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____
ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces			
• Forested			
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)			
• Agricultural (includes active orchards, field, greenhouse etc.)			
• Surface water features (lakes, ponds, streams, rivers, etc.)			
• Wetlands (freshwater or tidal)			
• Non-vegetated (bare rock, earth or fill)			
• Other Describe: _____			

c. Is the project site presently used by members of the community for public recreation? ☐Yes☐No
i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☐Yes☐No
If Yes,
i. Identify Facilities:

_____
_____

e. Does the project site contain an existing dam? ☐Yes☐No
If Yes:
i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____
iii. Provide date and summarize results of last inspection:

_____
_____

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐Yes☐No
If Yes:
i. Has the facility been formally closed? ☐Yes☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

_____
_____

iii. Describe any development constraints due to the prior solid waste activities: _____
_____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐Yes☐No
If Yes:
i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

_____
_____

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐Yes☐ No
If Yes:
i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐Yes☐No

☐ Yes – Spills Incidents database — Provide DEC ID number(s): _____
☐ Yes – Environmental Site Remediation database — Provide DEC ID number(s): _____
☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures: _____
_____
_____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☐Yes☐No
If yes, provide DEC ID number(s): _____

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

_____
_____

v. Is the project site subject to an institutional control limiting property uses? ☐Yes ☐No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐Yes ☐No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? _____ feet

b. Are there bedrock outcroppings on the project site? ☐Yes ☐No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____%

c. Predominant soil type(s) present on project site: _____ _____%
_____ _____%
_____ _____%

d. What is the average depth to the water table on the project site? Average: _____ feet

e. Drainage status of project site soils: ☐ Well Drained: _____% of site
☐ Moderately Well Drained: _____% of site
☐ Poorly Drained _____% of site

f. Approximate proportion of proposed action site with slopes: ☐ 0-10%: _____% of site
☐ 10-15%: _____% of site
☐ 15% or greater: _____% of site

g. Are there any unique geologic features on the project site? ☐Yes ☐No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☐Yes ☐No

ii. Do any wetlands or other waterbodies adjoin the project site? ☐Yes ☐No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☐Yes ☐No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐Yes ☐No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐Yes ☐No

j. Is the project site in the 100 year Floodplain? ☐Yes ☐No

k. Is the project site in the 500 year Floodplain? ☐Yes ☐No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐Yes ☐No
If Yes:

i. Name of aquifer: _____

m. Identify the predominant wildlife species that occupy or use the project site: _____

n. Does the project site contain a designated significant natural community? ☐Yes ☐No
If Yes:
i. Describe the habitat/community (composition, function, and basis for designation): _____
ii. Source(s) of description or evaluation: _____
iii. Extent of community/habitat:
- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐Yes ☐No

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐Yes ☐No

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐Yes ☐No
If yes, give a brief description of how the proposed action may affect that use: _____

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐Yes ☐No
If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☐Yes ☐No
i. If Yes: acreage(s) on project site? _____
ii. Source(s) of soil rating(s): _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐Yes ☐No
If Yes:
i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature
ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐Yes ☐No
If Yes:
i. CEA name: _____
ii. Basis for designation: _____
iii. Designating agency and date: _____

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on, or has been nominated by the NYS Board of Historic Preservation for inclusion on, the State or National Register of Historic Places? ☐Yes ☐No

If Yes:

i. Nature of historic/archaeological resource: ☐Archaeological Site ☐Historic Building or District

ii. Name: _____

iii. Brief description of attributes on which listing is based:

_____

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☐Yes ☐No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐Yes ☐No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☐Yes ☐No

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐Yes ☐No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐Yes ☐No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name MATTHEW LAUX Date APRIL 1, 2019

Signature _____ Title DEPUTY DIRECTOR DEPT. OF EWM.

PRINT FORM

9.3 SEQR Determination & Municipal Adoption

As a result of careful thought and deliberation, the environmental review thus concluded that the proposed LSWMP would result in no significant adverse environmental impact. Accordingly, the Town Board approved a Negative SEQRA Declaration and adopted the LSWMP on September 17, 2019. The associated Town Board resolutions follow. (Original copy to the NYSDEC).

2019-488

RESOLUTION DECLARING A NEGATIVE STATE ENVIRONMENTAL QUALITY REVIEW ACT DECLARATION REGARDING THE TOWN OF HUNTINGTON LOCAL SOLID WASTE MANAGEMENT PLAN AND ADOPTION OF THE PLAN BY THE TOWN OF HUNTINGTON

Resolution for Town Board Meeting Dated: September 17, 2019

The following resolution was offered by: **COUNCILMAN CUTHBERTSON**

and seconded by: **COUNCILWOMAN CERGOL**

WHEREAS, the Town Board of the Town of Huntington has acted as lead agency and established a coordinated State Environmental Quality Review (SEQR) with respect to the development of the Town of Huntington Local Solid Waste Management Plan (LSWMP); and

WHEREAS, the Environmental Review Division of the Department of Planning and Environment, along with the Town's consultant LK McLean, has reviewed the environmental information provided in the LSWMP, and has prepared the Environmental Assessment Form, Parts 1, 2 and 3, said forms being attached hereto and made part hereof; and

WHEREAS, the Town of Huntington will implement and maintain the Solid Waste Management System as described in the LSWMP and will submit biennial updates to the New York State Department of Environmental Conservation as per 6 NYCRR Part 366-5.1; and

NOW THEREFORE BE IT

STATE OF NEW YORK)
COUNTY OF SUFFOLK)
TOWN OF HUNTINGTON)

I, Stacy H. Colamussi, Deputy Town Clerk of the Town of Huntington, acting in the stead of **Town Clerk Jo-Ann Raia**, who is custodian of the Records of said Town, **DO HEREBY CERTIFY** that I have compared the annexed with the original thereof and that the same is a true and correct copy of resolution 2019-488 adopted by the Town Board of the Town of Huntington on: September 17, 2019
DECLARING A NEGATIVE STATE ENVIRONMENTAL QUALITY REVIEW ACT DECLARATION REGARDING THE TOWN OF HUNTINGTON LOCAL SOLID WASTE MANAGEMENT PLAN AND ADOPTION OF THE PLAN BY THE TOWN OF HUNTINGTON filed in the Town Clerk's Office and the same is a true copy thereof, and of the whole of such original.

IN TESTIMONY WHEREOF, I have hereunto signed my name and affixed the seal of the Town of Huntington this
4th day of October 2019

S. M. Colamussi
Deputy Town Clerk

2019-488

RESOLUTION DECLARING A NEGATIVE STATE ENVIRONMENTAL QUALITY REVIEW ACT DECLARATION REGARDING THE TOWN OF HUNTINGTON LOCAL SOLID WASTE MANAGEMENT PLAN AND ADOPTION OF THE PLAN BY THE TOWN OF HUNTINGTON

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WHEREAS, the Town of Huntington will implement and maintain the Solid Waste Management System as described in the LSWMP and will submit biennial updates to the New York State Department of Environmental Conservation as per 6 NYCRR Part 366-5.1; and

NOW THEREFORE, BE IT

RESOLVED, that the Huntington Town Board finds that the requirements of SEQRA have been met and there will be no significant environmental impacts, and hereby issues a Negative Declaration, pursuant to SEQRA, based upon the Board's review of the environmental assessment data submitted and the regulations; and be it further

RESOLVED, that the Town Board of the Town of Huntington hereby adopts the attached SEQRA findings in connection with the LSWMP; and be it further

RESOLVED, that the Town Board of the Town of Huntington hereby adopts the Town of Huntington Local Solid Waste Management Plan as prepared by LK McLean and will implement the solid waste management programs, projects and plans as identified in the final LSWMP and submit biennial updates documenting same to the New York State Department of Environmental Conservation as per 6 NYCRR.

VOTE: AYES: 5 NOES: 0 ABSTENTIONS: 0

Supervisor Chad A. Lupinacci	**AYE**
Councilwoman Joan A. Cergol	**AYE**
Councilman Eugene Cook	**AYE**
Councilman Mark A. Cuthbertson	**AYE**
Councilman Edmund J. Smyth	**AYE**

THE RESOLUTION WAS THEREUPON DECLARED DULY ADOPTED

Garofalo – Alpha CBA 5 & 6 Emergency Contract Assignment
9/10/2019

Full Environmental Assessment Form
Part 1 - Project and Setting

2019-488

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Sponsor Information.

Name of Action or Project: Town of Huntington Local Solid Waste Management Program		
Project Location (describe, and attach a general location map): Town of Huntington		
Brief Description of Proposed Action (include purpose or need): The proposed action is to adopt a new Local Solid Waste Management Plan (LSWMP), which was prepared in accordance with all applicable current codes and guidance from the New York State Department of Environmental Conservation (NYSDEC). The new LSWMP contains reasonable and realistic strategies, goals, and programming initiatives, which assess current waste management processes and evaluate new technologies and programs which the Town could employ to further reduce waste generation and increase recycling rates. This plan replaces the current outdated SWMP and conforms with new regulations issued by the NYSDEC.		
Name of Applicant/Sponsor: Town of Huntington	Telephone: (631) 351-3030 E-Mail: EWM@huntingtonny.gov	
Address: 100 Main St		
City/PO: Huntington	State: NY	Zip Code: 11743
Project Contact (if not same as sponsor; give name and title/role): Town of Huntington Department of Environmental Waste Management	Telephone: (631) 351-3186 E-Mail:	
Address: 100 Main St		
City/PO: Huntington	State: NY	Zip Code: 11743
Property Owner (if not same as sponsor): Address: City/PO:	Telephone: E-Mail: State:	Zip Code:

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B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financi assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Council, Town Board, or Village Board of Trustees ☑Yes☐No	Huntington Town Board	September, 2018
b. City, Town or Village Planning Board or Commission ☑Yes☐No	Board of Trustees of Villages of Northport, Lloyd Harbor, Huntington Bay, Asharoken	
c. City Council, Town or Village Zoning Board of Appeals ☐Yes☐No		
d. Other local agencies ☐Yes☐No		
e. County agencies ☐Yes☐No		
f. Regional agencies ☐Yes☐No		
g. State agencies ☑Yes☐No	New York State Department of Environmental Conservation (NYSDEC)	
h. Federal agencies ☐Yes☐No		

i. Coastal Resources.

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☑Yes☐No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☑Yes☐No

iii. Is the project site within a Coastal Erosion Hazard Area? ☑Yes☐No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☑Yes☐No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☑Yes☐No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☑Yes☐No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☑Yes☐No

If Yes, identify the plan(s):

Horizons 2020 Comprehensive Plan, Town of Huntington Climate Action Plan

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes☑No

If Yes, identify the plan(s):

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C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
All Town zoning districts

b. Is the use permitted or allowed by a special or conditional use permit? ☐ Yes ☑ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? All Town school districts

b. What police or other public protection forces serve the project site?

c. Which fire protection and emergency medical services serve the project site?

d. What parks serve the project site?

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)?

b. a. Total acreage of the site of the proposed action? _____ acres
b. Total acreage to be physically disturbed? _____ acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? _____ acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☐ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☐ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will proposed action be constructed in multiple phases? ☐ Yes ☐ No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____ year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

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f. Does the project include new residential uses? ☐Yes ☐No
If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				
At completion of all phases				

g. Does the proposed action include new non-residential construction (including expansions)? ☐Yes ☐No
If Yes,
i. Total number of structures _____
ii. Dimensions (in feet) of largest proposed structure: _____height; _____width; and _____ length
iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐Yes ☐No
If Yes,
i. Purpose of the impoundment: _____
ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐Other specify: _____
iii. If other than water, identify the type of impounded/contained liquids and their source. _____
iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres
v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length
vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete): _____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☐Yes ☐No
If Yes:
i. What is the purpose of the excavation or dredging? _____
ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?
- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them. _____
iv. Will there be onsite dewatering or processing of excavated materials? ☐Yes ☐No
If yes, describe. _____
v. What is the total area to be dredged or excavated? _____ acres
vi. What is the maximum area to be worked at any one time? _____ acres
vii. What would be the maximum depth of excavation or dredging? _____ feet
viii. Will the excavation require blasting? ☐Yes ☐No
ix. Summarize site reclamation goals and plan: _____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐Yes ☐No
If Yes:
i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____

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ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

iii. Will proposed action cause or result in disturbance to bottom sediments? ☐Yes☐No
If Yes, describe:

iv. Will proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes☐No
If Yes:

- acres of aquatic vegetation proposed to be removed:
- expected acreage of aquatic vegetation remaining after project completion:
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access):
- proposed method of plant removal:
- if chemical/herbicide treatment will be used, specify product(s):

v. Describe any proposed reclamation/mitigation following disturbance:

c. Will the proposed action use, or create a new demand for water? ☐Yes☐No
If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☐Yes☐No
If Yes:

- Name of district or service area:
- Does the existing public water supply have capacity to serve the proposal? ☐Yes☐No
- Is the project site in the existing district? ☐Yes☐No
- Is expansion of the district needed? ☐Yes☐No
- Do existing lines serve the project site? ☐Yes☐No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes☐No
If Yes:

- Describe extensions or capacity expansions proposed to serve this project:
- Source(s) of supply for the district:

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐Yes☐No
If, Yes:

- Applicant/sponsor for new district:
- Date application submitted or anticipated:
- Proposed source(s) of supply for new district:

v. If a public water supply will not be used, describe plans to provide water supply for the project:

vi. If water supply will be from wells (public or private), maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☐Yes☐No
If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each):

iii. Will the proposed action use any existing public wastewater treatment facilities? ☐Yes☐No
If Yes:

- Name of wastewater treatment plant to be used:
- Name of district:
- Does the existing wastewater treatment plant have capacity to serve the project? ☐Yes☐No
- Is the project site in the existing district? ☐Yes☐No
- Is expansion of the district needed? ☐Yes☐No

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- Do existing sewer lines serve the project site? ☐Yes☐No
- Will line extension within an existing district be necessary to serve the project? ☐Yes☐No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes☐No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge, or describe subsurface disposal plans): _____

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☐Yes☐No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?
_____ Square feet or _____ acres (impervious surface)
_____ Square feet or _____ acres (parcel size)

ii. Describe types of new point sources. _____

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)? _____

- If to surface waters, identify receiving water bodies or wetlands: _____
- Will stormwater runoff flow to adjacent properties? ☐Yes☐No

iv. Does proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☐Yes☐No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐Yes☐No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles) _____

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers) _____

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation) _____

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes☐No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes☐No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

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h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☐No
If Yes:
i. Estimate methane generation in tons/year (metric): _____
ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☐No
If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):
_____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐Yes ☐No
If Yes:
i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐Weekend
☐ Randomly between hours of _____ to _____.
ii. For commercial activities only, projected number of semi-trailer truck trips/day: _____
iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____
iv. Does the proposed action include any shared use parking? ☐Yes ☐No
v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:
_____
vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐Yes ☐No
vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☐No
viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☐No
If Yes:
i. Estimate annual electricity demand during operation of the proposed action: _____
ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):
_____
iii. Will the proposed action require a new, or an upgrade to, an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.
i. During Construction:
- Monday - Friday: _____
- Saturday: _____
- Sunday: _____
- Holidays: _____

ii. During Operations:
- Monday - Friday: _____
- Saturday: _____
- Sunday: _____
- Holidays: _____

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m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☐ Yes ☐ No

If yes:

i. Provide details including sources, time of day and duration:

ii. Will proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☐ No
Describe:

n.. Will the proposed action have outdoor lighting? ☐ Yes ☐ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☐ No
Describe:

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☐ No
If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures:

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☐ No

If Yes:

i. Product(s) to be stored

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally describe proposed storage facilities:

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☐ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☐ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction:
- Operation:

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction:
- Operation:

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s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☐ No
If Yes:
i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____
ii. Anticipated rate of disposal/processing:
- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐Yes ☐No
If Yes:
i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month
iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐Yes ☐No
If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.
i. Check all uses that occur on, adjoining and near the project site.
☐ Urban ☐ Industrial ☐ Commercial ☐ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____
ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces			
• Forested			
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)			
• Agricultural (includes active orchards, field, greenhouse etc.)			
• Surface water features (lakes, ponds, streams, rivers, etc.)			
• Wetlands (freshwater or tidal)			
• Non-vegetated (bare rock, earth or fill)			
• Other Describe: _____			

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c. Is the project site presently used by members of the community for public recreation? ☐Yes☐No
i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☐Yes☐No
If Yes,
i. Identify Facilities:

e. Does the project site contain an existing dam? ☐Yes☐No
If Yes:
i. Dimensions of the dam and impoundment:
- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____
iii. Provide date and summarize results of last inspection:

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐Yes☐No
If Yes:
i. Has the facility been formally closed? ☐Yes☐ No
- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:
iii. Describe any development constraints due to the prior solid waste activities: _____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐Yes☐No
If Yes:
i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐Yes☐ No
If Yes:
i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐Yes☐No
☐ Yes – Spills Incidents database — Provide DEC ID number(s): _____
☐ Yes – Environmental Site Remediation database — Provide DEC ID number(s): _____
☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures: _____
iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☐Yes☐No
If yes, provide DEC ID number(s): _____
iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

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v. Is the project site subject to an institutional control limiting property uses? ☐Yes ☐No
- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐Yes ☐No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? _____ feet

b. Are there bedrock outcroppings on the project site? ☐Yes ☐No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____%

c. Predominant soil type(s) present on project site: _____ _____%
_____ _____%
_____ _____%

d. What is the average depth to the water table on the project site? Average: _____ feet

e. Drainage status of project site soils: ☐ Well Drained: _____% of site
☐ Moderately Well Drained: _____% of site
☐ Poorly Drained _____% of site

f. Approximate proportion of proposed action site with slopes: ☐ 0-10%: _____% of site
☐ 10-15%: _____% of site
☐ 15% or greater: _____% of site

g. Are there any unique geologic features on the project site? ☐Yes ☐No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☐Yes ☐No

ii. Do any wetlands or other waterbodies adjoin the project site? ☐Yes ☐No
If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☐Yes ☐No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:
- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐Yes ☐No
If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐Yes ☐No

j. Is the project site in the 100 year Floodplain? ☐Yes ☐No

k. Is the project site in the 500 year Floodplain? ☐Yes ☐No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐Yes ☐No
If Yes:
i. Name of aquifer: _____

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m. Identify the predominant wildlife species that occupy or use the project site: _____ _____ _____ _____ _____ _____

n. Does the project site contain a designated significant natural community? ☐Yes ☐No
If Yes:
i. Describe the habitat/community (composition, function, and basis for designation): _____
ii. Source(s) of description or evaluation: _____
iii. Extent of community/habitat:
- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐Yes ☐No

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐Yes ☐No

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐Yes ☐No
If yes, give a brief description of how the proposed action may affect that use: _____

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐Yes ☐No
If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☐Yes ☐No
i. If Yes: acreage(s) on project site? _____
ii. Source(s) of soil rating(s): _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐Yes ☐No
If Yes:
i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature
ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐Yes ☐No
If Yes:
i. CEA name: _____
ii. Basis for designation: _____
iii. Designating agency and date: _____

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e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on, or has been nominated by the NYS Board of Historic Preservation for inclusion on, the State or National Register of Historic Places? ☐Yes ☐No

If Yes:

i. Nature of historic/archaeological resource: ☐Archaeological Site ☐Historic Building or District

ii. Name: _____

iii. Brief description of attributes on which listing is based:

_____

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☐Yes ☐No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐Yes ☐No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☐Yes ☐No

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐Yes ☐No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐Yes ☐No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name _____ Date _____

Signature _____ Title _____

PRINT FORM

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Full Environmental Assessment Form
Part 2 - Identification of Potential Project Impacts

Agency Use Only [If applica
Project: Local Solid Waste Management Pro
Date:

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer "**Yes**" to a numbered question, please complete all the questions that follow in that section.
- If you answer "**No**" to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box "Moderate to large impact may occur."
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the "whole action".
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land
Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1)
If "Yes", answer questions a - j. If "No", move on to Section 2.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	☐	☐
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	☐	☐
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	☐	☐
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	☐	☐
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	☐	☐
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	☐	☐
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	☐	☐
h. Other impacts: _____		☐	☐

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2. Impact on Geological Features
The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) ☑ NO ☐ YES
If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____	E2g	☐	☐
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	☐	☐
c. Other impacts: _____		☐	☐

3. Impacts on Surface Water
The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) ☑ NO ☐ YES
If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	☐	☐
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	☐	☐
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	☐	☐
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	☐	☐
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	☐	☐
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	☐	☐
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	☐	☐
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	☐	☐
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	☐	☐
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	☐	☐
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	☐	☐

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l. Other impacts: _____		☐	☐

4. Impact on groundwater
The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t) ☑ NO ☐ YES
If "Yes", answer questions a - h. If "No", move on to Section 5.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	☐	☐
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	☐	☐
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	☐	☐
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	☐	☐
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	☐	☐
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	☐	☐
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	☐	☐
h. Other impacts: _____		☐	☐

5. Impact on Flooding
The proposed action may result in development on lands subject to flooding. (See Part 1. E.2) ☑ NO ☐ YES
If "Yes", answer questions a - g. If "No", move on to Section 6.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	☐	☐
b. The proposed action may result in development within a 100 year floodplain.	E2j	☐	☐
c. The proposed action may result in development within a 500 year floodplain.	E2k	☐	☐
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	☐	☐
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	☐	☐
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	☐	☐

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g. Other impacts: _____		☐	☐

6. Impacts on Air

The proposed action may include a state regulated air emission source. (See Part 1. D.2.f., D,2,h, D.2.g) ☑NO ☐YES

If "Yes", answer questions a - f. If "No", move on to Section 7.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels:			
i. More than 1000 tons/year of carbon dioxide (CO_2)	D2g	☐	☐
ii. More than 3.5 tons/year of nitrous oxide (N_2O)	D2g	☐	☐
iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs)	D2g	☐	☐
iv. More than .045 tons/year of sulfur hexafluoride (SF_6)	D2g	☐	☐
v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions	D2g	☐	☐
vi. 43 tons/year or more of methane	D2h	☐	☐
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	☐	☐
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	☐	☐
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	☐	☐
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	☐	☐
f. Other impacts: _____		☐	☐

7. Impact on Plants and Animals

The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) ☑NO ☐YES

If "Yes", answer questions a - j. If "No", move on to Section 8.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	☐	☐
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	☐	☐
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	☐	☐
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	☐	☐

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e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	☐	☐
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	☐	☐
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	☐	☐
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____ _____	E1b	☐	☐
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	☐	☐
j. Other impacts: _____ _____		☐	☐

8. Impact on Agricultural Resources

The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.) ☑NO ☐YES

If "Yes", answer questions a - h. If "No", move on to Section 9.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	☐	☐
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, E1b	☐	☐
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	☐	☐
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	☐	☐
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	E1 a, E1b	☐	☐
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	☐	☐
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	☐	☐
h. Other impacts: _____		☐	☐

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9. Impact on Aesthetic Resources
The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.)
If "Yes", answer questions a - g. If "No", go to Section 10.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	☐	☐
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	☐	☐
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	 ☐ ☐	 ☐ ☐
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	 ☐ ☐	 ☐ ☐
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	☐	☐
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile ½ -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	☐	☐
g. Other impacts: _____		☐	☐

10. Impact on Historic and Archeological Resources
The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.)
If "Yes", answer questions a - e. If "No", go to Section 11.

☐ NO ☑ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on or has been nominated by the NYS Board of Historic Preservation for inclusion on the State or National Register of Historic Places.	E3e	☐	☐
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	☐	☐
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	☐	☐

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d. Other impacts: _____		☐	☐
e. If any of the above (a-d) are answered "Moderate to large impact may occur", continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	☐	☐
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	☐	☐
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	☐	☐

11. Impact on Open Space and Recreation

The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan. (See Part 1. C.2.c, E.1.c., E.2.q.)

☑ NO ☐ YES

If "Yes", answer questions a - e. If "No", go to Section 12.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	☐	☐
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	☐	☐
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	☐	☐
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	☐	☐
e. Other impacts: _____		☐	☐

12. Impact on Critical Environmental Areas

The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d)

☐ NO ☑ YES

If "Yes", answer questions a - c. If "No", go to Section 13.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
c. Other impacts: _____		☐	☐

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13. Impact on Transportation
The proposed action may result in a change to existing transportation systems. (See Part 1. D.2.j) ☑ NO ☐ YES
If "Yes", answer questions a - f. If "No", go to Section 14.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	☐	☐
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	☐	☐
c. The proposed action will degrade existing transit access.	D2j	☐	☐
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	☐	☐
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	☐	☐
f. Other impacts: _____ _____		☐	☐

14. Impact on Energy
The proposed action may cause an increase in the use of any form of energy. (See Part 1. D.2.k) ☑ NO ☐ YES
If "Yes", answer questions a - e. If "No", go to Section 15.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	☐	☐
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	☐	☐
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	☐	☐
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	☐	☐
e. Other Impacts: _____ _____			

15. Impact on Noise, Odor, and Light
The proposed action may result in an increase in noise, odors, or outdoor lighting. (See Part 1. D.2.m., n., and o.) ☑ NO ☐ YES
If "Yes", answer questions a - f. If "No", go to Section 16.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	☐	☐
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	☐	☐
c. The proposed action may result in routine odors for more than one hour per day.	D2o	☐	☐

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d. The proposed action may result in light shining onto adjoining properties.	D2n	☐	☐
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	☐	☐
f. Other impacts: _____		☐	☐

16. Impact on Human Health

The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.) ☐ NO ☑ YES

If "Yes", answer questions a - m. If "No", go to Section 17.

	Relevant Part I Question(s)	No,or small impact may occur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	☐	☐
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	☐	☐
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	☐	☐
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	☐	☐
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	☐	☐
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	☐	☐
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	☐	☐
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	☐	☐
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	☐	☐
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	☐	☐
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	☐	☐
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	☐	☐
m. Other impacts: _____			

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17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans. ☑ NO ☐ YES
(See Part 1. C.1, C.2. and C.3.)
If "Yes", answer questions a - h. If "No", go to Section 18.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	☐	☐
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	☐	☐
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	☐	☐
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	☐	☐
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, E1b	☐	☐
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	☐	☐
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	☐	☐
h. Other: _____		☐	☐

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character. ☑ NO ☐ YES
(See Part 1. C.2, C.3, D.2, E.3)
If "Yes", answer questions a - g. If "No", proceed to Part 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	☐	☐
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	☐	☐
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	☐	☐
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	☐	☐
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	☐	☐
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	☐	☐
g. Other impacts: _____		☐	☐

PRINT FULL FORM

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Agency Use Only [If Applicable]
Project : Local Solid Waste Management Plan
Date :

Full Environmental Assessment Form
Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
and
Determination of Significance

Part 3 provides the reasons in support of the determination of significance. The lead agency must complete Part 3 for every question in Part 2 where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.

Based on the analysis in Part 3, the lead agency must decide whether to require an environmental impact statement to further assess the proposed action or whether available information is sufficient for the lead agency to conclude that the proposed action will not have a significant adverse environmental impact. By completing the certification on the next page, the lead agency can complete its determination of significance.

Reasons Supporting This Determination:
To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact occurring, number of people affected by the impact and any additional environmental consequences if the impact were to occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.
- Provide the reason(s) why the impact may, or will not, result in a significant adverse environmental impact
- For Conditional Negative Declarations identify the specific condition(s) imposed that will modify the proposed action so that no significant adverse environmental impacts will result.
- Attach additional sheets, as needed.

The impact on rate of disposal, processing, or solid waste results from the LSWMP categories of "Recycling Program Expansion" and "General Waste Prevention." Implementation initiatives that expand the recycling programs, such as pilot programs to test residential collection of non-bottle, bulky rigid plastics, test the feasibility of a seasonal boat shrink wrap recycling program, and test the inclusion of beverage/aseptic cartons in current curbside recycling programs all encourage positive and more efficient waste processing methods. General Waste Prevention measures, such as creating more educational opportunities for the public regarding recycling resources via the Town website and social media, also encourage positive and more efficient waste management.

The Town of Huntington Local Solid Waste Management Plan (LSWMP) results in no significant adverse environmental impact. The plan's initiatives authorize new educational outreach programs, feasibility studies, monitoring and evaluation procedures, webpage and social media updates, equipment replacement, data collection, and reporting. The plan does not propose any new infrastructure, construction, or action which would result in any significant environmental impact.

Determination of Significance - Type 1 and Unlisted Actions

SEQR Status: ☑ Type 1 ☐ Unlisted

Identify portions of EAF completed for this Project: ☑ Part 1 ☑ Part 2 ☑ Part 3

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Upon review of the information recorded on this EAF, as noted, plus this additional support information

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the Town of Huntington as lead agency that:

☑ A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. Accordingly, this negative declaration is issued.

☐ B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.d).

☐ C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

Name of Action: Local Solid Waste Management Plan

Name of Lead Agency: Town of Huntington

Name of Responsible Officer in Lead Agency: Chad A. Lupinacci

Title of Responsible Officer: Supervisor

Signature of Responsible Officer in Lead Agency: Date:

Signature of Preparer (if different from Responsible Officer) Date:

For Further Information:

Contact Person:

Address:

Telephone Number:

E-mail:

For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)
Other involved agencies (if any)
Applicant (if any)
Environmental Notice Bulletin: http://www.dec.ny.gov/enb/enb.html

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