
TOWN OF SMITHTOWN, NEW YORK

LOCAL SOLID WASTE MANAGEMENT PLAN

Volume I



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Table of Contents

Table of Contents

Section 1	Description of the Planning Unit.....	1-1
1.1	Description of the Planning Unit.....	1-1
1.2	Duration of Planning Period.....	1-2
1.3	Objective of the Plan.....	1-2
1.4	Town and Village Population	1-2
1.5	Administration	1-4
1.6	Special Population Centers and Household Distribution.....	1-4
1.7	State and Federal Parks, Schools, Significant Industries and Seasonal Impacts.....	1-6
1.8	Tourism and Agricultural.....	1-7
Section 2	Solid Waste Quantities and Composition	2-1
2.1	Solid Waste Quantities and Composition	2-1
2.2	Current Estimates of Solid Waste Generation	2-1
2.2.1	Residential Waste Quantities.....	2-1
2.2.2	Village Residential (Household) Waste	2-2
2.2.3	Commercial Waste and Construction and Demolition Waste Quantities	2-4
2.2.4	Biosolids	2-4
2.3	Recyclable Quantities.....	2-5
2.4	Estimated Town-wide Recycling Rate	2-6
2.5	Enforcement of Town Recycling Ordinances	2-7
2.6	Per Capita Municipal Solid Waste Generation Rates.....	2-7
2.6.1	Residential Per Capita Waste Generation Rate	2-9
2.6.2	Commercial/Institutional Per Capita Waste Generation Rates	2-9
2.6.3	Summary Per Capita Municipal Solid Waste Generation Rates.....	2-9
2.6.4	Construction and Demolition Per Capita Waste Generation Rates.....	2-10
2.7	Summary of Existing Solid Waste Generation	2-11
2.8	Characterization of Solid Waste.....	2-12
2.8.1	Waste Composition Analysis.....	2-12
2.8.2	Recycling Analysis	2-13
Section 3	Existing Program Overview	3-1
3.1	Solid Waste Management Program Overview.....	3-1
3.1.1	Sources of Waste: Residential and Commercial	3-2



Table of Contents

3.1.1.1	Residential Waste	3-2
3.1.1.2	Commercial and Institutional Waste	3-3
3.1.2	Existing Solid Waste Facilities Inventory	3-5
3.1.3	Curbside Collection System for Residential Waste	3-6
3.1.4	Collection System for Commercial Waste.....	3-8
3.1.5	Recyclables Currently Collected and Processed	3-9
3.1.6	Yard Waste Curbside Collection.....	3-11
3.1.7	Village Yard Waste Practices	3-11
3.1.8	Huntington Resource Recovery Facility (HRRF), a Waste-to-Energy (WTE) Facility operated by Covanta	3-12
3.1.9	Materials Recycling Facility	3-13
3.1.10	Resident Drop-Off Area.....	3-14
3.1.11	Bulk Metal Storage Area	3-14
3.1.12	Transfer Station.....	3-14
3.1.13	Compressed Natural Gas (CNG) Fueling Facility	3-15
3.1.14	STOP Program	3-17
3.1.15	Pharmaceutical and E-Waste Programs.....	3-17
3.1.16	Public Education Programs	3-18
3.1.17	Animal Mortality Waste	3-19
3.1.18	Town Carter License Program.....	3-19
3.2	Existing Efforts to Recover Recyclables.....	3-20
3.2.1	Existing Recycling Program	3-20
3.3	Markets for Recovered Recyclables.....	3-21
3.3.1	Town of Smithtown Markets	3-21
3.3.2	Description of Market Services	3-22
3.3.3	Description of Current and Future Restrictions to Market Development	3-22
Section 4	Future Planning Unit Projections and Solid Waste Changes	4-1
4.1	Estimates of Future Solid Waste Generation.....	4-1
4.2	Anticipated Changes to the Planning Unit.....	4-2
4.2.1	Planned Residential Development.....	4-2



Table of Contents

4.2.2	Planned Commercial Development	4-2
4.2.3	Planned Industrial Development	4-6
4.3	Special Changes That May Affect any of These Characteristics.....	4-9
4.4	Projections of Changes to the Waste Stream	4-9
4.5	Anticipated Effects of the Changes on the Current and Proposed Management Practices of the Planning Unit.....	4-9
Section 5	Technology Evaluation	5-1
5.1	Treatment and Disposal of Residual Municipal Solid Waste	5-1
5.1.1	Sizing of Solid Waste Management Facilities.....	5-2
5.1.2	Cost of Alternatives.....	5-2
5.1.3	Environmental, Economic and Social Impacts of Technology.....	5-2
5.1.4	Available Capacity of Planning Unit	5-2
5.1.5	Contractual Requirements to Access Capacity	5-3
5.1.6	Impacts on Recyclables Recovery Efforts.....	5-3
5.1.7	Environmental Economic and Social Impacts of Each Technology	5-3
5.2	Alternative Programs for Recyclables, Organics, Waste Reduction and Reuse.....	5-4
5.2.1	Single-Stream and Dual-Stream Recycling Comparison.....	5-4
5.2.2	Pay-As-You-Throw (PAYT) Systems.....	5-6
5.2.3	Existing Waste-to-Energy Technology	5-10
5.2.4	Other Technologies.....	5-12
5.2.4.1	Pyrolysis	5-12
5.2.4.2	Plasma Gasification	5-13
5.2.5	Organics Recovery Programs	5-13
5.2.5.1	Indoor Organic Waste Facility	5-14
5.2.5.2	Minimize Yard Waste	5-15
5.2.5.3	Backyard Composting	5-15
5.2.5.4	Targeted Food Scraps Recovery.....	5-16
5.2.5.5	Food Donation Programs	5-17
5.2.5.6	Biosolids Re-Use and Processing Options	5-17
5.2.5.7	Anaerobic Digestion Promotion.....	5-18



Table of Contents

5.2.5.8	Public Education Efforts	5-19
5.2.5.9	Other Strategies	5-20
5.2.6	Waste Prevention Programs	5-20
5.2.6.1	Public Education Efforts	5-21
5.2.6.2	Reduction of Disposable Packaging	5-21
5.2.6.3	Incentivize Recycling	5-22
5.2.6.4	Paperless Office Preference	5-22
5.2.6.5	Toxic Waste Reduction & Product Stewardship Programs	5-22
5.2.6.6	C&D Reduction options	5-23
5.2.6.7	Non-Hazardous Industrial Waste Reduction options	5-24
5.2.6.8	Greenhouse Gas Emissions	5-25
5.2.7	Material Re-Use Programs	5-26
5.2.7.1	Re-Use/Donation of Textiles	5-26
5.2.7.2	Food Donation Programs	5-26
5.2.7.3	Local Tree Re-Use	5-26
5.2.7.4	Building Material Re-Use	5-26
5.2.7.5	Incorporate Re-use into Town Procurement and Asset Management	5-26
5.2.7.6	Promote Packaging Re-Use by Household Consumers	5-27
5.3	Cost Analysis of the Solid Waste System	5-27
5.3.1	Estimated Costs for MSW & Recyclables Collection	5-27
5.3.2	Estimated Costs for MSW Disposal	5-27
5.3.3	Estimated Costs for Recyclables Processing	5-28
5.3.4	Estimated Costs for Administration	5-28
5.3.5	Summary of Costs	5-28
5.3.6	Financing Mechanisms that will meet the Anticipated Costs	5-28
5.4	Neighboring Jurisdictions Impacts	5-29
5.4.1	Neighboring Planning Units	5-29
5.4.2	Measures Used to Secure Participation of Neighboring Jurisdictions	5-29
5.4.3	The effects on neighboring jurisdictions' SWM programs and their inclusion	5-29



Table of Contents

Section 6	Integrated System Selection	6-1
6.1	Overview	6-1
6.1.1	Selected Solid Waste Program	6-1
6.1.1.A	Existing Solid Waste Practices	6-2
6.1.1.B	Proposed New Solid Waste Plan Initiatives	6-3
6.1.2	Reasons for the Selection of the Proposed Program	6-8
6.2	Procedures for implementation of the Recovery Program	6-8
6.2.1	Plan and Scope of Operation	6-8
6.2.2	Equipment to be Used	6-9
6.2.3	Collection Arrangements	6-9
6.2.4	Processing and Storage Procedures	6-10
6.2.5	Market Agreements	6-11
6.2.6	Funding Sources	6-11
6.2.7	Available Staff	6-11
Section 7	Implementation Schedule	7-1
7.1	Major Elements	7-1
7.2	Program Schedule	7-1
7.3	Waste Reduction Predictions	7-7
7.3.1	Overview	7-7
7.3.2	Waste Stream Projections	7-8
Section 8	Laws and Regulations	8-1
8.1	Legal Constraints to the Selected Recovery Program	8-1
8.2	Local Laws in Effect to Support the Plan	8-1
8.3	Potential New Laws	8-2
8.3.1	Electronic Waste	8-2
8.3.2	Private Indoor Organic Waste Processing Facility (OWPF)	8-2
Section 9	Certification of Disposal Capacity	9-1
Section 10	Public Approval Process	10-1
10.1	Public Comment Period	10-1
10.1.1	Overview	10-1
10.1.2	Public Notice	10-1



Table of Contents

10.1.3	Public Comments and Town Responses	10-1
10.2	SEQR Assessment.....	10-1
10.3	SEQR Determination	10-1
10.4	Municipal Adoption.....	10-1

List of Figures

Figure 4-1.	Business Districts	4-3
Figure 4-2.	Major Industrial Areas of the Town.....	4-8
Figure 5-1.	Anaerobic Digestion Process Flow Chart	5-18

List of Tables

Table 1-1.	Town Wide Population Including Villages.....	1-3
Table 1-2.	Village Population	1-3
Table 2-1.	Total Residential Tonnage.....	2-2
Table 2-2.	Total Residential Tonnage from Villages.....	2-3
Table 2-3.	Commercial and C&D Waste Tonnages by Year	2-4
Table 2-4.	Quantities of Recyclables Collected and Processed Town-wide.....	2-5
Table 2-5.	Quantities of Recyclables Collected and Processed From Villages Only.....	2-6
Table 2-6.	Total 2010 MSW Quantities from Smithtown Controlled Garbage Districts and Villages.....	2-6
Table 2-7.	Assumed Smithtown Waste Composition (percentages)	2-8
Table 2-8.	Estimate of 2010 Waste Generation within Town of Smithtown	2-11
Table 2-9.	Assumed 2010 Baseline Smithtown Waste Composition (tons).....	2-12
Table 2-10.	2010 Smithtown Recycling Efficiency (percent).....	2-14
Table 3-1.	Residential Contract Bid Area (CBA) Overview 2013	3-6
Table 4-1	- Estimated Future Waste Generation	4-1
Table 4-2	– Commercial Land Use.....	4-4
Table 4-3	– Commercial District Characteristics	4-5
Table 4-4.	Industrial Zoned Land.....	4-7
Table 5-1.	Summary of cost for Smithtown’s Residential Solid Waste Program for 2012	5-28
Table 7-1A.	Existing Programs to be Continued	7-1
Table 7-2B.	Schedule of New Waste Management Initiatives.....	7-2
Table 7-4	– NYSDEC Calculator Tab 7. MSW Generation and Diversion – Detailed Projections	7-10



Table of Contents

Appendices – Volume II

Appendix A: Regional Setting Map

Appendix B: 2010 United States Federal Census Data

Appendix C: Town of Smithtown Community Facilities Study,

Includes lists of Parks and Schools within the Town

Appendix D: Town of Smithtown Recycling Calendar and Public Information

Appendix E: Municipal Services Facility Location Map

Appendix F: NYSDEC Solid Waste Facility Permit

Appendix G: CNG Program & Case Studies

Appendix H: Waste-To-Energy (WTE) Fact Sheets



Section 1 – Description of the Planning Unit

Section 1 Description of the Planning Unit

1.1 Description of the Planning Unit

The Planning Unit for this Local Solid Waste Management Plan (LSWMP) consists of the Town of Smithtown and the three incorporated Villages located within the Town. The three villages are the Village of the Branch, the Village of Nissequogue, and the Village of Head of the Harbor. The Town of Smithtown entered into agreements with the three villages in the 1990's for the collection of solid waste and recyclables. While the original agreement did not require planning unit membership, the three villages informally participated in Smithtown's municipal solid waste collection and recycling management program and were at that time, effectively members of this planning unit. In the fall of 2012, the Town of Smithtown renewed the Inter-Municipal Agreements (IMA's) with the Villages to more formally memorialize their membership in the planning unit. There are no other neighboring municipalities who have elected to become participants in this Planning Unit.

In 1991, the Town of Smithtown entered into a 20 year Municipal Cooperation Agreement (MCA) with the Town of Huntington 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. While this agreement ended on October 27, 2012, Smithtown and Huntington executed a re-stated agreement prior to October 2012. The re-stated MCA provides for a time extension to the agreement that includes option years until November 30, 2024; this full extension period has been executed and is currently in effect. Hence, while the Town of Huntington is not a member of the Town of Smithtown planning unit, it is a key stakeholder in the dynamics of the Smithtown-Huntington waste management system.

The Town of Smithtown is situated in the northwesterly portion of Suffolk County, Long Island, New York and covers a land area of 57.8 square miles. The Town is bounded on the North by Smithtown Bay, on the east by the Town of Brookhaven, on the south by the Town of Islip and on the west by the Town of Huntington. A Regional Setting Map is provided in Appendix A.



Section 1 – Description of the Planning Unit

1.2 Duration of Planning Period

This Comprehensive Solid Waste Management Plan establishes the structure of the Town of Smithtown's solid waste and recycling management for a 10- year planning period. Accordingly, the Town of Smithtown spanning from 2016 through 2025 has selected a planning period.

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

According to the census data obtained during the 2010 US Census, the population of the Town is currently at 117,801 residents. The Town's population has grown slightly between 1990 and 2010 with a growth rate of approximately 0.2 % each year. According to 2010 US Census figures, there are 41,381 households in the Town. The average household size is approximately 2.85⁽¹⁾ people. Table 1-1 below depicts the Town's population over the last 40 years including residents residing in the villages:

¹ 117, 801 residents/41,381 households = 2.85 residents per household



Section 1 – Description of the Planning Unit

Table 1-1. Town Wide Population Including Villages

Year	Town Population
1970	114,700
1980	116,700
1990	113,406
2000	115,715
2010	117,801

Table 1-1 above shows clearly that the Town's population has not grown significantly in 40 years, which could be attributed to several factors including:

- The limited amount of vacant land
- The decline in school age population of 30% since 1970
- The decline in household size
- The significant out migration of persons aged 19 to 33.
- The Town's population is growing older at a rate that is higher than the Suffolk County and national averages.

The population density of the Town is approximately 2,160 people per square mile, which is indicative of a suburban setting rather than a rural or urban area.

Table 1-2 below depicts the population of each of the three villages located within the Town. The residents in the villages comprise approximately 4.2% of the total Town population.

Table 1-2. Village Population

Village	2010 Population
Head of the Harbor	1,472
Nissequogue	1,749
Branch	1,807
Total:	5,028



Section 1 – Description of the Planning Unit

1.5 Administration

The Department of Environment and Waterways (DEW) is the Town of Smithtown’s municipal department charged with the primary responsibility for solid waste planning and management in the Town. The Department contracts for and manages the collection of all residential and recyclable waste in the Town, providing collection to approximately 37,363⁽²⁾ households out of the total 41,381⁽³⁾ households in the Town. The Department of Environment and Waterways also manages the Town’s closed landfills, transfer stations, S.T.O.P. hazardous household waste collection events, waste disposal contracts, Municipal Cooperative Agreements (MCAs) and handles regulatory reporting. DEW also is responsible for the management of the Town’s Non-Residential Solid Waste Disposal Capacity Generation Fee Program that sets waste generation fees for commercial waste in the Town. This program is formally codified in Chapter 177⁴ of the Town Code.

The Town Sanitation Department in consultation with DEW manages and operates the Material Recovery Facility (MRF), Construction & Demolition (C&D) Debris transfer station and yard waste processing and transfer stations. The Department of Public Safety enforces Town Codes pertaining to solid waste and participates in public education efforts on waste related issues.

1.6 Special Population Centers and Household Distribution

Town records indicate that in 2012 garbage and recycling collection services for *residential* waste were provided to 37,363 homes as described below:

- Single Family Homes:⁽⁵⁾ 35,786 households
- Two Family Homes: 1,368.50 households
- Three Family Homes: 140 households
- Multi-Family Homes: 68.25 households

The remaining 4,018 residential households (the difference between the amount of households counted by the 2010 US Census and those serviced by the Town) which do not receive garbage

² The Town Department of Environment and Waterways maintains data on the collection program

³ Data Source is 2010 US Census, refer to Appendix B

⁴ Town of Smithtown Town Code Chapter 177 can be found online at <https://ecode360.com/15099400>

⁵ Includes household waste from gated communities and some condominiums



Section 1 – Description of the Planning Unit

and recycling collection services are located outside of the Town's residential garbage collection districts in special population centers. The waste from these households is collected as *commercial waste*. Commercial waste generators include:

- Rental Apartment Developments
- Co-op Apartment Complexes
- Schools and Institutions
- Commercial Businesses
- Industrial Areas

The Town of Smithtown encompasses an area of 34,017 acres. Commercial businesses located in the Town are limited to approximately 3 percent (1,008 acres)⁽⁶⁾ of the Town's total acreage. Commercial activities are located in the three main central business districts in the hamlets of Kings Park, Smithtown, and St. James, as well as in the Smith Haven Mall (located partially in the Town). There is also commercial development along major arteries such as New York State Routes 25 (Jericho Turnpike/Middle Country Road), 25A (North Country Road), 454 (Veterans Memorial Highway), 347 and 111, as well as County Routes 4 (Commack Road) and 16 (Terry Road/Portion Road).

Industrial Centers located in the Town occupy about 9% (2,469 acres)⁽⁶⁾ of the Town's total area. The five main clusters of industrial businesses are listed below:

1. The John V.N. Klein Industrial park
2. Middle Country Road Corridor
3. West Jericho Turnpike Corridor
4. Old Northport Road Industrial area
5. Gyrodyne Industrial Area

A complete listing and detailed analysis of community facilities, including hospitals, nursing homes, municipal buildings and other institutions, within The Town of Smithtown was undertaken by the Town's Planning and Community Development department. It is provided as Appendix C. The Community Facilities Report also contains a thorough analysis of Utilities and Other Infrastructure within the Town, including a discussion of sewage treatment and sanitary systems, which includes a listing of private and Suffolk County-owned treatment plants within

⁶ Town of Smithtown Comprehensive Plan Update – February 2010



Section 1 – Description of the Planning Unit

the geographic borders of the Town. Note there are no sewage treatment plants owned or operated by the Town of Smithtown.

1.7 State and Federal Parks, Schools, Significant Industries and Seasonal Impacts

In the Town of Smithtown, there are 88 State, County, Town, and other types of parks that total approximately 4,600 acres or 15.9% of the unincorporated areas. A listing of all the Parks is provided in Appendix C. All of the large parks located in the Town are owned and operated by the State of New York or Suffolk County and include:

- Sunken Meadow State Park
- Nissequogue River State Park
- Caleb Smith State Park
- Lake Ronkonkoma County Park
- Arthur Kunz County Park
- Blydenburgh County Park

Many of the park facilities are passive parks and are not heavily visited by the public. Accordingly, they generate insignificant quantities of solid waste. Similarly, the smaller Town Parks also do not generate large amounts of solid waste. Waste at Town-owned parks is collected seasonally by a private carter under contract to the Town and is disposed of as non-residential town generated waste.

The Town of Smithtown is served by six public school districts for grades K-12: Smithtown, Kings Park, Commack, Hauppauge, Sachem, and Three Village. The Smithtown and Kings Park districts are located within the Town Boundaries; the other four districts are located partially within the Town of Smithtown. A listing of all the schools is shown in Appendix C. There are no colleges or universities located within the Town of Smithtown.

At this time waste tonnages and recyclable quantities from State, County and Town Parks are not available. Similarly, waste tonnages and recyclable quantities from local school districts are also not available at this time. In view of this, the Town will investigate this further as an action item as discussed in Section 6 of this plan.

Other than the industrial areas mentioned above in Section 1.4, there are no large or significant individual industries located in the Town.



Section 1 – Description of the Planning Unit

There are no discernible seasonal effects on waste disposal in the Town of Smithtown 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 Smithtown waste stream.

1.8 Tourism and Agricultural

Only a limited number of small farms remain in the Town, consequently farming does not generate significant quantities of solid waste. Similarly, generation of waste from tourism is not significant as the town is not a large-scale destination point for overnight tourism.



Section 2 – Solid Waste Quantities and Composition

Section 2 Solid Waste Quantities and Composition

2.1 Solid Waste Quantities and Composition

The Town of Smithtown's Department of Environment and Waterways (DEW) manages a program whereby putrescible and non-putrescible wastes are collected, recycled, or disposed of from all residences in the Town, from incorporated villages within the Town and from private waste haulers. This program provides for the collection of municipal solid waste (MSW) and recyclables from approximately 37,363 households in single, two-, three- and four-family housing, including households residing in condominiums and gated communities.

Commercial and institutional solid waste is also managed by the Town, in accordance with Article VIII of Town Code Chapter 177¹, with collection provided by commercial carters who contract directly with businesses and institutions for their collection, recycling and disposal services. Article VIII, Nonresidential Solid Waste Disposal Capacity Generation Fee (also known as the "Tulsa Plan" after a successful waste generation fee originally instituted in Tulsa, Oklahoma), is not truly a commercial flow control ordinance. It is a methodology to manage commercial and industrial waste by charging a waste generation fee to all commercial properties located in the Town. See Section 3.1.4 for additional information on the details of this program.

2.2 Current Estimates of Solid Waste Generation

2.2.1 Residential Waste Quantities

Residential (household) waste is collected in the Town's 12 collection districts (also known as Contract Bid Areas (CBAs)) as well as in the Villages of Head of the Harbor, Nissequogue, and The Branch. The waste is collected by private carters under contract to the Town who typically deliver the household waste directly to the Huntington Resource Recovery Facility (a Waste to Energy (WTE) plant operated by Covanta located within the Town of Huntington)². Recyclables are also collected by the carters and are delivered to the Town of Smithtown's Material Recycling Facility (MRF) located on Old

¹ Town of Smithtown Town Code Chapter 177 can be found online at <https://ecode360.com/15099400>

² Refer to Section 3.1.4. for details concerning the use of the Huntington RRF by carters



Section 2 – Solid Waste Quantities and Composition

Northport Road in Kings Park for processing and sale to markets. Yard Waste is collected by the Town's Highway Department and is delivered to the Town's yard waste transfer and processing facility, which is co-located with the MRF in Kings Park.

Please see Table 2-1 below for a tabulation of total residential waste quantities collected in the last several years from the Town's 12 CBA's which includes the three villages:

Table 2-1. Total Residential Tonnage

Calendar Year	Total Residential Tonnage Totals
2012	54,145
2011	52,331
2010	51,882
2009	55,689
2008	59,046

Note: Residential Waste includes household waste only and does not include recyclables and yard waste.

2.2.2 Village Residential (Household) Waste

The above residential waste totals include the household waste collected in the three villages; however, a summary of household waste generated in each individual village is not available. Household waste collected in the Villages of Nissequogue and the Head of the Harbor are comingled in one truck by a Town contract carter. Hence, combined household waste tonnage numbers are known for these two villages but not individual tonnages. The combined tonnages are shown below in Table 2-2. Household waste collected from the Village of the Branch is comingled with that of CBAs #3, 7 and 8, and thus could not be deduced from the combined residential total. In view of this, an estimate of the amount of household waste generated in the Village of the Branch was made by reviewing the village populations and extrapolating an estimated tonnage of approximately 800 tons per year.



Section 2 – Solid Waste Quantities and Composition

Table 2-2. Total Residential Tonnage from Villages

Calendar Year	Village Tonnage Totals ^{N1}	Tonnage Estimate Village of the Branch	Tonnage Totals ALL Villages
2012	1,545	800	2,345
2011	1,611	800	2,411
2010	1,568	800	2,368
2009	1,568	800	2,368
2008	1,690	800	2,490

Note 1: Includes only Nissequogue and Head of the Harbor.

An analysis of the above residential waste tonnage received over the last five years shows a somewhat declining trend in the generation rate of residential waste from 2008 to 2012. 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 materials use such as reductions in paper use as society increasing 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 such as Costco and Sam's Club
- Diversion of materials from disposal, through home composting or greater recycling

Some Long Island municipalities have avoided disposal through reduction in yard waste management by adopting "Don't Bag It" programs banning the collection of grass and increased collection efforts for leaves and brush. Smithtown has had a mandatory *Don't Bag It* program in place for over 20 years since 1993. 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.



Section 2 – Solid Waste Quantities and Composition

The decline in residential waste generation rates is despite the fact that between 1990 and 2010 it is estimated the population of Smithtown grew by an estimated 4,000 people. Thus, the per capita decline of waste generation is even greater than it appears.

2.2.3 Commercial Waste and Construction and Demolition Waste Quantities

Table 2-3 below shows the quantities of commercial solid waste and residential C&D Waste collected and processed for years 2008-2012. Note yard waste generated by the CII sector is not accepted at any Town-operated facilities.

Table 2-3. Commercial and C&D Waste Tonnages by Year

Tonnage Total by Year	Material	
	Commercial	C&D
2008	56,957	1,811
2009	52,038	1,926
2010	50,470	2,070
2011	51,910	1,892
2012	50,139	1,850

2.2.4 Biosolids

The Community Facilities Report provided as Appendix C contains a thorough discussion and listing of sewage treatment plants. All wastewater treatment plants within the geographic borders of the Town are either private or Suffolk County owned. There are not any sewage treatment plants owned or operated by the Town of Smithtown.

As such, the Town has no information regarding the amount of biosolids generated by these facilities. Section 6 and Section 7 will contain discussion of data collection initiative to address this.



Section 2 – Solid Waste Quantities and Composition

2.3 Recyclable Quantities

Quantities of recyclables collected and processed for years 2008-2012 are shown below in Table 2-4. The quantities shown include recyclables from the three villages in the Town.

Table 2-4. Quantities of Recyclables Collected and Processed Town-wide

Material	Tonnage by Year				
	2008	2009	2010	2011	2012
Paper	5,570	5,415	4,958	4,164	4,025
Cardboard	1,275	1,476	1,460	1,404	1,264
Mixed Glass	1,127	236	778	1,285	1,479
Mixed Plastic	540	409	374	364	348
Metal Containers	NA	278	295	272	217
Bulk Metal	560	520	351	513	250
Aluminum	47	62	47	47	88
E-Waste	43	50	43	46	71
RR Plant Metals ^{N1}	1,776	2,329	1,957	2,225	2,574
Subtotal of Materials:	10,938	10,775	10,263	10,320	10,316
Yard Waste					
Leaves	23,633	20,020	15,317	20,352	8,005
Brush	8,214	5,597	7,818	10,951	25,309 ^{N2}
Wood	8,929	9,771	6,129	5,372	6,201
Subtotal of Yard Waste:	40,776	35,388	29,264	36,675	39,515
Total of all Recyclables Collected:	51,714	46,163	39,527	46,995	49,831

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

Note 2: 5,250 tons of the total 25,309 tons of Hurricane Sandy brush debris was disposed of at the Town of Brookhaven Emergency Burner



Section 2 – Solid Waste Quantities and Composition

Table 2-5 below shows the quantities of recyclables collected and processed for years 2008-2012, from the Villages of Head of the Harbor and Nissequogue. Separate tonnage data for the Village of the Branch is not available but is included in the quantities shown on Table 2-4 above.

Table 2-5. Quantities of Recyclables Collected and Processed From Villages Only

Tonnage Total by Year	Material	
	Paper	Mixed Recyclables
2008	219	99
2009	498	105
2010	197	107
2011	193	109
2012	195	107

2.4 Estimated Town-wide Recycling Rate

In 2010, Smithtown directly collected and managed the following types of municipal solid waste from its collection districts and is presented in Table 2-6:

Table 2-6. Total 2010 MSW Quantities from Smithtown Controlled Garbage Districts and Villages

Waste Type	2010 Tonnage Received
Residential	51,882
Commercial	50,470
Recyclables-ONP/OCC	6,418
Recyclables-Comingled Containers	1,447
Metals from WTE Ash	1,957
Yard Waste (curbside)	29,264
Other Recyclables	389
Total:	141,827

Based on a total of 141,827 tons of waste processed by the Town of Smithtown in 2010, a recyclable material diversion rate of 27.8% was achieved.



Section 2 – Solid Waste Quantities and Composition

2.5 Enforcement of Town Recycling Ordinances

The Town operates a vigorous enforcement program in both the residential and commercial communities in order to support the Town's recycling efforts. From January 1 through May 31, 2013 over 2,021 residential recycling investigations and over 736 commercial recycling investigations were carried out by the Town's Code Enforcement officers. The enforcement efforts include individual inspection of garbage containers on a home-by-home or business-by-business approach, as well as a more targeted/focused strategy where an entire geographic area is inspected.

Code Enforcement Officers, in addition to undertaking enforcement matters; also provide public education to residents and businesses on recycling matters. The Department of Public Safety Division of Media has produced public education videos concerning waste management issues available to the public on the Town's website, public access TV stations and on YouTube.

2.6 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. Table 2-7 below provides the NYSDEC definition of suburban waste composition, as presented in the draft version of *"Beyond Waste"*.

The Town requires certain paper products to be source separated. These items include newspapers, magazines, corrugated cardboard, office and school paper, direct mail and catalogs, paper bags and index & greeting cards have been designated as "mandatory paper recyclables". The Town also requires that metal, glass, #1 and #2 plastics be source separated; these have been designated as "mandatory container recyclables." Attached as Appendix D is a copy of Smithtown's Refuse/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.



Section 2 – Solid Waste Quantities and Composition

Table 2-7. Assumed Smithtown Waste Composition (percentages)

CATEGORY	RESIDENTIAL	COMMERCIAL	TOTAL
Newspaper	5.00	1.90	3.61
Corrugated Cardboard	6.60	13.90	9.89
Other Paper Recyclables (total)	11.60	10.10	10.93
Other compostable paper	6.40	6.40	6.40
Total Paper	29.60	32.30	30.83
Ferrous containers	1.20	0.70	0.98
Aluminum containers	0.60	0.30	0.47
Other ferrous metals	5.00	5.80	5.36
Other aluminum	0.20	0.30	0.25
Automotive batteries	0.70	0.40	0.57
Other non-aluminum	0.30	0.40	0.35
Total Metals	8.00	7.90	7.98
PET Containers	0.90	0.80	0.86
HDPE Containers	0.90	0.70	0.81
3-7 plastic containers	0.20	0.20	0.20
Film plastic	5.50	5.80	5.64
Other durable plastics	3.00	3.20	3.09
Other non-durable plastics	1.60	1.80	1.69
Other plastic packaging	1.40	1.10	1.27
Total Plastics	13.50	13.60	13.56
Mandatory Container Recyclables	3.90	3.80	3.86
Other glass	0.30	0.40	0.35
Total Glass	4.20	4.20	4.21
Food scraps	12.90	15.50	14.10
Yard trimmings	11.30	9.10	10.30
Total Organics	24.20	24.60	24.40
Clothing, footwear, towels	4.40	3.20	3.90
Carpet	1.70	1.40	1.60
Total Textiles	6.10	4.60	5.50
Total Wood	2.90	4.10	3.40
C&D	3.80	2.70	3.30
Other durables	1.60	1.50	1.60
Diapers	2.10	1.20	1.70
Electronics	1.60	1.70	1.60
Tires	1.70	1.40	1.60
HHW	0.60	0.00	0.30
Fines	0.10	0.20	0.10
Total Miscellaneous	11.50	8.70	10.20



Section 2 – Solid Waste Quantities and Composition

2.6.1 Residential Per Capita Waste Generation Rate

For the purposes of this SWMP, the residential component waste of MSW will mean only household waste generated in Smithtown homes within the 12 Contract Bid Areas (CBAs); this includes waste generated within the villages. This includes household trash, recyclables such as newspaper, cardboard, and comingled containers, and yard waste. Residential Waste does not include other MSW components, such as wastes generated in apartment houses and co-ops, commercial/institutional waste, or industrial waste.

In 2012, 91,357 tons of residential waste was generated in the Town, calculated as follows from Table 2-6: The 50,470 tons of municipal solid waste generated by the CII sectors was subtracted from the overall 2012 total of 141,827 tons of waste, leaving a balance of 91,357 tons of residential waste.

With a population of 117,801 people, this suggests the waste generation rate for residents in the waste districts is approximately 4.35 lbs./person/day.

2.6.2 Commercial/Institutional Per Capita Waste Generation Rates

As mentioned earlier in this section, the Town has adopted a methodology to manage commercial waste modeled after a successful fee plan adopted in Tulsa, Oklahoma by charging a waste generation fee to all commercial properties located in the Town. Hence, while codified in Town Code Chapter 177³, Article VIII as the Nonresidential Solid Waste Disposal Capacity Generation Fee, the system is sometimes referred to as the "Tulsa Plan". As payment of a waste generation fee to the Town reserves waste capacity at the Huntington RRF and allows carters to dispose of waste at the RRF for no additional tipping fee, a significant amount of commercial solid waste is delivered to the Town. In 2012, 50,470 tons of commercial waste was delivered.

With a population of 117,801 people, this suggests the waste generation rate for commercial/institutional customers in the town is approximately 2.41 lbs./person/day.

2.6.3 Summary Per Capita Municipal Solid Waste Generation Rates

In summary, the total per capita municipal solid waste generation rate for the residential and commercial streams in the Town is estimated to be 6.76 lbs./person/day.

³ Town of Smithtown Town Code Chapter 177 can be found online at <https://ecode360.com/15099400>



Section 2 – Solid Waste Quantities and Composition

2.6.4 Construction and Demolition Per Capita Waste Generation Rates

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”.

We have 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.

A study conducted by DSM Environmental Services, Inc. in May of 2008 for the State of Massachusetts researching the C&D industry, estimated a per capita generation rate for C&D at 1.7 pounds per person per day.

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 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.

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 1.58 pounds per day per capita. This figure matches closely with a calculation LKMA has performed ; a calculation 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).

The amount of C&D generated is directly related to the economy, interest rates, and other financial factors such as mortgage availability. The severe downturn in the national economy that started in 2008 has resulted in lower than normal generation rates for C&D over the last several years. This factor, in conjunction with the others outlined above, supports a C&D per capita generation rate of 2.0 pounds per capita per day for C&D.



Section 2 – Solid Waste Quantities and Composition

With a town population of approximately 117,801 people, the total amount of C&D waste generated annually in the Town is estimated to be approximately 42,997 tons per year. The Town actually receives far less at its transfer station, receiving around 2,000 tons per year of C&D material. Most C&D waste materials generated in the Town are disposed of at private transfer stations, partially due to the Town's tipping fee of \$80.00 per ton for C&D waste. The C&D material received at the transfer station is material dropped off by residents; contractors are not permitted to dispose of C&D at this facility.

2.7 Summary of Existing Solid Waste Generation

Shown in Table 2-8 below, is a summary of the waste tonnages estimated to have been generated in 2012 in the Town of Smithtown, with associated waste generation per capita rates.

Table 2-8. Estimate of 2010 Waste Generation within Town of Smithtown

Waste Type	Tons	Pounds/Person/Day
Residential	91,357	4.35
Commercial	50,470	2.41
Total MSW	141,827	6.76
Construction & Demolition	2,070	2.00
Total MSW and C&D	143,897	8.76



Section 2 – Solid Waste Quantities and Composition

2.8 Characterization of Solid Waste

2.8.1 Waste Composition Analysis

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.

The Town is relying on the waste composition derived by NYSDEC for suburban areas in New York State (see Table 2-7). Using the total town wide waste estimates shown in Table 2-8 above and the waste composition percentages in Table 2-7, we have calculated a theoretical waste quantity for each of the waste categories shown below in Table 2-9. Again, these values represent not just the Planning Unit waste quantities, but the total waste stream from the entire Town.

Table 2-9. Assumed 2010 Baseline Smithtown Waste Composition (tons)

CATEGORY	RESIDENTIAL (TONS/YEAR)	COMMERCIAL (TONS/YEAR)	TOTAL (TONS/YEAR)
Newspaper	4,556.45	958.93	5,515.38
Corrugated Cardboard	6,014.51	7,015.33	13,029.84
Other Paper Recyclables (total)	10,570.96	5,097.47	15,668.43
Other compostable paper	5,832.26	3,230.08	9,062.34
Total Paper	26,974.18	16,301.81	43,275.99
Ferrous containers	1,093.55	353.29	1,446.84
Aluminum containers	546.77	151.41	698.18
Other ferrous metals	4,556.45	2,927.26	7,483.71
Other aluminum	182.26	151.41	333.67
Automotive batteries	637.90	201.88	839.78
Other non-aluminum	273.39	201.88	475.27
Total Metals	7,290.32	3,987.13	11,277.45
PET Containers	820.16	403.76	1,223.92
HDPE Containers	820.16	353.29	1,173.45
3-7 plastic containers	182.26	100.94	283.20
Film plastic	5,012.10	2,927.26	7,939.36
Other durable plastics	2,733.87	1,615.04	4,348.91
Other non-durable plastics	1,458.06	908.46	2,366.52



Section 2 – Solid Waste Quantities and Composition

CATEGORY	RESIDENTIAL (TONS/YEAR)	COMMERCIAL (TONS/YEAR)	TOTAL (TONS/YEAR)
Other plastic packaging	1,275.81	555.17	1,830.98
Total Plastics	12,302.42	6,863.92	19,166.34
Mandatory Container Recyclables	3,554.03	1,917.86	5,471.89
Other glass	273.39	201.88	475.27
Total Glass	3,827.42	2,119.74	5,947.16
Food scraps	11,755.64	7,822.85	19,578.49
Yard trimmings	10,297.58	4,592.77	14,890.35
Total Organics	22,053.22	12,415.62	34,468.84
Clothing, footwear, towels	4,009.68	161,504.00	165,513.68
Carpet	154.92	706.58	861.50
Total Textiles	5,558.87	2,321.62	7,880.49
Total Wood	2,642.74	2,069.27	4,712.01
C&D	3,462.90	1,362.69	4,825.59
Other durables	1,458.06	757.05	2,215.11
Diapers	1,913.71	605.64	2,519.35
Electronics	1,458.06	857.99	2,316.05
Tires	1,549.19	706.58	2,255.77
HHW	546.77	-	546.77
Fines	91.13	10,094.00	10,185.13
Total Miscellaneous	10,479.84	14,383.95	24,863.77

2.8.2 Recycling Analysis

Using the estimated composition of the residential waste streams, it was possible to estimate the recovery efficiency of the Town's recycling process (by dividing recyclables collected by the Town in 2010 by the estimate of the total waste stream tonnage). The accuracy of these calculations is unknown, as it is not clear that the NYSDEC waste composition is appropriate for the Town. From the results of this process, shown in Table 2-10, it is clear the Town's yard waste and newspaper recycling programs are very effective. Also it is encouraging to see an estimate that the Town is collecting over 20% of the mandated containers, especially considering the diversion of these materials through the Bottle Bill.

Exercises like this, while perhaps not especially rigorous and exact may help to direct future education and outreach programs in the Town.



Section 2 – Solid Waste Quantities and Composition

Table 2-10. 2010 Smithtown Recycling Efficiency (percent)

CATEGORY	RESIDENTIAL RECYCLABLES (TONS/YEAR)	COLLECTED RECYCLABLES (TONS/YEAR)	RECYCLING EFFICIENCY (%)
Newspaper	4,556.45	4,958.00	≥100%
Corrugated Cardboard	6,014.51	1,460.00	24.3%
Other Paper Recyclables (total)	10,570.96		
Other compostable paper	5,832.26		
Total Paper	26,974.18		
Ferrous containers	1,093.55	295.00	27.0%
Aluminum containers	546.77	47.00	8.5%
Other ferrous metals	4,556.45	2,849.00	62.5%
Other aluminum	182.26		
Automotive batteries	637.90		
Other non-aluminum	273.39		
Total Metals	7,290.32		
PET Containers	820.16	166.12	20.3%
HDPE Containers	820.16	194.20	23.7%
3-7 plastic containers	182.26		
Film plastic	5,012.10		
Other durable plastics	2,733.87	13.19	4.8%
Other non-durable plastics	1,458.06		
Other plastic packaging	1,275.81		
Total Plastics	12,302.42		
Glass Container Recyclables	3,554.03	778.00	21.9%
Other glass	273.39		
Total Glass	3,827.42		
Food scraps	11,755.64		
Yard trimmings	10,297.58	29,264.00	≥100%
Total Organics	22,053.22		
Clothing, footwear, towels	4,009.68		
Carpet	154.92		
Total Textiles	5,558.87		
Total Wood	2,642.74		
C&D	3,462.90		
Other durables	1,458.06		
Diapers	1,913.71		
Electronics	1,458.06		
Tires	1,549.19		
HHW	546.77		
Fines	91.13		
Total Miscellaneous	10,479.84		



Section 3 – Existing Program Overview

Section 3 Existing Program Overview

3.1 Solid Waste Management Program Overview

The solid waste program of the Town of Smithtown provides a variety of direct solid waste and recycling services to its 118,000 residents including the residents of three incorporated villages located in the town. The Town of Smithtown'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 Smithtown, 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. Pursuant to its mandate to protect the general health, welfare, and safety of its citizens, Smithtown charges a waste generation fee to the generators of nonresidential waste, thereby ensuring lawful handling and disposal of waste generated by the CII sector. These fees are used to maintain a waste disposal capacity sufficient to accommodate all such nonresidential waste. Nonresidential waste generators have the option of utilizing the available disposal capacity with a zero tip fee.

Key elements of the Town of Smithtown'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
- A waste generation fee (TULSA) program for nonresidential solid waste
- The operation of a municipal Materials Recovery Facility (MRF)
- The operation of a municipal Yard Waste Processing / Transfer Station
- A long term Municipal Cooperation Agreement (MCA) 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.



Section 3 – Existing Program Overview

3.1.1 Sources of Waste: Residential and Commercial

The modern structure of waste management on Long Island has its origin in the adoption of the Long Island Landfill Law (ECL §27-0704) 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. In the early 1980s, Smithtown operated a landfill for the disposal of MSW and C&D, and made it available to all Town residents and businesses, but not to waste generated in other towns. Smithtown did not provide waste collection services at this time, and did not provide a comprehensive recycling program. However, in response to the law, Smithtown began to develop the integrated waste management system it employs today.

3.1.1.1 Residential Waste

The provision of comprehensive waste management services to the residents of Smithtown began with the creation of the Town of Smithtown Solid Waste Collection and Disposal District in 1992. Prior to January 1992, all residents, commercial, industrial, and institutional establishments within the Town were required to make individual arrangements with private carters for solid waste collection or deliver such waste to the Town Municipal Services Facility for disposal. After the creation of the garbage districts, the Town provided residential waste and recyclables collection through contracts with private haulers including for the collection of bulk waste. Subsequently, the Town Board of the Town of Smithtown determined, pursuant to Section 50-a of the Town Law to become a suburban town subject to the provisions of Article 3-A of the Town Law. On May 21, 1991, the Town Board passed a Resolution declaring the Town to be classified a Suburban Town effective January 1, 1992. Since this time, the Town has been operating under appropriate Sections of the Town Law for Suburban Towns.

A primary reason for the Town to be so classified was to enable the Town to establish Solid Waste and Collection Districts. As part of its contractual obligation under the Smithtown/Huntington Municipal Cooperation Agreement (MCA), the town was required to deliver all of its processable municipal solid waste to the Huntington Resource Recovery Facility, essentially a “put or pay”



Section 3 – Existing Program Overview

obligation for the Town of Smithtown. It was determined by the Town that the establishment of a residential solid waste collection and disposal district would assist the Town by fulfilling its obligations to the Huntington Resource Recovery Facility and ensuring the highest quality of solid waste collection service to the residents of the District. The District covered the entire unincorporated area of the Town and the Village of the Branch, which elected to participate in the District. Services commenced after January 1, 1992.

While the Villages of Head of the Harbor and Nissequogue did not join the District they subsequently were provided collection and disposal services through IMA's entered into with the Town of Smithtown.

3.1.1.2 Commercial and Institutional Waste

Upon implementation of the MCA with the Town of Huntington, the Town of Smithtown by local law implemented traditional flow control for nonresidential solid waste directing all such nonresidential solid waste to the Huntington Resource Recovery Facility (HRRF). In 1994, in *C&A Carbone v. Town of Clarkstown*, the Supreme Court struck down a flow control law in Clarkstown N.Y. as violative of the commerce clause. As a result of this decision, the Town of Smithtown's flow control local law pertaining to nonresidential solid waste was considered unenforceable. The Town's residential district contracts were upheld by the 2nd Circuit in *SSC Corp. v. Town of Smithtown* in 1995.

Smithtown had committed to deliver all residential and nonresidential solid waste generated in the Town to the Huntington Resource Recovery Facility. Accordingly, Smithtown began to explore the creation of a commercial solid waste district after the Carbone and SSC decisions. However, when confronted with a potential commercial district, local carters in Smithtown provided active support and cooperation for an alternate Waste Generation Fee system patterned after one in Tulsa, Oklahoma. Under the Waste Generation Fee, or "Tulsa Program", Smithtown charges a waste generation fee to the generators of nonresidential waste.

The "Tulsa" fees are used to pay for and to maintain a waste disposal capacity sufficient to accommodate all such nonresidential waste as a means of protecting the public health. Nonresidential waste generators have the option of



Section 3 – Existing Program Overview

utilizing the available disposal capacity with a zero tip fee. There is no district involved. The waste generation fee is based on the volume of waste generated by nonresidential properties. Local carters provide information to the town on the services they provide to each nonresidential property: size of container, frequency of pick-up, and other relevant information. The town converts the size of container and frequency of pick-up into a fee sufficient to cover the cost of disposing of the involved solid waste and administering the program.

This fee is calculated on a monthly basis and the generator is billed monthly by the town. In the event of nonpayment, the town can levy the annual property tax bill for the amount due. Nonresidential waste generators are free to have their solid waste delivered to the Huntington Resource Recovery Facility (HRRF) and to utilize the waste disposal capacity maintained in this way without having to pay a tipping fee. Smithtown is the only community in New York State that operates this system, but similar waste generation fee systems exist in other parts of the county.

It should be noted that while the Town of Smithtown Town Code §177-58 thru §177-62¹ requires the recovery of recyclables from the nonresidential waste stream, the Town does not collect nor dictate the tipping points for nonresidential recyclables. Nonresidential generators of recyclables typically make private arrangements for the collection, sorting and marketing of nonresidential recyclables. The town will, however, accept nonresidential recyclables without charge at the municipal Materials Recovery Facility in Kings Park.

Advantages of the Waste Generation Fee System:

- Actively supported by local carters
- Generally accepted by the local business community with very few complaints
- Provides sufficient waste and revenue to meet the Town's obligations at the Huntington Resource Recovery Facility
- Enables the local government to maintain safe and environmentally secure disposal capacity for all local solid waste

¹Town of Smithtown Town Code Chapter 177 can be found online at <https://ecode360.com/15099400>



Section 3 – Existing Program Overview

- Ability to gather better and more comprehensive information on the types and quantities of waste generated in the Town for use in planning future facilities

Disadvantages, challenges, and concerns of the Waste Generation Fee System:

- The Town has to carefully monitor in-bound waste to ensure that carters depositing waste under the \$0.00 tip fee structure are not disposing of quantities greater than those they are paying for
- Administrative expense to manage billing system and to provide appropriate oversight of carters

3.1.2 Existing Solid Waste Facilities Inventory

The solid waste programs and facilities available to and planned by the Town of Smithtown 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, and recyclables providing collection services for approximately 37,363 households.
- Utilization of the Huntington Resource Recovery Facility through a Municipal Cooperation Agreement (MCA) with the Town of Huntington for the disposal of processable waste with energy recovery.
- The Town operates its Municipal Services Facility (MSF) in Kings Park, New York as shown in Appendix E. The solid waste facilities here include:
 1. A closed municipal landfill occupying approximately 60 acres
 2. Leachate Storage and Transfer Facilities
 3. A landfill gas recovery system including a landfill gas combustion/destruction device.
 4. Scale House and two digital weigh scales.
 5. Materials Recycling Facility for processing and marketing of paper/cardboard and commingled recyclables



Section 3 – Existing Program Overview

6. Yard waste processing and grinding area that receives waste generated either by Town residents or Town facilities
7. Resident drop-off area
8. Construction and Demolition Debris Transfer Station for the transportation off-site of residentially generated C&D waste
9. Compressed Natural Gas (CNG) Vehicle Fueling Facility
10. Support Buildings/Facilities including a truck garage and maintenance center, a building housing the employee lunchroom and foremen offices and a building housing the office of the Sanitation Supervisor

Each of these existing facilities, as well as Smithtown’s collection system and recycling programs, are discussed in more detail below.

3.1.3 Curbside Collection System for Residential Waste

The Town provides collection services for residential waste and recyclables generated within the Smithtown garbage district, a special district encompassing approximately 37,363 single, two, three, and four -family homes in the Town. The district has been further subdivided into 12 separate areas, known as Contract Bid Areas (CBA’s). The Town currently has contracts with four different carting companies who provide the collection services in the 12 CBA’s. After the residential waste has been collected by a contract carter, it is directly transported to the Huntington Resource Recovery Facility (Covanta Waste to Energy Plant) in Huntington for disposal. Table 3-1 below lists the current carting firms, the districts serviced, housing units, and collection costs for the year 2013.

Table 3-1. Residential Contract Bid Area (CBA) Overview 2013

	Single Family	Two Family	Three Family	Four Family	Units	Total Cost
CBA Pair A						(\$162.00/ unit /year)
CBA # 1	2466	86	13	4	2569	
CBA # 3	2166	61	2	1	2230	
Subtotal:	4632	147	15	5	4799	



Section 3 – Existing Program Overview

Factors:	1.00	1.75	2.50	3.25		
Units:	4632	257.25	37.5	16.25	4943	\$800,766.00
CBA Pair B						
CBA # 4	3321	48	3	2	3374	
CBA # 7	3435	72	5	1	3513	
Subtotal:	6756	120	8	3	6887	
Factors:	1.00	1.75	2.50	3.25		
Units:	6756	210	20	9.75	6995.75	\$1,133,311.50
CBA Pair C						(\$146.16/ unit /year)
CBA # 5	3410	83	2	0	3495	
CBA # 6	3526	82	3	1	3612	
Subtotal:	6936	165	5	1	7107	
Factors:	1.00	1.75	2.50	3.25		
Units:	6936	288.75	12.5	3.25	7240.5	\$1,058,271.48
CBA Pair D						(\$135.36/ unit /year)
CBA # 8	3787	74	3	2	3866	
CBA # 9	3948	93	6	3	4050	
Subtotal:	7735	167	9	5	7916	
Factors:	1.00	1.75	2.50	3.25		
Units:	7735	292.25	22.5	16.25	8066	\$1,091,813.76
CBA Pair E						(\$138.00/ unit /year)
CBA # 2	4298	113	14	3	4428	
CBA # 10	4383	56	5	0	4444	
Subtotal:	8681	169	19	3	8872	
Factors:	1.00	1.75	2.50	3.25		
Units:	8681	295.75	47.5	9.75	9034	\$1,246,692.00
Village CBAs						(\$313.28/ unit /year)
CBA # 11	567	6	0	0	573	
CBA # 12	479	8	0	4	491	
Subtotal:	1046	14	0	4	1064	
Factors:	1.00	1.75	2.50	3.25		
Units:	1046	24.5	0	13	1083.5	\$339,438.88



Section 3 – Existing Program Overview

Each home within the garbage district as well as homes in the two Incorporated Villages handled under the program pursuant to municipal cooperation agreements receives three collections per week from contract carters, two for household waste, and one for recyclables. Since the Town instituted “single stream” recycling, the recycling collection picks up newspaper, cardboard (fiber), and commingled recyclables (containers) each week. Bulky items are picked up by the contract carter on an on-call basis.

To reduce yard waste quantities and to help keep high nitrogen grass clippings out of the Huntington Resource Recovery Facility, a “Just Mow It” program was enacted, banning the collection of grass clippings and simultaneously promoting the practice of leaving grass clippings on lawns. The Town provides for the collection of leaves and brush from residential properties as more fully described in more detail in Section 3.1.6 of this document.

Please see attached as Appendix D, a copy of the Town’s recycling calendar informing residents of the schedule for recycling collections. The Town has provided a 20-gallon recycling container to every home in the collection district to facilitate recycling of commingled recyclables as well as a green plastic crate to facilitate the collection of newspapers and cardboard. In 2010, the Town’s contract carters collected over 51,882 tons of residential waste from homes in the Town. Similarly, Town contract carters collected over 6,418 tons of paper/cardboard as well as 1,447 tons of commingled recyclables from homes.

The Town’s website (www.smithtownny.gov) 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.

3.1.4 Collection System for Commercial Waste

The Town of Smithtown does not provide collection services for the collection of nonresidential waste, which 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. The private carters so employed are free to dispose of the involved nonresidential waste at the Huntington Resource Recovery Facility (HRRF) plant with a \$0.00 tipping fee. A secondary benefit of



Section 3 – Existing Program Overview

the commercial waste generation fee is that the volume based fee system constitutes a type of “Pay As You Throw” program providing a financial incentive to nonresidential waste generators to reduce their waste generation. Nonresidential waste collection services are provided by roll-off trucks or front-end loaders rather than the rear loader packer trucks commonly used for residential collection.

It should be noted that commercial carters operating under this Tulsa Plan are allowed to market any recyclables collected from customers; hence, nonresidential recyclables are not generally delivered to the Smithtown MRF but are marketed directly by the generator or the carter.

3.1.5 Recyclables Currently Collected and Processed

Town ordinances require all waste generators to source-separate recyclables. This includes institutional and commercial businesses and facilities. As of January 1, 2015, the Town has entered into an agreement with the Town of Brookhaven to participate in their “Green Stream” single-stream recycling program². As such, the Town’s curbside collection program now allows commingled recyclables, which are delivered to the Town’s MSF and hauled to the Town of Brookhaven by the Town using in-house personnel and equipment. Below is a listing of both recyclable and non-recyclable items established by the Town:

Mandatory Paper Recyclables

- newspaper, color inserts, magazines
- catalogs, mail, envelopes, greeting cards
- junk mail, office paper, post-its
- construction, school, & PC paper
- white ledger, fax paper, manila folders
- copy & shredded paper, yellow legal pads
- NCR paper, wrapping paper, index cards
- telephone books, sweepstakes forms
- books (no covers)
- kraft (brown bag) paper, corrugated cardboard

² Recycling markets and programs are subject to change based on global market conditions; please refer to <http://www.smithtownny.gov/index.aspx?NID=418> for current information.



Section 3 – Existing Program Overview

Mandatory Commingled Recyclables

- glass bottles, jars
- tin, aluminum, bimetallic cans
- aerosol spray cans
- aluminum foil
- aluminum food containers
- plastic containers: #1 (PET) and #2 (HDPE)

Non-Mandatory Drop-off recyclables

- used motor oil & filters
- scrap metal
- yard waste
- electronics
- car, truck, & boat batteries
- clothing
- frying oil
- fishing line
- small appliances

Unacceptable as Recyclables⁽¹⁾

- Regular pots & pans, knives, forks
- cardboard with metal rims
- containers with hazardous residue, medical waste
- window panes, ceramics, mirrors
- Pyrex, plastic bags
- wax-coated boxes, lightweight uncorrugated cardboard
- soiled boxes
- flake/chipboard boxes
- plastic string/wire
- carbon paper, blue prints

Note 1: Based on market dynamics or more specifically a lack of markets



Section 3 – Existing Program Overview

3.1.6 Yard Waste Curbside Collection

The Town's Highway Department is currently responsible for the collection of yard waste throughout the Town. Yard waste is collected primarily during two high generation periods in the fall and the spring. All leaves and small brush must be bagged for collection. Similarly, brush must be cut and tied into manageable bundles for collection. In 1993, the Town enacted a ban on grass collection, encouraging residents to utilize mulching mowers or home compost, so that grass clippings are not collected. Town inspectors make random checks of yard waste bags placed out for collection by residents to insure they do not contain any grass clippings.

The yard waste collected by the Highway Department is transported to the Town's MSF facility for further processing. The leaf portion of the yard waste received at the MSF Facility is stockpiled and then transferred out for recycling to out of town composting facilities by a private vendor. The brush portion of the yard waste received at the MSF Facility is processed into fine quality mulch. Brush is shredded, ground, and screened. Finished mulch is made available free of charge to residents and commercial landscapers and horticultural businesses. To make the finished mulch more attractive to residents / homeowners a portion of the finished mulch is run through a bagging plant. This finished bagged mulch has been very popular with residents / homeowners with the Town having to limit the number of bags to ten per resident / homeowner per trip. On average, the Town distributes over 100,000 forty-pound bags (2,000 tons) of mulch to homeowners per year. Only un-bagged bulk mulch is made available to commercial landscapers and horticultural businesses. On average the Town provides roughly 7,000 tons per year of bulk mulch to commercial landscapers and horticultural businesses.

3.1.7 Village Yard Waste Practices

The Village of the Branch has a private carter collect their yard waste, which is then transported, to the Town of Smithtown's MSF. The Villages of Nissequogue and Head of the Harbor also use private carters but the yard waste is not delivered to the Smithtown MSF, it is processed and disposed of elsewhere.



Section 3 – Existing Program Overview

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

On September 20, 1989, the Towns of Smithtown and Huntington entered into a long-term solid waste disposal Municipal Cooperation 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 unprocessable waste; 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. Contract provisions for extensions through November 30, 2024 have been elected and executed.

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 MSW generated in Smithtown is delivered to the Huntington RRF for disposal. The plant is located at 99 Town Line Road, Northport, in the Town of Huntington, and is co-located with the closed Huntington Landfill. The Huntington RRF is located in close proximity to the Smithtown MSF site - just 3.1 miles away. The facility processes 900 tons/day 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 2012, over 2,500 tons of metal were recovered from the ash from Smithtown's share of the combusted MSW.

As the year 2024 approaches, some concerns exist about the viability of this facility as a disposal option once the plant's long-term agreements with Huntington cease, and it returns to private merchant operation. It is stressed however, that the dependency of the Town on Covanta is not one-sided: the plant would have a difficult time finding alternative throughput from other clients on the same scale as Huntington and Smithtown. Should the plant not receive enough waste, operations and efficiency would be compromised. It is thus anticipated, that though the price structure may be subject to change, it is unlikely that any significant impacts to the current solid waste disposal system in Smithtown will occur because of this change.



Section 3 – Existing Program Overview

3.1.9 Materials Recycling Facility

Smithtown's Materials Recycling Facility (MRF) is a 60,000 square foot complex, semi-automated system, located within an 86 acre MSF Facility located in Kings Park, New York. The MRF is owned by the Town of Smithtown and operations are conducted by Town employees. The MRF has the capacity to separate and process recyclables as follows, though currently the Town has contracted with the Town of Brookhaven to handle single stream recyclables, including commingled containers and paper³.

- 1) **Commingled Containers**, including aluminum cans, high-density polyethylene (#2) containers, polyethylene terephthalate (#1) containers, glass containers, ferrous containers, and non-ferrous food cans.
- 2) **Commingled Paper**, including newspaper, corrugated containers, Kraft paper, office paper, magazines, and junk mail.

Prior to the arrangement with Brookhaven, the MRF sorted, processed, baled, and upgraded acceptable materials to improve material marketability. The materials previously produced after being processed in the MFR include the following commodities:

- Newspapers
- Cardboard
- High Density Polyethylene – Clear
- High Density Polyethylene - Colored
- Polyethylene Terephthalate
- Aluminum
- Ferrous Metals
- Glass

All of those materials were sold into markets, except for glass, which was 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.

³ Recycling markets and programs are subject to change based on global market conditions; please refer to <http://www.smithtownny.gov/index.aspx?NID=418> for current information.



Section 3 – Existing Program Overview

The MRF employs equipment and labor to separate comingled recyclables into specific commodity types, remove contaminants and to package materials for further handling and transport. Processing equipment in the MRF includes multiple conveyors, trommels, magnetic separators, an aluminum can densifier, a “Bollegraaf” baler, a paper sorter, aluminum extraction system, a glass crusher, a sorting table and other appurtenances. A worker enclosure was provided to increase safety and productivity. The Department of Environment and Waterways staff hosts tours of the MRF facility for schools and other interested civic groups.

3.1.10 Resident Drop-Off Area

The Town has provided a resident drop-off area at the Smithtown Municipal Service Facility (MSF) as a convenience to residents who wish to drop-off and dispose of household waste, e-waste, recyclables, yard waste, waste oil and car batteries. This service supplements the curbside collection services all homeowners receive in the Town of Smithtown. This facility is open six days a week all year long.

3.1.11 Bulk Metal Storage Area

White goods, bulk items, and miscellaneous metals are collected by town employees and are temporarily stored adjacent to the easterly side of the MRF. These recyclables are stored at this location until removal from the site by the recycling vendor.

3.1.12 Transfer Station

The Town operates a small C&D Transfer Station at the MSF on the east side of the MRF. This facility is strictly for homeowner use and is not available to contractors or the CII sector for C&D Disposal. Under an MCA with Huntington dating back prior to the construction of the now-closed Cell 6, which was a joint venture between the two Towns, Huntington residents may also drop off C&D at this facility. This debris has been disposed of at the Town of Islip Cleanfill Landfill since closure of the Town of Smithtown Landfill Cell 6. Recently, a new MCA has resulted in this debris being disposed of at the Town of Brookhaven Landfill in Yaphank.

As part of the processing of the C&D material, Town staff separate out and offer usable building materials, such as doors, windows, plumbing fixtures, and boards to residents



Section 3 – Existing Program Overview

who want the material free of charge. This facility has a NYSDEC Transfer Station permit that expires on September 22, 2020. The transfer station has a permitted capacity of 12,500 tons per year (see Appendix F for a copy of the permit).

3.1.13 Compressed Natural Gas (CNG) Fueling Facility

Historically the town of Smithtown collected residential solid waste and recyclables with private carters selected through a public bid process. Contracts were awarded to the lowest responsible bidder for a five-year term of service. To limit price volatility for the town, the contracts did not contain a fuel escalator clause. In 2005, the town was in the fourth year of such a contract. Following Hurricane Katrina in 2005, the price of diesel fuel increased dramatically to more than \$4.00 per gallon. The local price of diesel fuel in 2001 when the town had solicited bids for that contract was \$1.30 per gallon. The private companies providing collection services indicated that the town should expect significant price increases when the contracts were rebid in 2006.

Not wanting to simply accept a significant price increase, the town researched alternative practices to reduce and control costs. The town identified compressed natural gas (CNG) fueled trucks as the solution. CNG refuse trucks were operating in a few communities in California to meet air quality mandates and were allegedly providing reliable service. Research indicated that while CNG refuse trucks were more expensive to buy than diesel refuse trucks, the significantly lower cost to fuel a CNG refuse truck more than made up for the higher truck purchase price. In addition, research indicated that long-term fixed price fueling contracts for CNG could be obtained, offering a price stability advantage over diesel trucks as well.

In 2006, Smithtown became the first town outside of California to mandate that 100% of its refuse and recyclables collection fleet be fueled exclusively by CNG. The town signed a contract with Clean Energy Fuels of California to build a CNG fueling station in Hauppauge without any cost to the town and to provide CNG to the town and its refuse collection contractors for seven years at fixed prices well below the cost of diesel fuel. Fuel prices were guaranteed not to exceed \$2.33 per diesel gallon equivalent (DGE) in 2007 and would rise slowly over the contract term to a price not to exceed \$2.94 per DGE in 2013.



Section 3 – Existing Program Overview

The Town of Smithtown subsequently solicited bids for the provision of collection services for seven years using CNG refuse trucks exclusively. Eleven companies bid on the work with four different companies being awarded contracts in the various bid areas. The Town began 100% CNG fueled refuse collection services on January 01, 2007 with a fleet of twenty-two dedicated CNG fueled rear-loader packer trucks. The town saved money over the cost of a new diesel fueled collection service and obtained stable prices for a basic municipal service for seven years. In addition, the Town produced the following environmental benefits:

- Eliminated the need for approximately 1.5 million gallons of primarily imported petroleum product and replaced it with domestically produced natural gas
- Reduced the emissions of diesel particulates from its collection fleet by 15 tons over the contract term
- Reduced the emission of nitrogen oxides from its collection fleet by 265 tons over the contract term
- Reduced the emission of greenhouse gases associated with its refuse fleet by twenty percent.

In 2009, the Town of Smithtown collaborated with the neighboring Town of Huntington to obtain a second area CNG fueling station in Kings Park to facilitate the conversion of the Town of Huntington refuse collection operation to CNG trucks. Following an RFP process, Smithtown in 2009 entered into a second agreement with Clean Energy Fuels for the construction of a second CNG fueling station without cost to the town and obtained a fixed price fueling agreement to run through 2024. The Town of Huntington refuse collection fleet was converted to 100% CNG on January 01, 2010. A new Town of Smithtown second-generation 100% CNG fueled refuse collection fleet began service on January 01, 2014.



Section 3 – Existing Program Overview

3.1.14 STOP Program

The Stop Throwing Out Pollutants (S.T.O.P.) program is a New York State DEC sponsored program designed to promote proper disposal of household hazardous waste (HHW). This state-wide program encourages collection of a variety of materials from homeowners such as oil-based paints, pesticides, automotive fluids, and pool chemicals. Proper handling and disposal protects against adverse impact to groundwater, and natural resources.

The Town of Smithtown provides its residents with two (2) STOP collection days a year, one in October the other in April. This program provides residents with proper collection, disposal, and where applicable, recycling of household materials requiring special management outside of established MSW and recycling programs. These STOP events will allow the Town to maximize recovery, recycling and reuse of these materials and to minimize public health and environmental threats posed by their improper storage and disposal.

The following items are collected:

Adhesives	Lighter Fluids	Paint Remover	Pool Chemicals
Alcohols	Pesticides	Cleaning Solvents	Stain/Varnish
Antifreeze	Degreasers	Photo Chemicals	Solvents
Brake Fluid	Herbicides	Wood Preservatives	Insect Spray

3.1.15 Pharmaceutical and E-Waste Programs

Sanitary waste systems throughout the community are not capable of adequately treating or removing most pharmaceutical products. Pharmaceutical products disposed of in such systems are consequently discharged to either the underlying sole source drinking water aquifer or the area surface water bodies. To mitigate against such impacts the Town of Smithtown operates a drop off pharmaceutical waste collection and disposal program pursuant to the Secure and Responsible Drug Disposal Act. Under this act, each state's Attorney General has the authority to authorize groups to take unused,



Section 3 – Existing Program Overview

expired, or unwanted medications without the presence of a full-time Drug Enforcement Agency (DEA) official present.

Under Smithtown's drop off pharmaceutical program, residents may safely dispose of unwanted medications at the Fourth precinct of the Suffolk County Police Department in Hauppauge or at the Town's Department of Public Safety in Smithtown.

The Town of Smithtown operates an E-waste collection and recycling program. Homeowners are encouraged to deliver unwanted electronic items to the Municipal Services Facility. The town offers a call in curbside collection service to residents for computers, computer monitors, and televisions. All E waste collected by the town is recycled by a private vendor selected through a public bid process.

3.1.16 Public Education Programs

The Town of Smithtown Department of the Environment and Waterways (DEW) 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, Section 5, and the implementation activities described in Section 6 and Section 7. Samples of public materials can be found on the Town's website at <http://www.smithtownny.gov/157/Municipal-Services-Facility> and are included in the Refuse and Recycling Calendar provided as Appendix D.

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:

- A Recycling Calendar providing comprehensive waste management program information to residents is mailed to all residents annually and available on website
- Household Hazardous Waste events are publicized in newspapers and on the Town website; publications contain educational information
- The Town's website features waste programming information
- The Town's environmental professionals work with school groups and organizations to promote recycling, environmental protection and sustainable lifestyles
- The Town produces new segments which air repeatedly on its public access TV channel featuring information on various topics such as resource recovery and green energy
- The Town is a member of the Green Cities Coalition, which provides an additional source



Section 3 – Existing Program Overview

- of public education to Town residents
- The Town has an active Municipal Separate Storm Sewer (MS4) public education program which overlaps with waste management information by promoting re-use of glass clippings, reduction of yard waste, and proper disposal of HHW
 - DEW has oversight of two Town facilities whose mission includes educating school children on various environmental and ecological issues. A combination of non-for-profits and Town recreation staff provide programming at Sweetbriar Nature Center and Hoyt Farm
 - Recycling promotional material is included with TULSA bills for all businesses in the Town

3.1.17 Animal Mortality Waste

The Town of Smithtown 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 either by the Town's Animal Shelter, or in the case of animals within the public right-of-way the Town Highway Department, and stored in freezers for regular pick-ups by a licensed animal mortuary firm that cremates remains. This outside firm is not located within the Town, nor to the Town's knowledge are there any other animal crematories that are located within the Town.

3.1.18 Town Carter License Program

The Town of Smithtown monitors the collection of solid waste and recyclables generated by all sectors within the Town by ensuring that storing, collecting, carting and/or transporting activities be performed only by entities who are licensed by the Town to do so. The requirements and process of the licensing procedure are outlined in Chapter 177⁴ of the Town Code; the program is administered by the Department of Public Safety. It is noted that this program licenses only "packer-type closed body roll-off or equal or a compartmentalized or sorter vehicle or equivalent for recyclables" (Refer to §177-12), and not pick-up trucks or other smaller vehicles that are typically used by commercial landscaping companies to haul small amounts of commercially- or residentially-generated yard waste.

⁴ Town of Smithtown Town Code Chapter 177 can be found online at <https://ecode360.com/15099400>



Section 3 – Existing Program Overview

3.2 Existing Efforts to Recover Recyclables

3.2.1 Existing Recycling Program

Recycling will continue for the duration of the planning period, with the curbside collection and drop-off of residential recyclables. Curb side collection will continue for such items as plastic bottles, glass bottles and jars, tin and aluminum cans, corrugated cardboard, newspapers, magazines, junk mail, office paper, and phone books. The Town's current "single stream" agreement with the Town of Brookhaven will remain in force until 2020, with an option to extend until 2025. As the Town has seen a 20% increase in recyclables diverted since the program's inception, it is likely that the Town will either exercise the extension option or seek another means to continue offering single stream recycling to its residents, as opposed to reverting to operation of its MRF and marketing of commodities.

The Town will continue to operate a Resident drop-off center for residents to drop off Freon-containing units, bulk metals, vehicle batteries, rechargeable batteries and cell phones, used motor oil, textiles, electronics and fluorescent bulbs.

Yard waste collected curbside is delivered to the yard waste processing area at the MSF Facility in Kings Park. Wood delivered to the MSF is processed by grinding it into fine mulch that is available for free to homeowners and commercial landscapers. In 2012, over 6,000 tons of mulch was recycled in this way. Leaves are loaded into large 100 CY walking floor trailers and transported to out-of-town composting facilities by a private vendor. The Town of Smithtown has banned grass collection and instead has promoted "grass-cycling" since the 1990s, encouraging residents to leave grass clippings on the lawn to assist with lawn health, instead of bagging them and putting them at the curb as garbage.

The Town maintains a Town website that provides information to all residents pertaining to solid waste and recycling matters. The Department of Public Safety in conjunction with the Department of Environment and Waterways (DEW) also provides public education services by producing videos on such topics as household hazardous waste, the town's MRF facility, the Huntington Resource Recovery Facility (HRRF) and the Town's photovoltaic, wind turbine and CNG Fuel initiatives.



Section 3 – Existing Program Overview

3.3 Markets for Recovered Recyclables

3.3.1 Town of Smithtown Markets

The recyclables collected curbside from residents by the Town’s contract carters are transported to the Town MRF and subsequently hauled to the Town of Brookhaven for single stream processing. The MRF continues to accept and market scrap metal, bulk metals, and white goods. The MRF is owned and operated by the Town of Smithtown. Outlets used by the Town of Smithtown are subject to change and dependent upon global market conditions. The Town carefully monitors economic conditions, and continuously updates programs to the most economic-advantageous option for its residents. As of plan writing, the vendors for MRF recyclables were as shown below in Table 3-2.

Table 3-2 Non-MRF Recyclables Vendors

Recyclable Item	Vendor
Newspaper/Cardboard	Town of Brookhaven
Plastics and Aluminum	Town of Brookhaven
Glass	Town of Brookhaven
Tin/Steel	Franza

For other recyclables the Town receives such as waste oil, car batteries, E-Waste, appliances and scrap metal, the vendors utilized at the time this plan was written were as follows:

Table 3-3 Non-MRF Recyclables Vendors

Recyclable Item	Vendor
Waste Oil	AB Waste Oil Inc.
E-Waste	eRevival Inc.
Appliances	Franza
Scrap Metal	Franza



Section 3 – Existing Program Overview

3.3.2 Description of Market Services

The Town of Smithtown directly markets recyclables not sent to the Town of Brookhaven to various vendors. The marketing services provided by Town have been satisfactory and are expected to continue. Numerous private and public vendors provide processing services to reclaim recyclables for reuse in society. The Town has carried out a policy of entering into agreements with select vendors that have resulted in the uninterrupted marketing of all recyclables collected by the Town as well as the uninterrupted provision of yard waste composting and Household Hazardous collection and disposal services.

3.3.3 Description of Current and Future Restrictions to Market Development

To the extent possible, Smithtown will investigate whether certain recyclables such as crushed glass and/or crumb rubber can be used by the Town in municipal infrastructure improvement projects such as road paving projects or as a drainage medium in landfill gas piping projects at the Town landfill. 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. Beyond this, it is felt that a Long Island Township, such as Smithtown can do little to influence national or international recycling markets. The Town is of the opinion that market development efforts should be the responsibility of New York State government and the Federal government as well as major trade organizations and corporations.



**Section 4 – Future Planning Unit Projections
And Solid Waste Changes**

Section 4 Future Planning Unit Projections and Solid Waste Changes

4.1 Estimates of Future Solid Waste Generation

Estimates of future quantities of solid waste generation in the Town were calculated by multiplying the projected population of the Town by the waste generation rates shown in Table 2-8. The projected quantities are shown in Table 4-1 below.

Table 4-1 - Estimated Future Waste Generation

	Generation Rate (lbs./ person/ day)	Estimated Generated Tonnage						
		2014	2016	2018	2020	2022	2024	2026
Projected Total Town Population		118,037	118,273	118,509	118,746	118,984	119,222	119,460
Waste Type								
Residential MSW	4.24	91,377	91,543	91,726	91,909	92,094	92,278	92,462
Commercial MSW	2.35	50,638	50,739	50,840	50,942	51,044	51,146	51,248
Total MSW	6.59	142,015	142,282	142,566	142,851	143,138	143,424	143,710
C&D	2.00	43,084	43,170	43,256	43,342	43,429	43,516	43,603
Estimated Total Waste Generation	8.59	185,099	185,452	185,822	186,193	186,567	186,940	187,313

As shown in Table 4-1 from Section 1 of the document, the Town’s population has not grown significantly in 40 years. Furthermore, it is not projected to increase very much by the close of the year 2025. Accordingly, it appears that the generation of solid waste in the Town of Smithtown has plateaued and will not increase significantly over the 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 than those shown in Table 4-1 due to advances in recycling, product stewardship, and waste reduction programs.



Section 4 – Future Planning Unit Projections And Solid Waste Changes

4.2 Anticipated Changes to the Planning Unit

4.2.1 Planned Residential Development

Only limited residential new construction is anticipated during the next planning period due mostly to the scarcity of vacant residential land as well as other factors including:

- The population of the Town is no longer in a growth phase.
- The number of households has increased since 1970 while the number of persons per household has decreased.
- The median age in the Town has increased while the number of families with school age children has decreased.
- There is currently significant out migration of persons 19 to 33 years of age

4.2.2 Planned Commercial Development

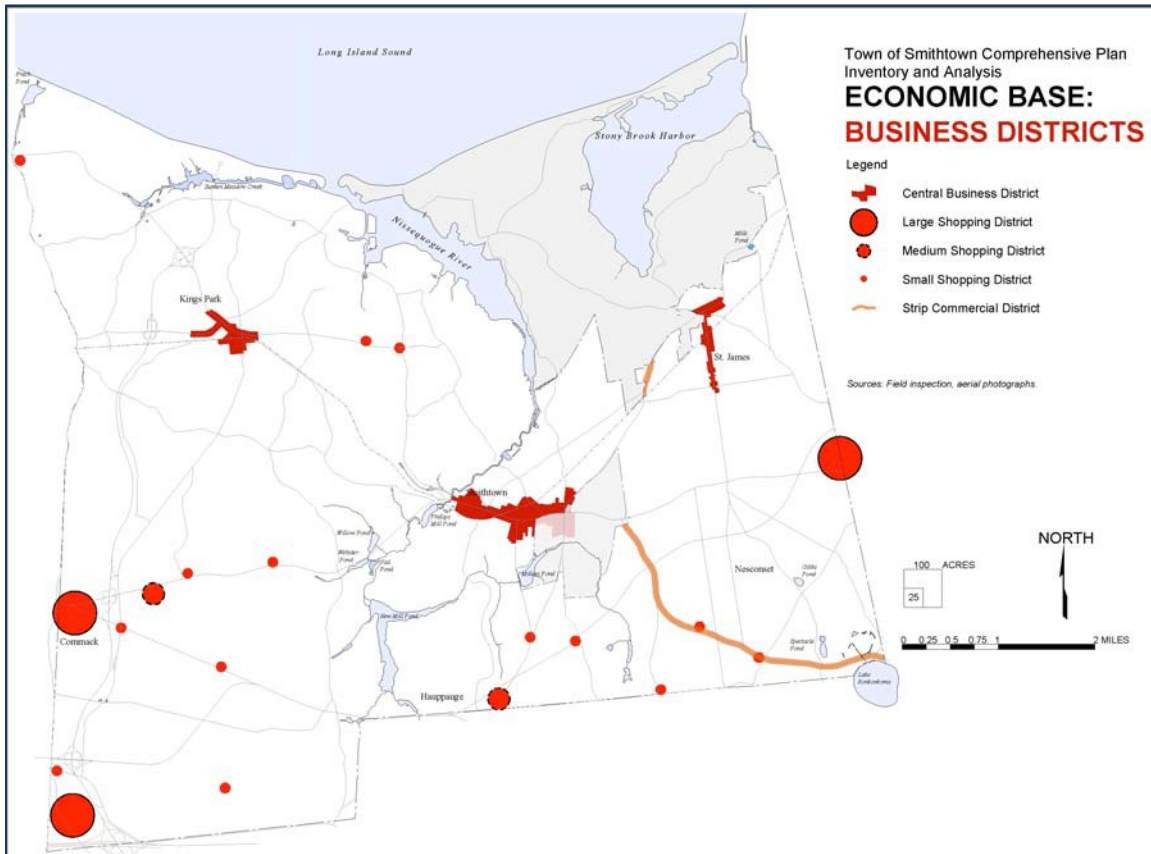
The business sector is constantly evolving. Prior to World War II, the downtown locations were the centers of business on Long Island. As suburbia developed, shopping centers and malls became dominant. Recently, “big box” stores (i.e., large single purpose stores that have a box form of architecture) have become important. We have also witnessed the emergence of the internet as a new mode of commerce.

As the makeup of the business sector changes, the classifications and perceived functions of the different types of retail districts change as well. For example, in the 1960s, when the Master Plan was published, the Town classified shopping districts by terms such as Regional, Sub-Regional, Community, or Neighborhood Centers, describing their trade areas. However, as the business environment has changed, these and older retail classifications and functions have become less accurate descriptions, even though they are still used in the Zoning Ordinance of the Town. Now the Town has begun to classify business districts according to their size, location, design, trade area, and composition, as summarized in Figure 4-1, classifying the districts as either *Central Business Districts*, *Large*, *Medium* and *Small Shopping Districts*, or *Strip Corridor Districts*.



Section 4 – Future Planning Unit Projections And Solid Waste Changes

Figure 4-1. Business Districts



While neighborhood Business and Central Business Districts have discernible amounts of underdeveloped properties, the amount of vacant land is somewhat limiting to new growth. Also, limited capacity at local sewage treatment plants is creating an obstacle to the siting and development of new businesses. Nonetheless, the Town will monitor any new businesses that arise in order to maximize further solid waste reduction, re-use and recycling opportunities.

See Table 4-2 below listing the land use for various commercial enterprises and the associated acreage for each category including vacant land available. Table 4-3 provides a breakout of the different types of business districts, locations, and typical characteristics.



**Section 4 – Future Planning Unit Projections
And Solid Waste Changes**

Table 4-2 – Commercial Land Use

Land Use	CB			NB			SCB		
	# of lots	Acres	% of acreage	# of	Acres	% of acreage	# of	Acres	% of acreage
Agriculture	1	1.09	0.4%	0	0.00	0.0%	0	0.00	0.0%
Auto dealership (includes sales, service and auto)	2	0.55	0.2%	1	0.61	0.2%	0	0.00	0.0%
Bar or restaurant	23	8.55	3.1%	19	16.38	5.4%	3	2.58	0.9%
Carwash	0	0.00	0.0%	0	0.00	0.0%	0	0.00	0.0%
Churches and membership	4	4.26	1.6%	3	1.55	0.5%	0	0.00	0.0%
Commercial recreation	1	0.17	0.1%	1	0.57	0.2%	1	0.26	0.1%
Fast food restaurant or snack	0	0.00	0.0%	10	7.00	2.3%	0	0.00	0.0%
Gas station or auto body/repair shop	19	10.34	3.8%	21	8.77	2.9%	1	0.50	0.2%
Heavy industry	0	0.00	0.0%	0	0.00	0.0%	0	0.00	0.0%
Hospitals, clinics and nursing homes	0	0.00	0.0%	0	0.00	0.0%	0	0.00	0.0%
Hotel/motel	0	0.00	0.0%	2	3.51	1.2%	0	0.00	0.0%
Manufacturing	1	0.13	0.0%	0	0.00	0.0%	1	0.52	0.2%
Miscellaneous (Funeral Homes, dog kennels)	6	4.14	1.5%	6	3.03	1.0%	0	0.00	0.0%
Mobile Home Park	0	0.00	0.0%	2	0.61	0.2%	0	0.00	0.0%
Multi-family residence and apartments*	6	1.07	0.4%	3	2.73	0.9%	0	0.00	0.0%
Multiple Use (Retail and office)	116	28.15	10.3%	32	16.24	5.3%	0	0.00	0.0%
Museums and art galleries	0	0.00	0.0%	0	0.00	0.0%	0	0.00	0.0%
Office, bank, or professional building	74	28.41	10.4%	57	32.19	10.6%	1	1.51	0.5%
One and two family residence*	102	33.77	12.3%	73	23.79	7.8%	0	0.00	0.0%
Other dealership	0	0.00	0.0%	1	0.30	0.1%	0	0.00	0.0%
Parks and Open Space	2	0.13	0.0%	3	4.37	1.4%	0	0.00	0.0%
Retail	84	75.25	27.4%	66	105.15	34.6%	36	236.66	78.6%
Schools, libraries, and municipal buildings	20	39.59	14.4%	4	8.54	2.8%	0	0.00	0.0%
Storage, Warehouse and Distribution Facilities	8	8.65	3.2%	4	9.53	3.1%	0	0.00	0.0%
Utilities and infrastructure	5	4.74	1.7%	5	4.62	1.5%	3	10.61	3.5%
Vacant*	72	17.42	6.4%	106	47.52	15.6%	25	14.20	4.7%
Unknown	12	7.86	2.9%	12	7.18	2.4%	25	34.38	11.4%
Total	558	274.27	100.0%	431	304.18	100.0%	96	301.22	100.0%

CB=Central Businesses NB= Neighbor Hood Businesses SCB=Shopping Center Businesses



Section 4 – Future Planning Unit Projections And Solid Waste Changes

Table 4-3 – Commercial District Characteristics

District	Characteristics	Examples of specific locations in the Town
<i>Central business district</i>	<ul style="list-style-type: none"> • total floor area is more than 200,000 sq. ft. • many small and medium sized stores • consists of multiple uses (retail, office, government, apartments, etc.) • compact design • comprised of many small lots • pedestrian oriented • located along a "main street" • attracts customers from within the hamlet and Town 	<ul style="list-style-type: none"> • Kings Park • Smithtown • St. James
<i>Large shopping district</i>	<ul style="list-style-type: none"> • total floor area is more than 750,000 sq. ft. • many large stores • department stores and big box retail stores • buildings spread apart from each other • comprised of a small number of large lots • automobile oriented and pedestrian infrastructure within the site • located off limited access highways or primary arterials • attracts customers from adjoining hamlets and townships 	<ul style="list-style-type: none"> • Smith Haven mall • Costco shopping center in Nesconset • Crooked Hill Road • Veterans Memorial Highway (NYS 454) and Jericho Turnpike (NYS 25) in Commack
<i>Medium shopping district</i>	<ul style="list-style-type: none"> • total floor area may vary from 200,000 - 750,000 sq. ft. • many medium sized stores • contains one or more anchor stores (e.g. supermarket) • stores attached • generally comprised of large lots • automobile oriented and pedestrian infrastructure within the site • located on primary arterials • attracts customers from within the hamlet 	<ul style="list-style-type: none"> • Mayfair Shopping Center • southwest corner of the Smithtown By-Pass (NYS 347) and Smithtown-Islip Road (NYS 111) • southwest corner of Mt. Pleasant Road and the Smithtown By-Pass (NYS 347) • Motor Parkway and Commack Road • Fort Salonga Shopping Center
<i>Small shopping district</i>	<ul style="list-style-type: none"> • total floor area less than 100,000 sq. ft. • limited number of small to medium sized stores • generally contains a small food store or drug store as well as other retail stores • stores attached, usually in 1 building • generally comprised of large lots • automobile and pedestrian oriented • located on primary arterials • attracts customers from within the neighborhood and hamlet 	<ul style="list-style-type: none"> • Northgate Shopping Center at Kings Park Road and Jericho Turnpike • north side of Smithtown Boulevard, across from the Nesconset armory • Old Nichols Village at Nichols Road and Smithtown Boulevard
<i>Strip corridor district</i>	<ul style="list-style-type: none"> • total floor area may vary from 20,000 - 40,000 sq. ft. • limited number of small stores • stores stand alone or attached, usually 2-3 stores per block • comprised of numerous small lots • automobile oriented • located alongside a primary or secondary arterial • attracts customers traveling on the highway 	<ul style="list-style-type: none"> • Terry Road/Smithtown Boulevard • North Country Road in St. James • Commack Road



Section 4 – Future Planning Unit Projections And Solid Waste Changes

4.2.3 Planned Industrial Development

The first zoning map for the Town was adopted in 1932 and the distribution of industrially zoned land reflected the ideas of that time. The industrial districts occupied a fraction of the land they occupy today. However, suburban population growth, the construction of the interstate highway system, the emergence of the modern freight system (including the growth in air freight services and decline in rail shipping in the northeast), and the changes in demand in the industrial sector resulted in significant changes in land use, especially in and near industrially zoned land.

The Town has three industrial zoning districts:

Wholesale and Service Industry (WSI): This category was created during the 1950s as a replacement for strip business zoning along arterial roads. This classification provides land along appropriate arterial highways for automotive-related non-retail needs, for uses that require extensive land for outdoor storage or display and for uses that do not generate large traffic volumes. Examples of permitted WSI uses include fast food restaurants, auto repair shops, automobile sales and showrooms, offices and similar uses.

Light Industry (LI): This classification provides, in appropriate locations, land for office, research and development, wholesale trade and light manufacturing on sites of high aesthetic character, with adequate buffering from adjoining residential neighborhoods. Light industry is distinguished from heavy industry in that all activity is conducted inside a building; outdoor activity such as storage of raw materials or merchandise for resale is prohibited. Permitted uses include activities such as non-nuisance industries, research laboratories, and warehouses.

Heavy Industry (HI): This classification provides for land for heavy industrial activities necessary to serve the needs of the community. Permitted uses may include activities such as asphalt manufacturing, cement batching, sand and gravel mining or processing, concrete products manufacture, licensed junkyards, and so forth. These uses tend to be incompatible with many other land uses.

Currently, only about 9% of the area of the Town is zoned for industrial use, broken down as shown in Table 4-4:



Section 4 – Future Planning Unit Projections And Solid Waste Changes

Table 4-4. Industrial Zoned Land

Zoning District	Acres	# Lots
WSI	412	363
LI	1,979	628
HI	78	22
TOTAL	2,469	1,013

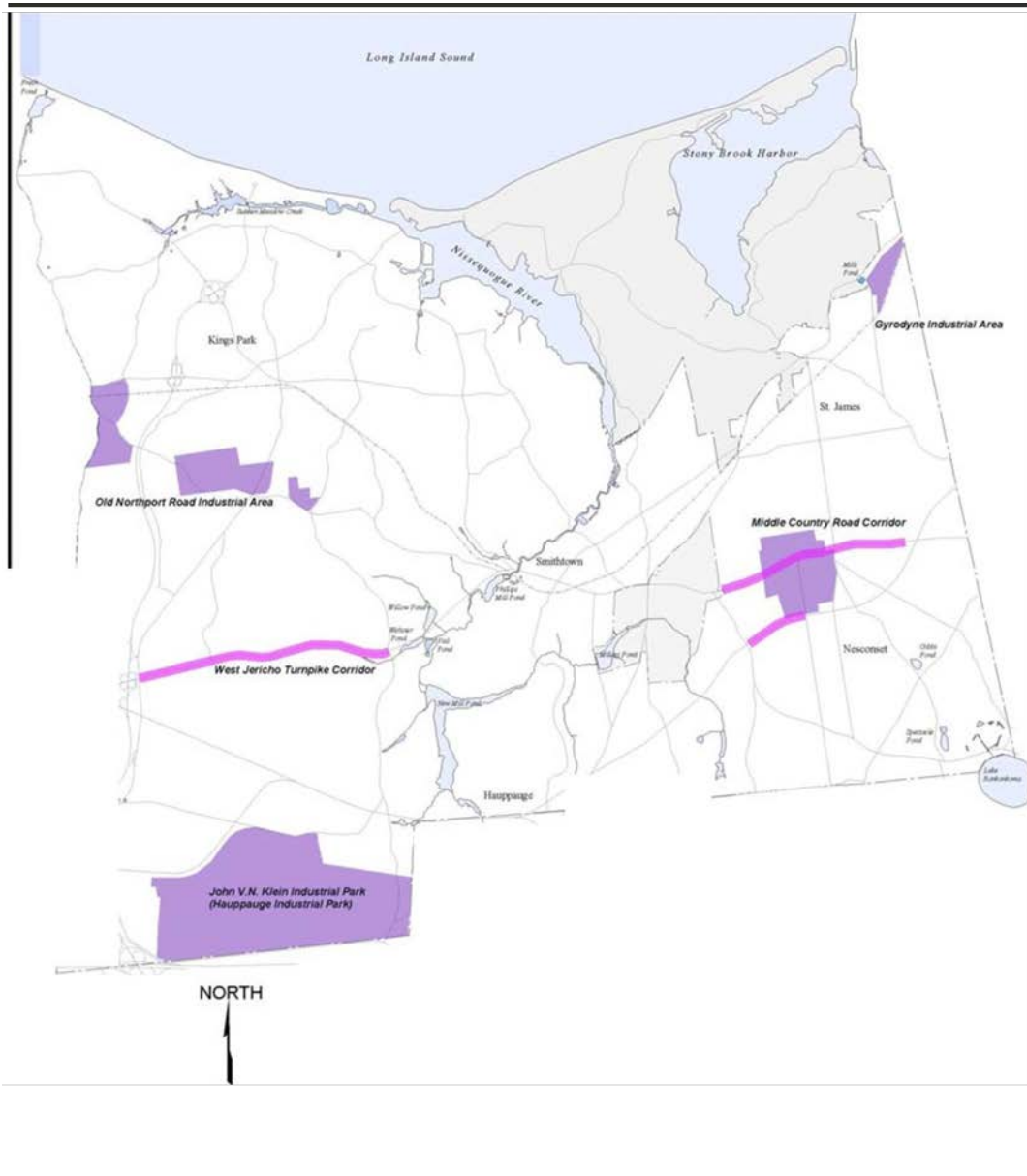
Figure 4-2 on the next page, shows the location of the major industrial areas of the town.

Similar to commercial development, increases to new industrial development in the coming planning period will be modest due to lack of vacant land and limited capacity at local sewage treatment plants. Nonetheless, the Town will monitor any new industrial businesses that arise in order to maximize further solid waste reduction, reuse, and recycling opportunities.



Section 4 – Future Planning Unit Projections And Solid Waste Changes

Figure 4-2. Major Industrial Areas of the Town





Section 4 – Future Planning Unit Projections And Solid Waste Changes

4.3 Special Changes That May Affect any of These Characteristics

At this time, there are no new anticipated changes that would significantly change the characteristics of the planning unit.

4.4 Projections of Changes to the Waste Stream

During the ten (10) 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 stewardship 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").

4.5 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 Department of Environment and Waterways (DEW) and Sanitation Department are 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 awards and national recognition. Presently, DEW is a town department with roughly 20 employees, overseen by the Smithtown Town Board, which is composed of elected officials. The Department of Environment and Waterways is managed by a Director and a Solid Waste Coordinator while the Sanitation Department is overseen by a Sanitation Supervisor. The Department of Public Safety employs trained professional investigators to enforce town codes and regulations pertaining to solid waste.



Section 5 – Technology Evaluation

Section 5 Technology Evaluation

5.1 Treatment and Disposal of Residual Municipal Solid Waste

The Town of Smithtown collects municipal solid waste (MSW) from residents in the unincorporated and incorporated areas of the Town in the solid waste collection districts by private carters under contract with the Town. It is then hauled directly to the Resource Recovery Facility (HRRF) operated by Covanta for waste to energy recovery.

This arrangement began in 1989, when construction on the HRRF was commenced under a multi-faceted design/build/operational contract between the Town of Huntington and Ogden Martin Systems. The facility became operational late in 1991, with Ogden Martin Systems responsible for all operations. The Solid Waste Disposal Service Agreement dated June 29, 1989 between Ogden Martin and the Town of Huntington outlines the terms of the design, construction and subsequent operation of the Facility. The agreement was formally amended several times over the years, most importantly to clarify the Town of Smithtown's interest in the contract, ensuring that their solid waste needs would continue to be met for the long term. The initial term of this service agreement ended October 27, 2012.

At that time, Amendment No. 6 was executed 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. As the end of this initial period is approaching, the Towns have exercised the option to extend the agreement to November 30, 2024.

There is a Municipal Cooperation 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 recognized at an early date the need for regional cooperation and initiatives that reduce the amount of solid waste being landfilled.

Due to the long term contractual commitment by both parties for MSW waste incineration with energy recovery, an evaluation of alternative technologies to evaluate other disposal methods for municipal solid waste has not been studied in depth, however, a brief summary of some selected technologies and practices are presented in Section 5.2. Accordingly,



Section 5 – Technology Evaluation

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. Additionally, the Town relies on public education and recycling initiatives, with goals of continuing to reduce the amount of MSW generated.

5.1.1 Sizing of Solid Waste Management Facilities

The Town's major solid waste facilities include the Materials Recycling Facility (MRF), Construction & Demolition (C&D) Debris Transfer Station, and the Yard Waste Processing Facility located in one facility on Old Northport Road in Kings Park, in addition to use of the Resource Recovery Facility in the Town of Huntington, as described above in Section 5.1. The Town's major operations are supported by three registered transfer stations that mainly process residential yard waste and Town-generated C&D.

The Town's Yard Waste Processing Facility also accepts yard waste from residents of the Town of Huntington, pursuant to the MCA that governed the original construction of the now-closed Cell 6 of Smithtown's landfill, which was a joint venture between the two Towns. All of these facilities have the capacity to meet the immediate and projected populations and waste quantities during the 10 year planning period.

5.1.2 Cost of Alternatives

As alternative technologies for waste processing are not being considered for implementation during the ten (10) year planning period, consideration of costs is not applicable.

5.1.3 Environmental, Economic and Social Impacts of Technology

Alternative technologies for waste processing are not being considered for implementation during the ten (10) year planning period.

5.1.4 Available Capacity of Planning Unit

Please see Section 5.1.1 above for details on available capacity.



Section 5 – Technology Evaluation

5.1.5 Contractual Requirements to Access Capacity

As discussed above the Town of Smithtown and Huntington recently renewed their municipal cooperation agreement (MCA) which provides Smithtown continued access and use of the Huntington Covanta WTE facility for the disposal of Smithtown MSW. This MCA allows Smithtown access to the Covanta Plant for 12 years for MSW disposal until November 30, 2024.

5.1.6 Impacts on Recyclables Recovery Efforts

The MCA and Town collection practices give the Town more control over recyclables recovery, as incoming garbage loads are monitored and permitted hauler information is on file so direct contact can be made in case of non-compliance. Establishing low per ton cost for recyclables for commercial accounts is also an incentive to recycle. Having both the disposal capacity and Recycling Facility at nearby locations is the most cost effective method to promote recyclables recovery. All town residents, villages residents and commercial entities are under the Town local law requiring source separation, with the Town provides either curbside recycling to residents, or drop off opportunities, or a combination of both outlets.

5.1.7 Environmental Economic and Social Impacts of Each Technology

The Town of Smithtown's existing solid waste management system offers an integrated solid waste system in compliance with New York State regulations and policies.

The Town has a notable waste diversion program, which has as its centerpiece a ban on the collection of grass clippings. This may divert half of the yard waste generated in the Town from waste management. The Town also offers assistance to home composters, and advocates for waste reduction through its mailings, website, and public education programs

The Town has a mature, well-established curbside collection program for traditional recyclable materials (paper and containers). The Town has a separate collection program for leaves and brush, which are directed to composting facilities. The yard waste collection program, even with the lack of seasonal variability in waste disposal tonnages, has been exceptionally successful at collecting all yard waste generated in the Town. The



Section 5 – Technology Evaluation

Town has drop-off facilities for waste oil, batteries, clothing, electronics, metal goods, and other Town recyclables.

The Town provides periodic Household Hazardous Waste events during the year where Town and Village residents can safely and in an environmentally secure manner dispose of household hazardous waste.

The Town disposes of its waste that is not recycled or otherwise recovered at a local facility, the Covanta WTE Facility in Huntington, where MSW is converted to renewable energy through combustion of the waste. Metals recovered from the bottom ash are reclaimed and transported to metal recyclers. The plant is heavily regulated by NYSDEC, and its air emissions per unit of energy produced are much less than fossil fuel plants. The arrangement is an example of government creating efficiency by combining needs through shared resources.

Lastly, the Town funds a NYSDEC Environmental Monitor position for its solid waste management facilities, and as such, a NYSDEC Environment Engineer is on-site regularly monitoring the Town's compliance with environmental regulations.

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

In the sections immediately below, details are provided describing various solid waste and recycling technologies that the Town is considering for future use.

5.2.1 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.



Section 5 – Technology Evaluation

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 un-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 in the Town of Smithtown, for instance: MSW, containers, paper) can be reduced to 2 containers (MSW, recyclables), also decreasing collection costs for commercial carters

Disadvantages - Potential disadvantages of single stream recycling may 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
- Possible reduced commodity prices due to contamination of paper
- 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.



Section 5 – Technology Evaluation

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 the Materials Recovery Facility (MRF).

If this pressure is met by capital expenditures such as automated pickup and investment in more 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.

5.2.2 Pay-As-You-Throw (PAYT) Systems

In Smithtown, businesses pay for garbage collection based on the size of their trash containers and how many times per week those containers are emptied. Residences, however, pay a flat fee regardless of the amount of trash they place on the curb or how often it is collected. This is currently the system in place in the Town of Smithtown where residents can place unrestricted amounts of household waste out to the curb for collection and pay an annual fixed fee for these services.

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 put out for collection. 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.



Section 5 – Technology Evaluation

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 Smithtown’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 yard waste program now. Decreases in wastes set aside for disposal would decrease the Town’s disposal costs. Communities with PAYT also typically report significant increases in recycling rates (on average, an additional 5% diversion to recycling, which would increase the Town’s curbside collection program by nearly 50%). Since the Town makes substantial revenue currently from processed curbside recyclables, this would decrease waste management program costs. 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 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. 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 Smithtown’s size, given a population of over 117,000 with 37,363 households served by the Town, spread over 58 square miles.



Section 5 – Technology Evaluation

One option for the Town would be to engage the services of a professional organization specializing in administration of PAYT programs. Such organizations order and maintain inventory of bag/tag identifiers, organize sales points or other delivery systems, and assist in the promotion of the program. Such organizations are available to Smithtown and could be engaged through competitive bidding or pursuant to professional services contracts. As noted above, the cost of such services could be incorporated into the overall cost of the PAYT bag or tag, and included in the overall cost of collection and/or disposal.

A more serious problem for implementation of a PAYT program may lie in the delivery of the program at a lower cost than the service presently provided. Successful implementation of PAYT in other communities has often been achieved where existing collection and disposal is provided by private arrangement between residents and private waste collectors. In these situations, the municipality would continue to provide disposal facilities to the hauler, but could allow the hauler to deliver PAYT waste for no fee, as the cost of disposal is recouped from the sale of PAYT bags/tags. This allows the hauler to reduce its rate to the customer, charging only for the collection component of the service. Residents that efficiently utilize the PAYT program may save on overall solid waste service costs by recycling more, and disposing of less. The degree to which the PAYT program is considered a cost benefit is a function of the actual savings enjoyed by the resident.

In Smithtown, the collection and disposal system for residences is highly reliable, and is the most frequent, direct and visible service provided to citizens by any level of government. The cost of this service, after incorporation of all disposal, processing, transportation, and administrative costs is approximately \$305 per year (2012), assessed equally to each single-family household in the TOWN. Residential collection cost in 2012 was \$5,670,293, and disposal cost was \$3,790,150. Hence, of the \$305.00 tax assessment for solid waste services approximately 40%, or about \$120.00, is attributable to disposal costs, and therefore could be directly funded by a PAYT system.

Two problems present themselves in a changeover from the current flat fee billing structure to PAYT in Smithtown. From an administrative point of view, PAYT requires the Town to secure the revenue needed to pay for disposal through the sale of bags and tags. In order to allow residents to achieve cost savings, the disposal component of the current Town assessment, approximately \$120.00 per household, must be subtracted



Section 5 – Technology Evaluation

from the district assessment. The first challenge would be to assure that sufficient revenue is received from the sale of bags and tags to meet the expected cost of disposal, which could be estimated at \$3,790,150 per year, assuming quantities of 54,145/tons/yr. and a total disposal cost of \$70/ton. Therefore, if \$3,790,150 is secured from bag/tag sales, the program can succeed, and participants can save against the \$120 portion of the Town disposal charge that has been shifted to PAYT bag/tag sales. However, if bag/tag sales do not provide sufficient revenue to cover disposal costs, the Town will be required to make up any shortfall.

Moreover, because the current cost of service is already low, the potential for maximum savings to residents is also limited. If a resident generating relatively little waste could cut his disposal cost by 20% (a figure often cited by successful programs), the actual savings would amount to \$60 ($\305×0.2) per year. Other residents, such as large families, would of course see larger bills under PAYT because their actual disposal costs are now averaged with all others under the flat fee system. For all residents however, the amount of labor and attention to solid waste disposal would have to be increased, and habits changed. Special bags/tags at higher costs than ordinary garbage bags would have to be secured, and errors of placement in unapproved bags would have to be corrected. The average single-family residential dwelling in Smithtown Town is taxed for schools, police, County, and Town charges in an amount in excess of \$8,000 per year. There is a serious question as to whether sufficiently high participation can be achieved for PAYT if the tax bill for a family is initially cut by \$120.00, but additional labor and bag purchases result in a net savings of no more than 60.00 per year of an average \$8,000 tax bill.

The second challenge lies in establishing high participation in the program among residents, and in enforcing collection discipline among carting crews collecting on routes. If the cost of a PAYT bag or tag to the resident is to accurately reflect the cost of disposal, the program cannot accommodate a large number of "free-riders", or residents who put out waste for collection that is not in PAYT bags, and that is nevertheless collected by carting crews. The Town would have to absorb the cost of disposal of this "unauthorized" waste, and if the PAYT program were to tolerate it, the cost of the bags or tags would have to be increased to assure that sufficient revenue is available to pay for it. At some point, an uncontrolled free-rider problem could eliminate the savings otherwise available to participants, because they would be effectively subsidizing too many non- participants. The power to discipline carters collecting this waste is limited,



Section 5 – Technology Evaluation

because if carters are directed to leave non-PAYT waste at curbside in all cases, the perception of quality service may decline, and in the worst case, a health problem may emerge. Policing compliance, primarily through load inspection is somewhat problematic when up to hundreds of loads of waste are tipped on some high volume days

Another issue raised by adopting a PAYT system is 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.

Lastly, various studies showed that PAYT programs often resulted in recyclables with a very high contamination rate. This is important because the Town markets and sells the recyclables it collects. The Town realizes significant revenue from the sale of MRF recyclables, which is attributed to the very clean recyclable streams commanding maximum prices. Higher contamination rates would either reduce the value of these recyclable materials, or render them un-marketable, resulting in the Town having to pay to dispose of the material.

These issues will require further study.

5.2.3 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. The Huntington RRF processes 900 tons/day of Municipal Solid Waste that generates up to 25 megawatts of renewable energy that is used to run the plant with the surplus sold to PSE&G Long Island. In addition to diversion of MSW from landfills and the revenue from electrical generation, waste-to-energy has several environmental benefits. These benefits include reduction of greenhouse gases and recovery of ferrous and non-ferrous metals. In 2012, over 2,500 tons of metal were recovered from the ash from Smithtown's share of the combusted MSW. The metals recovered from the ash is marketed and sold to recycling metal reclaimers for reuse.



Section 5 – Technology Evaluation

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.

At this time, 25 states, the District of Columbia and Puerto Rico define MSW, when diverted to a WTE facility for energy recovery, as a renewable energy source. The HRRF is listed in the Energy Recovery Council Fact Sheet for WTE and State Renewable Statutes provided in Appendix H. 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



Section 5 – Technology Evaluation

5.2.4 Other 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 Smithtown 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:

5.2.4.1 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 that 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.



Section 5 – Technology Evaluation

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

5.2.4.2 Plasma Gasification

Plasma Gasification is a thermal conversion process that 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.

5.2.5 Organics Recovery Programs

The Town of Smithtown recognizes the need to both reduce the amount of organic waste generated and divert organic waste from the waste stream. However, currently there are no facilities on Long Island that could meet the capacity needs of Smithtown's waste stream. As such, the Town has been exploring the regulatory and environmental impact of creating conditions that would attract a privately-operated indoor organic waste composting facility to operate within the Town. This is further described in Section 5.2.5.1. Should an organics facility become available for use by the Town, the Town would have greater flexibility in developing programs to recover more organics. In the meantime, this LSWMP is focused on methods of reducing organic waste that is not dependent on such a facility.



Section 5 – Technology Evaluation

5.2.5.1 Indoor Organic Waste Facility

The Town of Smithtown began an effort to examine the Town’s regulatory framework in regards to indoor organic waste processing facilities in the year 2014, when it applied for a NYSERDA grant under the 2014 Consolidation Funding process. The grant was awarded, and funds became available in 2016 to fund a study examining potential impacts and best management practices associated with fully enclosed organic waste processing facilities, with a goal towards revising the Town’s local land use regulations to allow indoor organic waste processing facilities within the Town. The draft study is due to be completed and presented for public comment in 2018, with an aim to complete any changes to local laws by the end of 2019.

While the study is not complete as of yet, it would be speculative to comment on potential final recommendations. It is anticipated, however, that the regulations would permit a facility of a sufficient capacity to handle the majority of organic waste generated within the Town of Smithtown, and possibly have capacity to allow for some strategic partnerships with neighboring Towns in Suffolk County. It is not expected that the capacity would be able to become a solution for the entire Long Island region. It is also important to note that the Town itself would not undertake either the construction or operation of said facility, but rather, simply change regulations governing private development.

The outcome of this process will be further documented in future biennial compliance reports, and associated new initiatives will be examined. For example, should a private facility of sufficient capacity become available for use by the Town within the duration of the planning period, the Town will consider adding initiatives concerning the development of pilot programs to source separate and recover organic materials from residential households, which would include an evaluation of best collection practices and effective public communication. In the meantime, the Town will consider designing data collection programs to better identify the amounts and types of organic waste that are generated within the Town, so that if a private facility was to be proposed, the Town would be able to more accurately assess the potential impacts of such a facility on the Town’s residents.



Section 5 – Technology Evaluation

5.2.5.2 Minimize Yard Waste

The Town has already instituted a “Just Mow It” campaign that bans grass clippings from Town yard waste collection pickups, and they are not accepted at any Town waste management facilities. Additionally, they do not accept stumps, sod, soil/stone, 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 5.2.5.3

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. 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 Solid Waste 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.

5.2.5.3 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



Section 5 – Technology Evaluation

streams directly at its source. As Town residents have to pay to dispose of organic waste included in MSW collections, and as such, is a direct economic impact on the Town, there is a higher cost-benefit rationale 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 vector 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 that 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 may be challenging in a region that is characterized by higher cost-of-living when compared to other statewide municipalities and typically requires a minimum of two household members to be employed full-time. As such, backyard composting may not receive widespread enough public participation rates within the Town of Smithtown to warrant the significant expenditure of Town resources starting the program up would require.

5.2.5.4 Targeted Food Scraps Recovery

The Town could create partnerships with large generators of food scraps such as supermarkets, restaurants, and healthcare institutions. This would both reduce food waste generated through self-evaluation and implementation of efficient practices and procedures, as well as help businesses connect with private organic processing facilities and/or other businesses, such as agricultural entities 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



Section 5 – Technology Evaluation

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 Solid Waste 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.

5.2.5.5 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 Smithtown is interested in doing more to promote the concept of food donation to reduce waste, but that 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.

5.2.5.6 Biosolids Re-Use and Processing Options

As The Town is not responsible for the management of sludge generated by the private or Suffolk County-owned wastewater treatment plants within its borders, they have no jurisdiction over the production or reduction of biosolids generated within Town boundaries. 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.



Section 5 – Technology Evaluation

5.2.5.7 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:

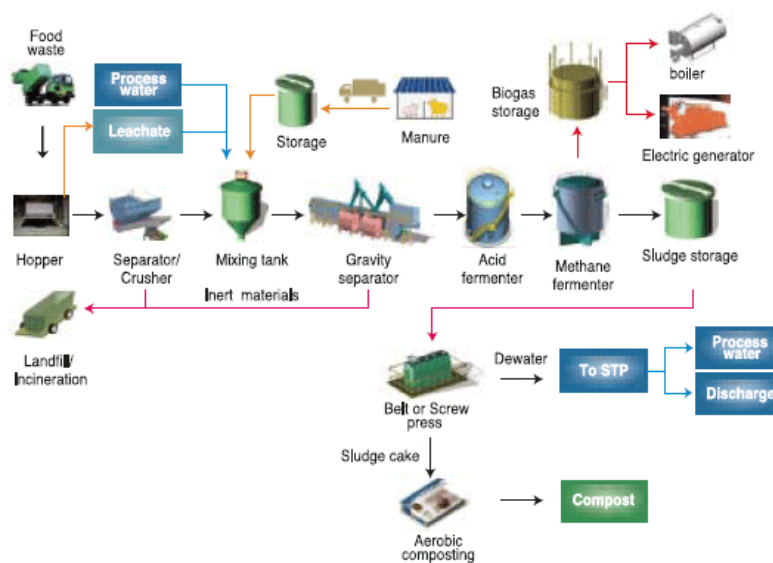


Figure 5-1. Anaerobic Digestion Process Flow Chart

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



Section 5 – Technology Evaluation

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 by the Town of Smithtown may 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. In addition to its current initiative exploring regulatory changes to support a large-scale Organic Waste Processing Facility, 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.

5.2.5.8 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.

“Green” baby diapers are a significant example of a product that could produce noticeable reductions in waste handled by the Town. Currently available locally are cloth diaper services that 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 it is in accordance with the Town’s desire to increase environmental awareness.

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



Section 5 – Technology Evaluation

businesses and/or organizations which can aid them in recycling a variety of products.

5.2.5.9 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 solid waste carter license program¹. These companies service both residences and the CII sector, and are prohibited from utilizing Town facilities for yard waste disposal. As such, the Town currently does not have a mechanism in place to collect any data on this portion of the yard waste stream. 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 through development of best management practices. In turn, the reduced waste generation would lead to lower disposal and maintenance expenses for both residential and CII sector property owners.

5.2.6 Waste Prevention Programs

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

¹ This program is governed by Town of Smithtown Town Code Chapter 177, which can be found online at <https://ecode360.com/15099400>



Section 5 – Technology Evaluation

5.2.6.1 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 leftover 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. 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 creation of a GIS-based web application for use by both residents and businesses that would give them access to waste program information and recycling information. However, for these efforts to be successful, this would require a substantial amount of staff time, or the Town would have to procure a technology firm to create this application. Budgetary limitations, especially in light of the New York State property tax cap, may prevent consideration of new expenditures at this time.

5.2.6.2 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, recently, the County of Suffolk has passed legislation that will reduce single-use plastic film bags (i.e. those commonly used in grocery stores) for all retail businesses within the ten Towns of Suffolk County by charging five (5) cents per bag utilized by consumers beginning in the year 2018. However, previous legislation by the



Section 5 – Technology Evaluation

County required these same retail businesses establish “Take Back” programs for plastic film, and these businesses will continue to be required to provide recycling facilities for this material.

Because of the drastic increase in this material’s use as a shipping material, however 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 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.

5.2.6.3 Incentivize Recycling

Currently, the Town’s TULSA plan structure incentivizes recycling by charging for MSW disposed, but not recyclables. As such, all businesses currently have a direct financial incentive to recycle as much material as possible. The Town may consider new educational programs, in conjunction with its exploration of a GIS-based web application, to make businesses aware of this benefit.

5.2.6.4 Paperless Office Preference

The Town could consider a feasibility study for a paperless office preference in Town offices. After a successful pilot in a limited amount of departments, the Town could consider expanding to all municipal facilities. Once that program has been successfully implemented, the Town can use that case study to provide technical assistance to area businesses.

5.2.6.5 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, local newspapers and the Town’s website, to disperse information about new types of toxic waste and to advertise HHW disposal events



Section 5 – Technology Evaluation

The Town's Municipal Services Facility (MSF) accepts Fluorescent Light Bulbs, Computers, E-Waste, Batteries, Motor Oil, Smoke Detectors, Mercury Thermostats, and Antifreeze six days a week. Additional hazardous materials can be dropped off, free of charge with no maximum quantity limit, at semi-annual HHW events. The Huntington 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 of Huntington'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.

5.2.6.6 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



Section 5 – Technology Evaluation

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. As collection of further information on this waste stream may be challenging, the Town will add an initiative to this LSWMP concerning the design of realistic data collection programs and their subsequent implementation.

5.2.6.7 Non-Hazardous Industrial Waste Reduction options

Currently, any non-hazardous industrial waste not suitable for HRRF is likely long-hauled or brought to Bergen Point, by private parties. The Town of Smithtown 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



Section 5 – Technology Evaluation

voluntary participation, and how to launch this initiative within existing budgetary constraints of their current programs.

5.2.6.8 Greenhouse Gas Emissions

The Town has embarked on several initiatives to reduce Greenhouse Gases, such as establishment of a CNG station for mandated use by private carters, a Green Homes program which provides financial assistance to homeowners seeking to make energy-saving improvements, converting all street lights to LEDs, and becoming the first Town in the State to participate in NYSERDA's Clean Energy Communities Program.

The Town's environmental analysts and planning professionals located in both DEW and the Department of Planning and Community Development continually development initiatives that will reduce greenhouse gas emissions both from municipal operations, private households, and commercial establishments. Examples of programs that are funded for future development by a Clean Energy Community grant of \$250,000 include:

1. Installing solar PV on two Town buildings (Planning and DEW/Engineering)
2. Purchasing two additional electric vehicles
3. Installing an electric vehicle charging station behind Town Hall. This station will be open to the public 24 hours a day, 7 days a week, and will provide free charging for at least two years. The station will also be used to charge the Town's electric vehicles.
4. Installing a sign at Town Hall and mailing literature to Town residents describing initiatives the Town has taken and the benefits of reducing GHG emissions



Section 5 – Technology Evaluation

5.2.7 Material Re-Use Programs

5.2.7.1 Re-Use/Donation of Textiles

The Town will continue to allow textile recycling organizations to place bins strategically in public parking lots, 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.

5.2.7.2 Food Donation Programs

The Town will be exploring how to encourage food re-use and donation. Refer to Section 5.2.5.5.

5.2.7.3 Local Tree Re-Use

The Town Department of Environment and Waterways may consider 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.

5.2.7.4 Building Material Re-Use

The Town could consider, through their website and direct-mailed recycling calendar, to direct residents to donate used building materials to the Habitat for Humanity ReStore and other suitable outlets. Since the Town operates a C&D transfer station, this would give them a facility at which they could consider operating a materials exchange.

5.2.7.5 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 considering a membership in the Buy Recycled Alliance of New York (BRANY), a program of the New York State Association for Reduction, Re-use and



Section 5 – Technology Evaluation

Recycling (NYSAR3), 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 Purchasing Department coordinates public auction programs for a variety of these items, as they become available.

5.2.7.6 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, 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.

5.3 Cost Analysis of the Solid Waste System

5.3.1 Estimated Costs for MSW & Recyclables Collection

The Town provides collection services for residential waste and recyclables generated within the Smithtown garbage districts, a special district encompassing approximately 37,363 single, two, and three-family homes in the Town. The Town district has been further subdivided into 12 contract bid areas. The Town has contracted for the collection of waste with different carting companies who provide the collection services in the Town of Smithtown garbage districts. The Town’s 2012 budget for collection services is \$5,670,293.00.

5.3.2 Estimated Costs for MSW Disposal

A new Municipal Cooperative Agreement with the Town of Huntington enables Smithtown to dispose of MSW at the Huntington Covanta WTE plant. The Town’s 2012 budget for disposal services is approximately \$7,000,000 for residential and commercial waste disposal based on a tip fee of \$65.00 per ton at the plant.



Section 5 – Technology Evaluation

5.3.3 Estimated Costs for Recyclables Processing

The MRF facility is currently operated by employees of the Town of Smithtown. The Town has earned \$1,215,528 in revenues for the sale of recyclable processed in the MRF in 2012.

5.3.4 Estimated Costs for Administration

For 2012, the Town has budgeted approximately \$546,200 to cover the administrative expenses for the operation of the Town’s solid waste and recycling programs. This amount does not include the costs associated with administering the “Tulsa” commercial waste system operated by the Town.

5.3.5 Summary of Costs

A summary of cost for Smithtown’s Residential Solid Waste Program for 2012 is presented below in Table 5-1.

Table 5-1. Summary of cost for Smithtown’s Residential Solid Waste Program for 2012

Program Element	2012 Budget
Collection Services	\$5,670,293
Disposal Costs	\$3,790,150 ⁽¹⁾
Recycling Processing Costs	\$2,134,597
Administrative Costs	\$ 470,350 ⁽²⁾
Total Program Costs	\$12,065,390

Note (1): Disposal Cost for Commercial waste was another \$3,500,000 in 2012 in addition to residential waste disposal cost shown above in Table 5-1.

Note (2): Without Tulsa Administration.

5.3.6 Financing Mechanisms that will meet the Anticipated Costs

The financing of Smithtown’s municipal solid waste program is through a waste charge placed on the real estate tax bills for residential properties. Currently, each house pays a solid waste and recycling charge of \$305.00 (2012) per household for a one family home.



Section 5 – Technology Evaluation

5.4 Neighboring Jurisdictions Impacts

There are no negative jurisdiction impacts as a result of Smithtown's Solid Waste Program. Actually, beneficial impacts have occurred through Smithtown's shared use of the Huntington Covanta Waste to Energy Facility. For example, the ash from the Huntington Covanta facility created by the combustion of Smithtown's waste is disposed of in both the Town of Brookhaven's and the Town of Babylon's landfills. Periodically street sweepings from Smithtown's roadways have been disposed at the Town of Brookhaven landfill as well.

5.4.1 Neighboring Planning Units

Immediately below is a listing of planning units that are adjacent to the Town of Smithtown:

- The Town of Huntington
- The Town of Islip
- The Town of Babylon
- The Town of Brookhaven

5.4.2 Measures Used to Secure Participation of Neighboring Jurisdictions

Dialogues between solid waste department heads have occurred particularly between Smithtown and the Towns of Huntington and Brookhaven to explore joint ventures.

5.4.3 The effects on neighboring jurisdictions' SWM programs and their inclusion

It is not envisioned that the plans implementation will negatively impact a neighboring municipality.

There are no plans to include other neighboring planning units in the Town of Smithtown's SWMP.



Section 6 – Integrated System Selection

Section 6 Integrated System Selection

6.1 Overview

The integrated solid waste management program that is currently in operation will be continued for duration of the planning period. The program that is currently in operation is successful in meeting the needs of the solid waste management within the planning unit. The Town's integrated program meets the objectives of New York States Solid Waste Management Hierarchy. It has achieved substantial levels of waste reduction, recycling, composting, recovery of energy, and reductions in landfilling.

The major elements of the proposed solid waste management system are:

- the continued utilization of existing solid waste management facilities and programs in the Planning Unit;
- the expansion of existing waste reduction and recycling programs throughout the Planning Unit;

The Town of Smithtown has adopted the following overarching goals in developing its next solid waste management plan.

- Goal 1: To manage waste in a manner that will protect the environment and public health and that will conserve natural resources.
- Goal 2: To manage waste in an integrated waste management system in accordance with the hierarchy in order to minimize landfilling, with an increased focus on maximizing reduction of toxicity and volume of waste, and optimizing reuse, recycling and source- separated organic waste management.
- Goal 3: To manage waste in a cost-effective manner that maximizes environmental benefits and minimizes long-term financial liability for citizens, businesses, and taxpayers.

6.1.1 Selected Solid Waste Program

Listed below are the key elements of the Town solid waste management system over the next ten year planning period. The first group shown below lists the existing programs that the Town intends to maintain in providing solid waste services to its residents. The



Section 6 – Integrated System Selection

second group contains new initiatives and programs to strengthen recycling efforts and focus more attention on recycling and waste prevention measures.

6.1.1.A Existing Solid Waste Practices

- Maintain existing curbside recycling collection for paper, cardboard and comingled containers.
- Maintain management of the disposal of commercial waste through the continued administration of the Tulsa Plan.
- Maintain separate yard waste curbside collect and contract for composting at private facilities.
- Continue the Town wide ban prohibiting the collection of grass.
- Residential and commercial waste from the Town of Smithtown will continue to be transported to the Huntington Covanta Waste to Energy facility for disposal.
- Continue the operation and management of the Town's Material Recycling Facility (MRF).
- Continue marketing of recycled materials from the MRF to private reclamation vendors for the reuse of these materials.
- Continue to operate the extensive landfill gas collection and destruction systems to minimize the production of greenhouse gases.
- Continue to hold STOP events receiving Household Hazardous Waste at the Town's Municipal Services Facility (MSF)
- Continue to collect expired and unwanted pharmaceuticals at the Town's Department of Public Safety and other locations in the Town.
- Continue E-Waste collection at the Town' MSF site and other locations in the Town.
- Continue to provide a resident drop off center for recyclables including waste oil and electronics, C&D, brush, tires and other materials requiring management, at Towns MSF site.
- Maintain Town website and communication program to continue advocating and highlighting recycling and waste reduction programs and venues.
- Continue requiring town contracted carters to use cleaner alternative energy fuels for their fleets for solid waste collection.



Section 6 – Integrated System Selection

- Participate in the Suffolk County Multi-Jurisdictional Debris Management Plan to develop and implement Best Management Practices in regards to planning for debris collection and processing in the event of natural disasters

6.1.1.B Proposed New Solid Waste Plan Initiatives

The following actions will be carefully evaluated in terms of economic, logistical, and practical factors for the Town to adopt over the ten year planning horizon. These options have been identified by Town solid waste planners as being potentially beneficial for the Town's solid waste program, in order to achieve the goals enumerated above.

The Town, however, will not have the financial or personnel resources to implement all of the following initiatives. As such, they will select from the initiatives below a smaller number of that they can realistically implement within the planning period. Those initiatives which can be accomplished with existing resources, and that will create the maximum benefit to the future development of waste management programs, will be selected and identified in Section 7.

1. With the assistance of state grants, add personnel resources dedicated to recycling, waste reduction and grant acquisition.
2. Increase efforts to enhance the promotion of recycling and waste reduction planning and programs.
3. Expansion of curbside collected recyclables, where economically feasible, with candidates including:
 - Waxed paper and other types of aseptic cartons not currently accepted
 - Gable-top boxes
 - Boxboard
 - Clean film plastic
 - Untreated lumber
 - Clothing
4. Further investigate a possible policy to increase compostable bag (i.e. "Bio Bags") usage in collection of yard waste materials.



Section 6 – Integrated System Selection

5. Further investigate a possible new residential recyclable drop-off center at the former Montclair Avenue Landfill
6. Explore the amendment of Town Codes to allow privately constructed and operated indoor Organic Waste Processing facilities
7. Explore a winter boat wrap recovery program.
8. Provide Town technical assistance to local school recycling programs, including such steps as coordinating with haulers and markets and/or assisting in preparing public procurement documents for collection and recycling.
9. Investigate School waste tonnages. Provide Town technical assistance to local school recycling, including such steps as coordinating with haulers and markets as is done in the Town of North Hempstead, and/or assisting in preparing public procurement documents for collection and recycling.
10. Conduct public education program to inform residents of Suffolk County's existing mandate that supermarkets accept plastic bags back for recycling. Send surveys to supermarkets to remind them of the law and obtain metrics on their plastic bag recycling programs
11. Provide Town technical assistance to local not-for-profit/institutional recycling, including such steps as coordinating with haulers and markets and/or assisting in preparing public procurement documents for collection and recycling
12. Provide Town technical assistance to local not-for-profit/institutional recycling, including such steps as coordinating with haulers and markets and/or assisting in preparing public procurement documents for collection and recycling
13. Survey recycling/recovery practices in targeted business sectors
14. Increase enforcement of Town source separation regulations for commercial carter collection stops, ensuring that all commercial/institutional waste generators have been provided with the tools and opportunities to recycle according to Town code
15. Evaluate expansion of Household Hazardous Waste program to determine if new collection event days and/or locations would increase recovery rates.
16. Design a data collection program to capture metrics on the amount of waste



Section 6 – Integrated System Selection

recycled by targeted commercial entities, after first completing a target analysis of businesses within the Town with the highest potential for increasing recyclable rates

17. Conduct a pilot program to collect un-used latex paint by including latex paint collection in selected Household Hazardous Waste events
18. Conduct a pilot program by allowing DIY drop-off of separated carpet on selected days at the Town's C&D drop-off facility
19. Investigate expansion of the existing E-Waste curbside collection program.
20. Expanded public space and public event recyclable collection
21. Conduct a public education initiative aimed at supermarkets and restaurants to encourage donation of unspoiled food waste to charitable organizations
22. Consider more solar energy facilities at various buildings/structures in the Town
23. Coordination of Town, private sector and state activities in support of product stewardship programs established by state law
24. Expansion of outreach efforts to civic groups and other interested parties on Town programs and private sector options
25. Expansion of Town promotional campaigns for recycling awareness and participation
26. Increase outreach regarding home composting practices and technologies for organic wastes
27. Expand consumer education programs on waste reduction in consumer purchasing decisions
28. Promote existing programs that re-use or redistribute materials in the second- hand marketplace
29. Identify gaps in data regarding waste generation, and create a comprehensive plan to increase the Town's access to data regarding institutional and other waste generation, including for public and private schools, hospitals and nursing home facilities, and biosolids.
30. Utilize data collected under new comprehensive data collection program to



Section 6 – Integrated System Selection

further develop initiatives presented within Section 6 of this plan, but that are not currently included in the Program Schedule in Section 7. The biennial compliance report will be used as a means to identify new initiatives developed.

31. Design and implement a public education program aimed at increasing recycling rates within multi-residential developments, such as private condominium complexes, which are currently not part of the Town's curbside recycling program.
32. Work with textile recovery organizations to design a curbside collection program for residential collection.
33. Expand public education programs through use of Smithtown Government Access television station
34. Create a Geographic Information System-based web application to educate residents and businesses on various aspects of the Town's waste management and recycling programs.
35. Use of interns from local colleges and universities to create public education materials aimed at advertising voluntary residential waste reduction initiatives, for example explaining the benefits of residential composting and environmentally-friendly alternatives to using traditional plastic baby diapers
36. On an annual basis, send a letter to County and New York State agencies controlling facilities such as parks, municipal buildings, and sewage treatment plants to request waste generation data.
37. Design a program to collect local data to support estimates of the amount of C&D generated from commercial projects, and separately by commercial contractors working on residential homes.
38. Use additional C&D data collected to conduct a feasibility study exploring various ways to expand C&D recycling by commercial generators
39. Collect data necessary to support detailed waste projections, in regards to both existing programs and initiatives contained within this table. Include detailed waste projections in biennial compliance reports.
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, Table 7-2, and Table 7-3. All of these tables will be refined with each biennial report as additional data becomes available.



Section 6 – Integrated System Selection

41. Continue comparative cost and benefit analysis of solid waste processing alternatives such as the construction of a Town-owned Solid Waste Transfer Station and long-hauling municipal solid waste in preparation for the HRRF becoming a private merchant operation.
42. Evaluate various forms of waste control ordinances such as Pay-as-you-Throw or Flow Control for residential waste streams to reduce dependency on the HRRF
43. Consider modification to the Non-Residential Waste generation Disposal Capacity Fee Program plan governing waste from the CII sectors to provide incentives for increased recycling
44. Should an organics processing facility of sufficient capacity and proximity become available, create a pilot program for residents to deliver food waste to the MRF for transport to an organics processing facility
45. Should an organics processing facility of sufficient capacity and proximity become available, create a pilot program for the Town to partner with major commercial food waste generators on food waste source separation and recycling options
46. Explore modified Non-Residential Waste generation Disposal Capacity Fee Program plan to encourage voluntary source-separation of commercial food waste
47. Create a voluntary survey aimed at restaurants and supermarkets, and use other methods to estimate food waste generation within the Town and include public awareness efforts.
48. Conduct cost-benefit analyses of various organics recovery and processing methods
49. 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
50. Examine the possibility of creating a business-friendly Town-wide registration requirement for businesses generating commercial yard waste, and create public education information regarding best management practices and yard waste reduction techniques
51. Conduct a pilot program to test residential collection of non-bottle, bulky rigid plastics
52. Contact recyclers of beverage/aseptic cartons to determine if a viable market



Section 6 – Integrated System Selection

for Smithtown exists, and if so, design a pilot program to test inclusion of this material in current curbside recycling programs.

53. Advocate for and participate in a regional task force which include representatives from both the grocery and beverage distributors industries, as well as manufacturers of products commonly sold in glass containers, to development new partnerships to encourage glass recycling
54. Explore private/regional and/or public options for mixed bulky waste recovery
55. Work with Chambers of Commerce 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, provide information to businesses on the economic benefits to recycling, and create better communication on recycling issues between the Town and the CII sector
56. 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.

6.1.2 Reasons for the Selection of the Proposed Program

The existing solid waste system developed by the Town of Smithtown over the last twenty years as described in Section 6.1.1A above, has proven to be stable, reliable and cost effective platform for solid waste and recycling operations in the Town. This system is consistent with the New York State’s hierarchy of handling waste, having in place a core waste system which minimizes landfilling while relying on waste reduction, recycling and composting as the preferred management strategies for MSW in the Town of Smithtown.

6.2 Procedures for implementation of the Recovery Program

6.2.1 Plan and Scope of Operation

The key elements of the Town’s recovery and recycling program that are described in detail in Section 3 of this LSWMP include:

- a) Operation of the STOP program
- b) Curbside residential collection of recyclables



Section 6 – Integrated System Selection

- c) Management of Commercial Waste through the Tulsa Plan
- d) Curbside collection of yard waste
- e) Curbside collection of appliances
- f) E-Waste drop-off and curbside collection of computers, computer monitors, and televisions
- g) Yard waste/brush drop-off and Processing area
- h) Operation of the Material Recycling Facility (MRF)
- i) Waste oil collection and recycling
- j) Scrap metal collection and recycling
- k) Preparing for the HRRF becoming a private merchant facility by exploring solid waste processing options and enacting initiatives to expand recycling and reduce waste

6.2.2 Equipment to be Used

Equipment used by the Town is discussed briefly below by waste activity:

- A. Collection: The Town uses Town contracted carters to collect residential waste and recyclables. Approximately twenty-two (22) CNG fueled rear-loader packer trucks are utilized for this task. Truck capacities range from 20 to 28 cubic yards. Yard waste is collected by the Highway Department using dump trucks of varying size, packer trucks, and payloaders.
- B. MRF Operations: Town employees operate the MRF, supported by various equipment such as payloaders, skid steers, and other rolling stock.
- C. Yard Waste Processing Area: Town staff operates a yard waste area where brush is processed by use of tub grinders, pay loaders and other equipment.
- D. Landfill Operations: The Town owns and operates a small fleet of support vehicle and equipment to provide maintenance services at the Towns closed landfill.

6.2.3 Collection Arrangements

The Town provides collection services for residential waste and recyclables generated within the Smithtown garbage district, a special district encompassing approximately 37,363 one, two, three, and four -family homes in the Town. The district has been further



Section 6 – Integrated System Selection

subdivided into 12 separate collection districts, known as Contract Bid Areas or CBA's. The Town currently has contracts with four different carting companies who provide the collection services in the 12 districts. After the residential waste has been collected by a contract carter, it is directly transported to Covanta Waste to Energy Plant in Huntington for disposal.

Each home within the garbage district receives three collections per week, two for household waste and one for recyclables. The Town Highway Department is responsible for the collection of yard waste. Bulky items are picked up by the carter on an on-call basis. The recycling collections alternate, with one week being solely a collection for newspaper and cardboard followed in the next week with a collection for solely commingled recyclables. To reduce waste quantities further, a "Just Mow It" program was enacted banning the collection of grass clipping and simultaneously promoting leaving grass clipping on lawns or instituting household composting. The Town still provides for the collection of leaves and brush by the Highway Department as described in more detail in Section 3.1.6 of this document.

The Town has provided a 20-gallon recycling container to every home in the collection districts to facilitate recycling of commingled recyclables as well as a green plastic crate to facilitate the collection of newspapers and cardboard. 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 at the curb.

6.2.4 Processing and Storage Procedures

As discussed above, after residential and commercial waste is collected by the carters, it is directly transported to the Covanta Waste to Energy Plant in Huntington for disposal. Leaf yard waste which is collected by the Town's Highway Department is transported to the MSF Facility and there reconsolidated in large walking floor trailers for shipment to out of town compost facilities. Brush delivered to the MSF is ground up and turned into a mulch product, which is distributed back to Smithtown residents and area contractors for free.



Section 6 – Integrated System Selection

6.2.5 Market Agreements

The recyclables collected curbside from residents by the Town's contract carters are transported to the Town's MRF for processing. Collected newspapers/cardboard and commingled containers are transported to the Town's MRF where they are processed according to end user requirements and sold directly by the Town to recycling markets.

For other recyclables, such as waste oil, car batteries, E-Waste, appliances, and scrap metal, the Town uses the public bid process to obtain the lowest pricing or best revenues depending on market conditions prevalent at the time of bid.

6.2.6 Funding Sources

The financing of Smithtown's municipal solid waste program is through the levying of a fixed waste charge on the real estate tax bill for residential properties. As of 2013, each house pays an annual use charge of \$305.00 per home for waste services.

6.2.7 Available Staff

The Town of Smithtown has sufficient staff in place to adequately manage the solid waste and recycling programs. The Department of Environment and Waterways (DEW) is staffed by capable, professional solid waste professionals, who currently operate a viable solid waste and recycling system for Town residents. Presently, DEW is a town department with over 20 employees, overseen by the Smithtown Town Board, which is composed of elected officials. The Department of Environment and Waterways is managed by a Director, and a Solid Waste Coordinator. In addition to the Department of Environment and Waterways, the Town's Department of Public Safety provides the enforcement arm for all solid waste activities including inspections, code compliance and licensing.

Under supervision of the Town's Director of Environmental Protection and supported by appropriate personnel in both the Department of Environment and Waterways and the Sanitation Department, the Town's Solid Waste Coordinator will be responsible implement the program schedule and initiatives contained within the plan.



Section 7 – Implementation Schedule

Section 7 Implementation Schedule

7.1 Major Elements

The major elements of that the Local Solid Waste Management Plan (LSWMP) recommends are:

- The continued utilization of existing solid waste management facilities and programs in the Town.
- The expansion of existing waste reduction and recycling programs throughout the Town.

7.2 Program Schedule

Table 7-1A. Existing Programs to be Continued

Number	Existing Programs to be Continued
E1.	Maintain existing curbside recycling collection
E2.	Maintain separate yard waste curbside collection
E3.	Maintain and enforce grass collection ban
E4.	Continue the Non-Residential Waste generation Disposal Capacity Fee Program (aka "TULSA" Plan)
E5.	Operate Yard Waste Processing facility at the Old Northport Road Municipal Services Facility at Kings Park
E6.	Residential waste collected by Town-contracted private carters transported to the Huntington Resource Recovery Facility
E7.	In conjunction with the Town's Public Safety Department, supported as necessary by the Suffolk County Police Department 4th Precinct, operate a pharmaceuticals anonymous drop-off program
E8.	Operate the landfill gas collection and destruction systems at various closed landfill sites throughout Town
E9.	Required private garbage carters under contract to the Town to maintain their use of Compressed Natural Gas (CNG) fuel to reduce greenhouse gases, nitrogen oxide, and particulate emissions
E10.	Hold Household Hazardous Waste collection events at Town MSF.
E11.	E-Waste Collection drop off program at Town Landfill site with the curbside collection of computers, computer monitors, and televisions.
E12.	Resident drop-off center for recyclables, waste oil, fluorescent bulbs, batteries, and tires at the Town MSF.
E13.	In conjunction with Department of Planning, institute a "Green Homes" residential improvement program aimed at reducing energy consumed and greenhouse gases generated by residents
E14.	Continue solar installations at various buildings/structures in the Town and other greenhouse gas reductions throughout municipal facilities and operations.



Section 7 – Implementation Schedule

Number	Existing Programs to be Continued
E15.	Coordination of Town, private sector and state activities in support of product stewardship programs established by state law
E16.	Consider outreach efforts to civic groups and other interested parties on Town programs and private sector options
E17.	Continue to refine and expand Town promotional campaigns for recycling awareness and participation

Table 7-2B. Schedule of New Waste Management Initiatives

Number	New Waste Management Initiatives	Level of potential Waste Reduction	Funds Required	Demands on Staff Time	Year Complete
Solid Waste Processing					
N1	Continue comparative cost and benefit analysis of solid waste processing alternatives such as the construction of a Town-owned Solid Waste Transfer Station and long-hauling municipal solid waste in preparation for the HRRF becoming a private merchant operation.	Low	Light	Low	2020
N2	Evaluate various forms of waste control ordinances such as Pay-as-you-Throw or Flow Control for residential waste streams to reduce dependency on the HRRF	Medium	Low	Low	2021
N3	Consider modification to the Non-Residential Waste generation Disposal Capacity Fee Program plan governing waste from the CII sectors to provide incentives for increased recycling	Medium	Low	Low	2022
Organic Waste Recovery					
N4	With assistance of State grants, explore codes to potentially allow construction of a privately-owned and operated indoor organic waste processing facility within the Town boundaries.	Medium	Low	Medium	Ongoing



Section 7 – Implementation Schedule

Number	New Waste Management Initiatives	Level of potential Waste Reduction	Funds Required	Demands on Staff Time	Year Complete
N5	Should an organics processing facility of sufficient capacity and proximity become available, create a pilot program for residents to deliver food waste to the MRF for transport to an organics processing facility	Low	Low	Medium	Dependent on facility availability
N6	Should an organics processing facility of sufficient capacity and proximity become available, create a pilot program for the Town to partner with major commercial food waste generators on food waste source separation and recycling options	Medium	Medium	Medium	Dependent on facility availability
N7	Explore modified Non-Residential Waste generation Disposal Capacity Fee Program plan to encourage voluntary source-separation of commercial food waste	Medium	Medium	Low	2023
N8	Create a voluntary survey aimed at restaurants and supermarkets, and use other methods to estimate food waste generation within the Town and include public awareness efforts.	Low	High	Medium	2021
N9	Conduct cost-benefit analyses of various organics recovery and processing methods	Medium	Low	Medium	2022
N10	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	Medium	Low	Medium	2022
N11	Examine the possibility of creating a business-friendly Town-wide registration requirement for businesses generating commercial yard waste, and create public education information regarding best management practices and yard waste reduction techniques	Low	Light	Medium	2023
Recycling Program Expansion					



Section 7 – Implementation Schedule

Number	New Waste Management Initiatives	Level of potential Waste Reduction	Funds Required	Demands on Staff Time	Year Complete
N12	Conduct a pilot program to test residential collection of non-bottle, bulky rigid plastics	Low	Light	Medium	2023
N13	Contact recyclers of beverage/aseptic cartons to determine if a viable market for Smithtown exists, and if so, design a pilot program to test inclusion of this material in current curbside recycling programs.	Low	Low-Medium	Medium	2022
N14	Advocate for and participate in a regional task force which include representatives from both the grocery and beverage distributors industries, as well as manufacturers of products commonly sold in glass containers, to development new partnerships to encourage glass recycling	Low	Light	Medium	2020
N15	Explore private/regional and/or public options for mixed bulky waste recovery	Low	Light	Low	2023
N16	Design a boat-shrink wrap recovery pilot program, to be conducted in the spring time at Long Beach Marina	Low	Light	Low	2020
N17	Conduct a pilot program by allowing DIY drop-off of separated carpet on selected days at the Town's C&D drop-off facility	Low	Low	Medium	2023
N18	Design and implement a public education program aimed at increasing recycling rates within multi-residential developments, such as private condominium complexes, which are currently not part of the Town's curbside recycling program.	Medium - High	Medium	Medium	2019-2020
N19	Work with textile recovery organizations to design a curbside collection program for residential collection.	Medium - High	Medium	Medium	2020
Public Education					
N20	Expand public education programs through use of Smithtown Government Access television station	Low - Medium	Low	Medium	2021



Section 7 – Implementation Schedule

Number	New Waste Management Initiatives	Level of potential Waste Reduction	Funds Required	Demands on Staff Time	Year Complete
N21	Create a Geographic Information System-based web application to educate residents and businesses on various aspects of the Town's waste management and recycling programs.	Varies	Medium	Medium	2022
CII Sector					
N22	Work with Chambers of Commerce 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, provide information to businesses on the economic benefits to recycling, and create better communication on recycling issues between the Town and the CII sector	Varies	Low	Medium	2020
N23	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	2021
N24	Greater enforcement of Town source separation regulations for commercial carter collection stops, ensuring that all commercial/institutional waste generators have been provided with the tools and opportunities to recycle according to Town code	Varies	Light	Medium	Begin 2019, ongoing
Construction & Demolition Debris Reduction & Management					
N25	Design a program to collect local data to support estimates of the amount of C&D generated from commercial projects, and separately by commercial contractors working on residential homes.	N/A	Low	Medium	2024
N26	Use additional C&D data collected to conduct feasibility analysis exploring various ways to expand C&D recycling by commercial generators	Medium	Medium	Medium	2025



Section 7 – Implementation Schedule

Number	New Waste Management Initiatives	Level of potential Waste Reduction	Funds Required	Demands on Staff Time	Year Complete
Biosolids					
N27	On an annual basis, send a letter to County and New York State agencies controlling facilities such as parks, municipal buildings and sewage treatment plants to request waste generation data.	N/A	Light	Low	begin 2019, ongoing
Reduction of Toxicity in Waste Stream					
N28	Evaluate expansion of Household Hazardous Waste program to determine if new collection event days and/or locations would increase recovery rates	Low-Medium	Low	Low	2021
N29	Conduct a pilot program to collect un-used latex paint by including latex paint collection in selected Household Hazardous Waste events	Low	Low	Low	2024
Data Collection & Planning Efforts					
N30	Identify gaps in data regarding waste generation, and create a comprehensive plan to increase the Town's access to data regarding institutional and other waste generation, including for public and private schools, hospitals and nursing home facilities, and biosolids.	N/A	Low	Low	2019
N31	Collect data necessary to support detailed waste projections, in regards to both existing programs and initiatives contained within this table. Include detailed waste projections in biennial compliance reports	N/A	Medium	Medium	2021
N32	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, Table 7-2, and Table 7-3. All of these tables will be refined with each biennial report as additional data becomes available.	N/A	Low	Medium	2020



Section 7 – Implementation Schedule

Number	New Waste Management Initiatives	Level of potential Waste Reduction	Funds Required	Demands on Staff Time	Year Complete
N33	Utilize data collected under new comprehensive data collection program to further develop initiatives presented within Section 6 of this plan, but that are not currently included in the Program Schedule in Section 7. The biennial compliance report will be used as a means to identify new initiatives developed.	Varies	Low	Medium	2022

Definitions utilized in table above:

Waste Reduction levels:

Low – less than 2% of overall waste stream

Medium – 2.1-4% of overall waste stream

High – 4.1-10% of overall waste stream

Funding levels:

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-\$85,000 – would require advance planning to dedicate funds.

High – \$85,000-\$300,000 may require inclusion in long-term capital planning efforts and/or issuance of bonds.

Staff levels:

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 consultants and/or part-time staff.

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

7.3 Waste Reduction Predictions

7.3.1 Overview

At the present time, the Town of Smithtown does not have sufficient data nor resources to complete detailed waste projections and recovery goals. As such, the Town is including a generic version of the Population and Municipal Solid Waste Composition Calculator, based on NYSDEC default data and conservative projections. Section 7.2



Section 7 – Implementation Schedule

contains initiatives regarding the future collection of data to support the inclusion of more detailed waste projection and recovery goals in biennial compliance reports.

7.3.2 Waste Stream Projections

The data provided herein has been generated using the NYSDEC Population and Municipal Solid Waste Composition Calculator and is intended for general reference purposes only. The calculator is continuously updated by NYSDEC in an effort to better reflect current industry conditions. The source data included in the calculator is reflective of general trends observed on the federal and state levels, and not meant to portray specific local conditions. The Town makes no warranty that the included waste generation and diversion rates and quantities are an accurate prediction of the future state of waste management within the Town, but will strive to collect sufficient data to provide calculations that are more realistic in future biennial compliance reports.



Section 7 – Implementation Schedule

Table 7-2 – NYSDEC Calculator Tab 6. MSW Diversion Projections

Step 6. Municipal Solid Waste (MSW) Diversion Projections

This tab will be used to create goals for the amount of material the planning unit will divert for each year of the planning period. These goals will be entered as percentages, based on how much of the material generated will be diverted for recycling or beneficial use.
The diversion goal percentages will be entered in the purple cells for each material and each year of the planning period.

Town of Smithtown					2016-2025											
					2016	2017	2018	2019	2020	2021	2022	2023	2024	2025		
Projected MSW Generation (Tons/yr)					111,827	111,485	111,143	110,803	110,464	110,126	109,789	109,453	109,119	108,785		
MSW Diverted (Tons/yr)					10,363	11,475	12,589	13,696	14,809	15,918	16,781	17,261	17,298	17,334		
Material	MSW Materials Composition (%)	2015			2016			2017	2018	2019	2020	2021	2022	2023	2024	2025
		MSW Generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted	% MSW Diverted	% MSW Diverted	% MSW Diverted	% MSW Diverted	% MSW Diverted	% MSW Diverted	% MSW Diverted	% MSW Diverted	% MSW Diverted
		111,802	9,510	8.5%	111,827	10,363	9.3%	10.3%	11.3%	12.4%	13.5%	14.5%	15.3%	15.8%	15.9%	15.9%
Paper	Newspaper	4.4%	4,897	680	13.9%	4,898	735	15.0%	20.0%	25.0%	30.0%	35.0%	35.0%	35.0%	35.0%	35.0%
	Corrugated Cardboard	8.1%	9,011	1,303	14.5%	9,013	1,352	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	45.0%	50.0%	50.0%
	Other Recyclable Paper (Total)	11.3%	12,634	1,250	9.9%	12,636	1,264	10.0%	11.0%	12.0%	13.0%	14.0%	15.0%	15.0%	15.0%	15.0%
	Other Compostable Paper	6.4%	7,155	710	9.9%	7,157	716	10.0%	10.0%	10.0%	10.0%	12.0%	15.0%	20.0%	20.0%	20.0%
	Total Paper	30.1%	33,697	3,943	11.7%	33,705	4,066	12.1%	14.5%	16.9%	19.4%	22.2%	24.6%	27.0%	28.3%	28.3%
Metal	Ferrous/Aluminum Containers (Total)	1.6%	1,834	180	9.8%	1,834	185	10.1%	10.0%	10.0%	12.0%	15.0%	20.0%	20.0%	20.0%	20.0%
	Other Ferrous Metals	3.2%	5,769	580	10.1%	5,770	606	10.5%	11.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	
	Other Non-Ferrous Metals (Total)	1.2%	1,319	130	9.9%	1,320	135	10.2%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	
	Total Metals	6.0%	8,922	890	10.0%	8,924	926	10.4%	10.6%	11.3%	11.7%	12.3%	13.3%	13.3%	13.3%	
Plastic	PET Containers	0.9%	984	90	9.1%	984	99	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	
	HDPE Containers	0.9%	961	90	9.4%	962	100	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	10.4%	
	Other Plastic (3-7) Containers	0.2%	224	20	8.9%	224	22	9.9%	9.9%	9.9%	9.9%	9.9%	9.9%	9.9%		
	Total Plastics	13.3%	15,116	1,490	9.9%	15,119	1,646	10.9%	10.9%	10.9%	10.9%	10.9%	10.9%	10.9%		
Glass	Glass Bottles, Jars and Containers	3.9%	4,338	430	9.9%	4,339	473	10.9%	10.9%	10.9%	10.9%	10.9%	10.9%	10.9%		
	Other Glass (Flat glass, dishware, light bulbs, etc.)	0.3%	358	35	9.8%	358	39	10.8%	10.8%	10.8%	10.8%	10.8%	10.8%			
	Total Glass	4.2%	4,696	465	9.9%	4,697	512	10.9%	10.9%	10.9%	10.9%	10.9%	10.9%			
Organic	Food Scraps	13.4%	15,004	100	0.7%	15,007	15	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%		
	Leaves and Grass /Pruning and Trimmings	10.9%	12,142	1,200	9.9%	12,144	1,822	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%			
	Total Organics	24.3%	27,146	1,300	4.8%	27,152	1,837	6.8%	6.8%	6.8%	6.8%	6.8%	6.8%			
Textiles	Clothing Footwear, Towels, Sheets	4.2%	4,651	50	1.1%	4,652	56	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%		
	Carpet	1.6%	1,834	0	0.0%	1,834	0	0.0%	0.1%	0.5%	0.5%	0.5%	0.5%			
	Total Textiles	5.8%	6,485	50	0.8%	6,486	56	0.9%	0.9%	1.0%	1.0%	1.0%	1.0%			
Wood	Total Wood (Pallets, crates, adulterated and non-adulterated wood)	3.1%	3,511	350	10.0%	3,511	351	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%			
Miscellaneous	DIY Construction & Renovation Materials	3.6%	4,003	400	10.0%	4,003	240	6.0%	8.0%	9.0%	11.0%	11.0%	11.0%			
	Diapers	1.9%	2,147	20	0.9%	2,147	21	1.0%	1.0%	1.5%	2.0%	2.5%	2.5%			
	Electronics	1.6%	1,811	180	9.9%	1,812	91	5.0%	10.0%	15.0%	20.0%	30.0%	30.0%			
	Tires	1.6%	1,834	180	9.8%	1,834	367	20.0%	25.0%	30.0%	35.0%	40.0%	45.0%			
	HHW	0.3%	537	50	9.3%	537	54	10.0%	15.0%	20.0%	25.0%	30.0%	30.0%			
	Soils and Fines	0.1%	134	12	8.9%	134	12	9.0%	9.5%	9.7%	9.8%	3.9%	10.1%			
	Other Composite Materials - Durable and/or inert	1.6%	1,766	180	10.2%	1,767	186	10.5%	11.0%	11.5%	12.0%	13.0%	14.0%			
	Total Miscellaneous	10.9%	12,231	1,022	8.4%	12,234	970	7.9%	10.4%	12.6%	15.0%	16.9%	18.6%			



Section 7 – Implementation Schedule

Table 7-3 – NYSDEC Calculator Tab 7. MSW Generation and Diversion – Detailed Projections

Step 7. Municipal Solid Waste (MSW) Generation and Diversion - Detailed Projections

The final result of the Population and Municipal Composition Calculator is presented on the last tab. This tab contains data for the current year regarding waste generated and waste diverted from disposal. This tab also shows the projected waste diversion percentages, and the amount of waste in tons these percentages will divert for recycling. Total amounts of waste diverted will be calculated for each material and each year of the planning period.

		Town of Smithtown																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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Material	MSW Materials Composition (%)	MSW Generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted (Tons)	% MSW Diverted																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
		Material		111,802	9,910	8.8%	111,827	10,263	9.2%	111,485	11,475	10.3%	111,143	12,589	11.3%	110,803	13,658	12.4%	110,451	14,910	13.5%	110,126	15,918	14.5%	109,799	16,781	15.3%	109,453	17,261	15.8%	109,119	17,298	15.9%	108,785	17,331	15.9%	108,451	17,331	15.9%	108,117	17,331	15.9%	107,783	17,331	15.9%	107,449	17,331	15.9%	107,115	17,331	15.9%	106,781	17,331	15.9%	106,447	17,331	15.9%	106,113	17,331	15.9%	105,779	17,331	15.9%	105,445	17,331	15.9%	105,111	17,331	15.9%	104,777	17,331	15.9%	104,443	17,331	15.9%	104,109	17,331	15.9%	103,775	17,331	15.9%	103,441	17,331	15.9%	103,107	17,331	15.9%	102,773	17,331	15.9%	102,439	17,331	15.9%	102,105	17,331	15.9%	101,771	17,331	15.9%	101,437	17,331	15.9%	101,103	17,331	15.9%	100,769	17,331	15.9%	100,435	17,331	15.9%	100,101	17,331	15.9%	99,767	17,331	15.9%	99,433	17,331	15.9%	99,099	17,331	15.9%	98,765	17,331	15.9%	98,431	17,331	15.9%	98,097	17,331	15.9%	97,763	17,331	15.9%	97,429	17,331	15.9%	97,095	17,331	15.9%	96,761	17,331	15.9%	96,427	17,331	15.9%	96,093	17,331	15.9%	95,759	17,331	15.9%	95,425	17,331	15.9%	95,091	17,331	15.9%	94,757	17,331	15.9%	94,423	17,331	15.9%	94,089	17,331	15.9%	93,755	17,331	15.9%	93,421	17,331	15.9%	93,087	17,331	15.9%	92,753	17,331	15.9%	92,419	17,331	15.9%	92,085	17,331	15.9%	91,751	17,331	15.9%	91,417	17,331	15.9%	91,083	17,331	15.9%	90,749	17,331	15.9%	90,415	17,331	15.9%	90,081	17,331	15.9%	89,747	17,331	15.9%	89,413	17,331	15.9%	89,079	17,331	15.9%	88,745	17,331	15.9%	88,411	17,331	15.9%	88,077	17,331	15.9%	87,743	17,331	15.9%	87,409	17,331	15.9%	87,075	17,331	15.9%	86,741	17,331	15.9%	86,407	17,331	15.9%	86,073	17,331	15.9%	85,739	17,331	15.9%	85,405	17,331	15.9%	85,071	17,331	15.9%	84,737	17,331	15.9%	84,403	17,331	15.9%	84,069	17,331	15.9%	83,735	17,331	15.9%	83,401	17,331	15.9%	83,067	17,331	15.9%	82,733	17,331	15.9%	82,399	17,331	15.9%	82,065	17,331	15.9%	81,731	17,331	15.9%	81,397	17,331	15.9%	81,063	17,331	15.9%	80,729	17,331	15.9%	80,395	17,331	15.9%	80,061	17,331	15.9%	79,727	17,331	15.9%	79,393	17,331	15.9%	79,059	17,331	15.9%	78,725	17,331	15.9%	78,391	17,331	15.9%	78,057	17,331	15.9%	77,723	17,331	15.9%	77,389	17,331	15.9%	77,055	17,331	15.9%	76,721	17,331	15.9%	76,387	17,331	15.9%	76,053	17,331	15.9%	75,719	17,331	15.9%	75,385	17,331	15.9%	75,051	17,331	15.9%	74,717	17,331	15.9%	74,383	17,331	15.9%	74,049	17,331	15.9%	73,715	17,331	15.9%	73,381	17,331	15.9%	73,047	17,331	15.9%	72,713	17,331	15.9%	72,379	17,331	15.9%	72,045	17,331	15.9%	71,711	17,331	15.9%	71,377	17,331	15.9%	71,043	17,331	15.9%	70,709	17,331	15.9%	70,375	17,331	15.9%	70,041	17,331	15.9%	69,707	17,331	15.9%	69,373	17,331	15.9%	69,039	17,331	15.9%	68,705	17,331	15.9%	68,371	17,331	15.9%	68,037	17,331	15.9%	67,703	17,331	15.9%	67,369	17,331	15.9%	67,035	17,331	15.9%	66,701	17,331	15.9%	66,367	17,331	15.9%	66,033	17,331	15.9%	65,699	17,331	15.9%	65,365	17,331	15.9%	65,031	17,331	15.9%	64,697	17,331	15.9%	64,363	17,331	15.9%	64,029	17,331	15.9%	63,695	17,331	15.9%	63,361	17,331	15.9%	63,027	17,331	15.9%	62,693	17,331	15.9%	62,359	17,331	15.9%	62,025	17,331	15.9%	61,691	17,331	15.9%	61,357	17,331	15.9%	61,023	17,331	15.9%	60,689	17,331	15.9%	60,355	17,331	15.9%	60,021	17,331	15.9%	59,687	17,331	15.9%	59,353	17,331	15.9%	59,019	17,331	15.9%	58,685	17,331	15.9%	58,351	17,331	15.9%	58,017	17,331	15.9%	57,683	17,331	15.9%	57,349	17,331	15.9%	57,015	17,331	15.9%	56,681	17,331	15.9%	56,347	17,331	15.9%	56,013	17,331	15.9%	55,679	17,331	15.9%	55,345	17,331	15.9%	55,011	17,331	15.9%	54,677	17,331	15.9%	54,343	17,331	15.9%	54,009	17,331	15.9%	53,675	17,331	15.9%	53,341	17,331	15.9%	53,007	17,331	15.9%	52,673	17,331	15.9%	52,339	17,331	15.9%	52,005	17,331	15.9%	51,671	17,331	15.9%	51,337	17,331	15.9%	51,003	17,331	15.9%	50,669	17,331	15.9%	50,335	17,331	15.9%	50,001	17,331	15.9%	49,667	17,331	15.9%	49,333	17,331	15.9%	48,999	17,331	15.9%	48,665	17,331	15.9%	48,331	17,331	15.9%	47,997	17,331	15.9%	47,663	17,331	15.9%	47,329	17,331	15.9%	46,995	17,331	15.9%	46,661	17,331	15.9%	46,327	17,331	15.9%	45,993	17,331	15.9%	45,659	17,331	15.9%	45,325	17,331	15.9%	44,991	17,331	15.9%	44,657	17,331	15.9%	44,323	17,331	15.9%	43,989	17,331	15.9%	43,655	17,331	15.9%	43,321	17,331	15.9%	42,987	17,331	15.9%	42,653	17,331	15.9%	42,319	17,331	15.9%	41,985	17,331	15.9%	41,651	17,331	15.9%	41,317	17,331	15.9%	40,983	17,331	15.9%	40,649	17,331	15.9%	40,315	17,331	15.9%	39,981	17,331	15.9%	39,647	17,331	15.9%	39,313	17,331	15.9%	38,979	17,331	15.9%	38,645	17,331	15.9%	38,311	17,331	15.9%	37,977	17,331	15.9%	37,643	17,331	15.9%	37,309	17,331	15.9%	36,975	17,331	15.9%	36,641	17,331	15.9%	36,307	17,331	15.9%	35,973	17,331	15.9%	35,639	17,331	15.9%	35,305	17,331	15.9%	34,971	17,331	15.9%	34,637	17,331	15.9%	34,303	17,331	15.9%	33,969	17,331	15.9%	33,635	17,331	15.9%	33,301	17,331	15.9%	32,967	17,331	15.9%	32,633	17,331	15.9%	32,299	17,331	15.9%	31,965	17,331	15.9%	31,631	17,331	15.9%	31,297	17,331	15.9%	30,963	17,331	15.9%	30,629	17,331	15.9%	30,295	17,331	15.9%	29,961	17,331	15.9%	29,627	17,331	15.9%	29,293	17,331	15.9%	28,959	17,331	15.9%	28,625	17,331	15.9%	28,291	17,331	15.9%	27,957	17,331	15.9%	27,623	17,331	15.9%	27,289	17,331	15.9%	26,955	17,331	15.9%	26,621	17,331	15.9%	26,287	17,331	15.9%	25,953	17,331	15.9%	25,619	17,331	15.9%	25,285	17,331	15.9%	24,951	17,331	15.9%	24,617	17,331	15.9%	24,283	17,331	15.9%	23,949	17,331	15.9%	23,615	17,331	15.9%	23,281	17,331	15.9%	22,947	17,331	15.9%	22,613	17,331	15.9%	22,279	17,331	15.9%	21,945	17,331	15.9%	21,611	17,331	15.9%	21,277	17,331	15.9%	20,943	17,331	15.9%	20,609	17,331	15.9%	20,275	17,331	15.9%	19,941	17,331	15.9%	19,607	17,331	15.9%	19,273	17,331	15.9%	18,939	17,331	15.9%	18,605	17,331	15.9%	18,271	17,331	15.9%	17,937	17,331	15.9%	17,603	17,331	15.9%	17,269	17,331	15.9%	16,935	17,331	15.9%	16,601	17,331	15.9%	16,267	17,331	15.9%	15,933	17,331	15.9%	15,599	17,331	15.9%	15,265	17,331	15.9%	14,931	17,331	15.9%	14,597	17,331	15.9%	14,263	17,331	15.9%	13,929	17,331	15.9%	13,595	17,331	15.9%	13,261	17,331	15.9%	12,927	17,331	15.9%	12,593	17,331	15.9%	12,259	17,331	15.9%	11,925	17,331	15.9%	11,591	17,331	15.9%	11,257	17,331	15.9%	10,923	17,331	15.9%	10,589	17,331	15.9%	10,255	17,331	15.9%	9,921	17,331	15.9%	9,587	17,331	15.9%	9,253	17,331	15.9%	8,919	17,331	15.9%	8,585	17,331	15.9%	8,251	17,331	15.9%	7,917	17,331	15.9%	7,583	17,331	15.9%	7,249	17,331	15.9%	6,915	17,331	15.9%	6,581	17,331	15.9%	6,247	17,331	15.9%	5,913	17,331	15.9%	5,579	17,331	15.9%	5,245	17,331	15.9%	4,911	17,331	15.9%	4,577	17,331	15.9%	4,243	17,331	15.9%	3,909	17,331



Section 8 – Laws and Regulations

Section 8 Laws and Regulations

8.1 Legal Constraints to the Selected Recovery Program

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

8.2 Local Laws in Effect to Support the Plan

The Town has complied with New York State General Municipal Law 120-aa and enacted an extensive recycling ordinance to meet the requirements of this Law. Local laws and ordinances governing the collection and disposal of solid waste, and the mandatory source separation of recyclables are codified in the Smithtown Town code in chapter 177, annexed hereto as Appendix K.

Chapter 177 of the code was adopted in 1991. Chapter 177 provides a comprehensive regulatory structure governing the residential and commercial collection of solid waste and the use of Town facilities. Persons engaged in the collection of solid waste within the Town, and those delivering solid waste or recyclables to the Town's facilities must obtain a permit from the Town to do so. The Town currently permits 88 haulers to do business in the Town. The ability to license haulers affords the Town the power to identify the location of hauler's yards, identify the vehicles utilized in collection of all materials, and ensure that vehicles are fully licensed and insured. The licensing power also allows the Town to require haulers to disclose a variety of information relevant to planning activities, such as type, quantity and source of solid wastes and recyclables. Article VIII of Chapter 177 entitled "*Nonresidential Solid Waste Disposal Capacity Generation Fee*", provides the regulatory framework for the Town's commercial waste collection system (i.e., the Tulsa Plan).

Section V of Chapter 177 of the Code governs the source separation and collection of recyclables. All residential structures, including single- and multiple-family dwellings, apartment buildings and all condominiums with curbside collection and all community facilities shall be required to make provisions for the segregation of newspapers, corrugated cardboard, glass, metal and plastic from other solid waste for separate collection by a Town licensed carter. Furthermore, all commercial and industrial facilities that generate corrugated cardboard waste



Section 8 – Laws and Regulations

and or recyclables shall be required to source separate any and all corrugated cardboard materials and/or recyclables from other solid wastes for separate collection by Town-licensed carters at a time and place mutually convenient to both the business and the carter.

8.3 Potential New Laws

8.3.1 Electronic Waste

New local regulations governing the collection and disposal of electronic devices may be required to coordinate the activity stimulated by the New York State Electronics Recycling and Reuse Act ECL Article 27, Title 26 (ERRA). ERRA is a product stewardship law that places significant responsibility on the manufacturers of designated electronic products for the collection and recycling of these products, including the organization of a collection system and the achievement of a graduated series of recycling and recovery goals over period of years. However, the law also establishes prohibitions on the collection and disposal of electronics products with other solid wastes.

These prohibitions become effective for retail sellers of electronic products as of April 1, 2011, for all other commercial generators as of January 1, 2012, and for all individuals and households as of January 1, 2015. Town waste management practices and policies have been updated to reflect compliance with the State regulation.

8.3.2 Private Indoor Organic Waste Processing Facility (OWPF)

The Town of Smithtown recently received a grant from the New York State Energy and Research Development Authority to encourage sustainable solutions within the Long Island Region. Specifically, the Town of Smithtown is exploring the possibility of updating all of their applicable land use, property maintenance, ordinance enforcement codes etc. governing private development to permit and regulate an indoor organic waste processing facility (OWPF), to be potentially constructed and managed by a private developer.

Requests for Proposals were due back to the Town under RFP#15-027 on May 7, 2015 from waste management consultant firms to thoroughly investigate the nature of these facilities and potential impacts on the Town's residents. The exploratory process will include several public hearings and coordination with the New York State Department of



Section 8 – Laws and Regulations

Environmental Conservation. The effort is anticipated to last approximately three years, into the year 2018. Should the outcome of this effort be the modification of Smithtown's Zoning codes to allow a private OWPF, this would provide a much-needed solution to provide more options to the Town, and possibly, neighboring municipalities to reduce the amount of organic waste, especially food waste, being disposed of in landfills and or processed in WTE facilities such as the Huntington Resource Recovery facility. Reducing the amount of food waste going to the Huntington RRF would increase the energy generation of the facility, and further the goals of New York State's "Beyond Waste" Solid Waste Management Plan.



Section 9 – Certification of Disposal Capacity

Section 9 Certification of Disposal Capacity

The general criteria as defined in NYCRR §366-1.2 requires that an LSWMP “provide for or take into account all the solid waste generated within the planning unit for a 10-year period”. This LSWMP covers the period spanning 2016-2025.

All residential and commercial waste generated in Smithtown is delivered to the Huntington WTE Facility for disposal, and will continue to do so in accordance with the existing Municipal Cooperative Agreement (MCA) with the Town of Huntington. The above referenced MCA provides the Town of Smithtown with disposal capacity out until November 30, 2024.

Since the planning period for this plan lasts until 2025, the Town feels it is prudent to discuss the waste disposal options for that year and after. As of December 1, 2024, the privately owned and operated RRF would have the option to seek other clients besides the Towns of Smithtown and Huntington on the free market. However, as the waste supplied by two Towns currently comprises approximately 63% of the total waste processed at the plant, and they are the closest large customers to a facility that is not centrally or conveniently located within the Nassau-Suffolk region, it is likely that the free market will continue to dictate affordable waste disposal rates for both Towns. The back-up alternative, to haul waste off of Long Island to various facilities upstate or out-of-state, would likely still be costlier than negotiating new contracts with Covanta, but could of course be executed if necessary.

Alternative long term strategies for disposal of solid waste have been explored throughout the plan; please refer to Section 5 for an analysis of other solid waste disposal options. Section 7 contains a schedule of new initiatives being considered to promote waste reduction, reduce dependency on the Resource Recovery Facility, and provide long term solid waste management strategies that are both environmentally and financially sustainable.



Section 10 – Public Approval Process

Section 10 Public Approval Process

10.1 Public Comment Period

10.1.1 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.

10.1.2 Public Notice

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

10.1.3 Public Comments and Town Responses

10.2 SEQR Assessment

10.3 SEQR Determination

10.4 Municipal Adoption