

Section 1. Cover

**Town of Brookhaven
Updated Solid Waste Management Plan**

2015-2016 Compliance Report
LOCAL SOLID WASTE MANAGEMENT PLAN (SWMP)



**Department of Waste Management
Town of Brookhaven
Reporting Period: January 1, 2015 to December 31, 2016**

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Town of Brookhaven LOCAL SOLID WASTE MANAGEMENT PLAN (SWMP) 2015-2016 Compliance Report

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Attachments:

Annual Recycling Report (2015)
Annual Recycling Report (2016)
Special Recycling Events Calendar (2017)
Flyer for Great Brookhaven Cleanup
Copy of Solid Waste Code

Section 3. Executive Summary

The Town of Brookhaven has an estimated population of 488,930 (2015). The Town provides waste collection services to 111,973 households in its curbside residential waste districts (2016). The Town's waste management district provides regional waste management services through its materials recycling facility (MRF) and its landfill, the only one on Long Island that is in full compliance with the Long Island Landfill Law. The landfill, however, only has another eight years of lifespan as of 2016, and so there is a need for regional planning on the part of NYSDEC to ensure wastes currently managed there have proper disposal options available for 2025.

The Town of Brookhaven averaged nearly 25 percent recycling for the curbside residential component of its waste stream over the 2015-2016 compliance time period. The Town continues to operate a progressive recycling program that provides curbside collection to all 1, 2, and 3-family houses in the unincorporated areas of the Town, and to provide a range of drop-off recyclables programs that match those provided across Region I. A major milestone by the Town of Brookhaven during this reporting period was continuing its single stream recycling program and expanding this service to other municipalities. Recycling rates have been maintained since the introduction of single stream recycling in 2014, which resulted in an increase of about 25% in recyclables tonnages (Figure 1). The district recycling rate in 2015 and 2016 was 24.9 percent. The Town has agreements with several Long Island Towns and villages to process their single stream recyclables at the Town Materials Recycling Facility (MRF) (Table 1), and has continued to expand arrangements with other Long Island municipalities including access to the Town's MRF and the landfill. Thus, the Town's MRF facility is enabling implementation of single stream recycling throughout the region. The Town's landfill manages a large portion of the downstate region C&D residual waste stream, and nearly all ash generated at Long Island WTE facilities. The landfill has another 8 years operational lifespan as of 2016, Again there is a clear need for a regional solution, and the Town respectfully encourages NYSDEC to assume a leadership role in addressing this concern. The Town of Brookhaven stands ready to assist the NYSDEC in this matter.

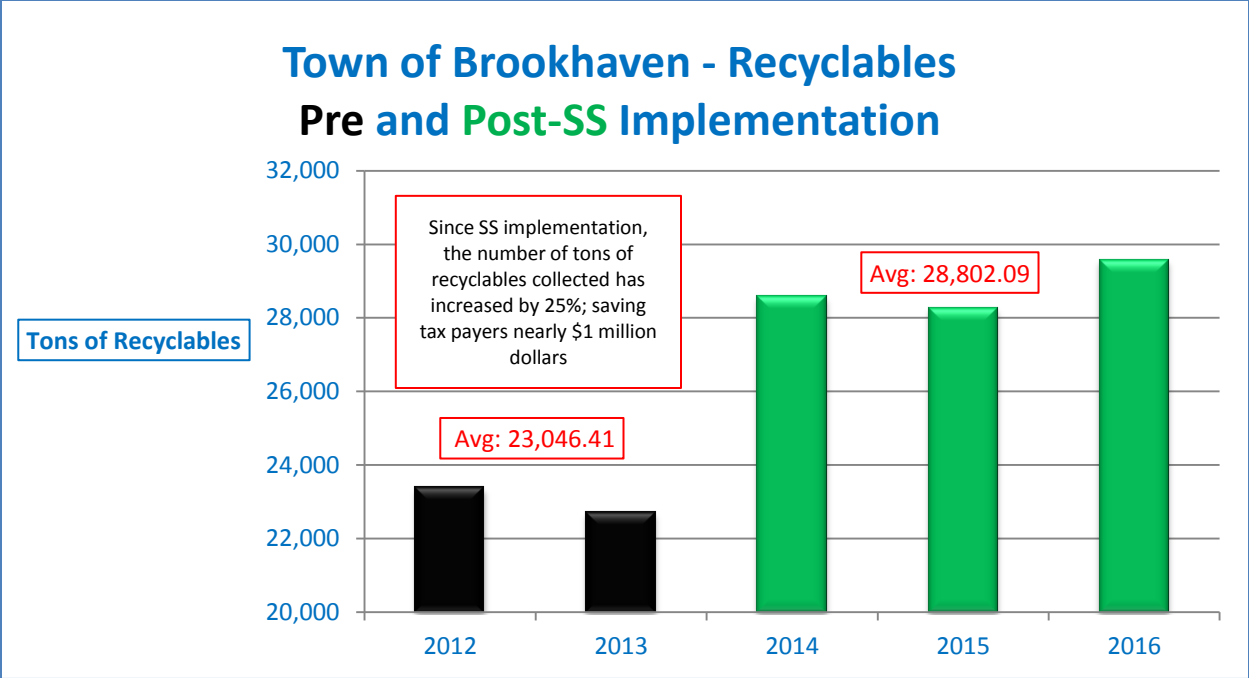


Figure 1: Pre and Post-Single Stream Residential Recyclables Separation Tonnages

Town of Brookhaven: IMA's and their 3-year Single Stream Deposits				
Entity	Single Stream Recycling Deposits in Tons			
Village	2014	2015	2016	Total
Bellport	143.37	294.88	292.21	730.46
Lake Grove	0.00	531.05	664.90	1,195.95
Mastic Beach	325.66	648.39	663.02	1,637.07
Patchogue	0.00	0.00	320.00	320.00
Poquott	71.79	123.26	155.80	350.85
Port Jefferson	0.00	0.00	828.96	828.96
Shoreham	9.52	57.17	56.04	122.73
Northport	0.00	511.10	975.68	1,486.78
Town	2014	2015	2016	Total
Huntington	0.00	0.00	50.36	50.36
Smithtown	0.00	10,873.49	11,450.62	22,324.11
Southold	2498.91	3,144.53	3,086.29	8,729.73
Southampton	1,232.06	1,307.62	625.78	3,165.46
School District's	2014	2015	2016	Total
Combined	682.31	1,090.57	921.96	2,694.84
Totals	4,963.62	18,582.06	20,091.62	43,637.30

Table 1: Town of Brookhaven Single Stream IMAs

The Town’s MRF processed over 133,000 tons over the two-year period. The MRF operator has continued to access varied markets for the products of the facility, and has

developed some new product lines. The Town collects brush and leaves from residents as part of its regular collection program, which totaled nearly 82,000 tons for the 2015-2016 period. The Town also has an ambitious waste reduction program, including a ban on the disposal of grass clippings. The amount of waste set out for disposal in the collection districts declined absolutely in 2015, although the tons disposed in 2016 rose slightly and per capita waste disposal was slightly higher both years. The Town also operates the only area landfill which follows all strictures of the Long Island Landfill Law. The landfill predominantly receives construction and demolition debris (C&D) process residues and incinerator ash for disposal. This facility allows the Town to thus support regional C&D recycling and recovery efforts, metals recovery, and the recovery of energy from three regional Waste-to-Energy (WTE) facilities (Covanta Hempstead, Islip, and Huntington). The facility has an estimated 8-year lifespan as of 2016.

The Town was involved in several long-term agreements and arrangements during the planning period. This includes the “Ash for Trash” agreement with Covanta in which the Town of Brookhaven ships its MSW to the Covanta Hempstead plant and in return, landfills the plant’s ash residue. The original 20-year agreement between the Town of Hempstead and Brookhaven expired, but a second five-year agreement with Covanta followed. This second agreement expired in 2014, but was amended which extended the agreement for at least ten more years. The Town also continues to support regional solutions to solid waste problems through its inter-municipal agreements (IMAs) with the Towns of Huntington and Islip for ash residue disposal at Brookhaven’s landfill. During the planning period, the Town had agreements with the Towns of Southampton, Southold, Smithtown, Huntington, and East Hampton to allow for the recycling of their container or single stream and recyclables at the Brookhaven MRF. The Town has agreements with villages in the Town (Bellport, Lake Grove, Mastic Beach, Patchogue, Poquott, Port Jefferson, and Shoreham) and the village of Northport in Huntington to use Brookhaven’s MRF. The Town continues to actively pursue future agreements with additional municipalities.

The Town remains committed to a progressive program of maximal recycling with financially responsible waste disposal, and to providing landfill disposal capacity for ash and C&D residues. The Town is also committed to IMAs that maximize public sector resources for the purposes of increasing recyclable recovery rates and economic benefits to residents, and to

support the needs of other Long Island municipalities. In addition, the Town focuses on reuse and waste reduction through its curbside collection and drop-off programs for recyclables, the yard waste management program, and through school-based and adult education programs.

The Town also amplified its public education and outreach efforts during the planning period, particularly by hiring a part-time recycling educator, and establishing agreements with several schools for single stream recyclables collection.

Section 4. Report Body

4.1 Planning Unit Description

a) Member municipalities in the Planning Unit

The Town of Brookhaven is the member municipality in the Planning Unit. The Town contains nine villages (Belle Terre, Bellport, Lake Grove, Old Field, Patchogue, Poquott, Port Jefferson, Mastic Beach, and Shoreham), although Mastic Beach is undergoing dissolution. They all manage wastes on their own, but six (as of 2016) have agreements with the Town to bring their recyclables to the Town MRF (Bellport, Lake Grove, Mastic Beach, Poquott, Port Jefferson, and Shoreham). Seven have contracts for collection with private carters (Belle Terre, Lake Grove, Mastic Beach, Old Field, Poquott, Port Jefferson, and Shoreham) while two use municipal crews (Bellport and Patchogue). This means there is some waste management planning independent of Town efforts.

b) Former member municipalities

There are no former member municipalities in the Planning Unit.

c) Planning Unit demographics

The Town of Brookhaven has an estimated population of 488,930 (2015). The residential waste districts, which address waste collection outside of incorporated villages for single-, double- and triple-family housing, serviced 111,973 households in 2016. The area of the Town is 259.4 square miles.

4.2 LSWMP Status and Milestones

a) Milestones achieved during the reporting period

The most important milestone achieved during the reporting period is continuing the implementation of single stream recycling. The Town has continued to operate its Materials Recovery Facility (MRF), which has been modified to process single stream recyclables. The Town received single stream recyclables from the Towns of Southold, Smithtown, and Huntington, and the villages of Bellport, Lake Grove, Patchogue, Mastic Beach, Poquott, Port Jefferson, Shoreham and Northport (in Huntington) over the planning period (see Table 1).

Recyclables were also received from the Towns of Southampton and East Hampton. Various private carters and institutions (such as Brookhaven National Laboratory, Suffolk County offices and departments) also delivered recyclables to the MRF. The Town believes its ability to accept single stream recyclables has increased the attractiveness of its facility for recyclables processing, and thus, it enables the implementation of single stream throughout the region. The MRF operator, Hudson Baylor LLC, continues to find markets for all materials produced at the facility, with the exception of glass. Beginning in 2014, the Town began accepting more materials for curbside recycling, adding plastic containers labeled #1-7 and rigid plastics.

The Town has an extensive electronic waste drop-off program at the landfill facility, although the Extended Producer Responsibility program established by the State has clearly failed in its goal of shifting costs from the municipal managers of waste programs to the producers of the materials. Costs continue to rise for these programs, and in 2016 the Town had to spend \$285,583.52 to manage collected electronic wastes; the early promise of being paid for these materials has vanished. In 2009 the Town expanded its electronic waste program by holding satellite electronic waste collection days at multiple locations throughout the Town. In 2016, the Town held 12 satellite electronic waste collection events, which also included paper shredding and collection of pharmaceuticals (prescription drugs). In 2017, 12 satellite electronic waste collection events are planned. All of these 2017 events will allow for paper shredding and the drop-off of pharmaceuticals (prescription drugs). The Town is also crushing and recycling concrete at the landfill. The Town uses chipped tires in internal roadways in the landfill. The Town received Beneficial Use Determinations (BUD) for dredge spoils and uses on-site generated loam for the landfill liner system. The best use the Town has found for its “glass sand,” generated at the MRF, is as separation materials and in the gas venting layer in the landfill. The Town collects cell phones, in-house, for reuse through “911” programs and other public benefit actions. The Town has, however, in accord with State policies, stopped collecting household batteries (which cannot be recycled, and the disposal of which is no longer deemed to represent a hazard).

The Town continued its extensive curbside recycling program and has continued to aggressively reduce its waste stream through its mandatory “Don’t Bag It” program for grass

clippings. There is a trend that the amount of waste set out for disposal in the collection districts has declined from 2003 absolutely (22.6 percent overall) and on a per household basis (21.3 percent overall). Waste tonnage was almost exactly the same in 2015 compared to 2014 (which represented a 2.1 percent increase per household) and rose by 2.1 percent in 2016 compared to 2015 (a 3.1 percent per household increase). The Town believes that the recovering economy resulted in slightly more waste, offsetting long-term trends in reduced paper (especially newspaper) generation and plastics light-weighting and replacement of other packaging materials. The Town believes that the long-term trend will continue to result in overall decreases in wastes set out for disposal.

The Town maintains its composting site in Manorville; neighborhood opposition and some concerns raised by the Region I office meant the Town did not pursue its intention to expand operations there. The Town is installing a solar facility at the site in the spring 2017. Instead of composting yard waste itself, the Town continues to use Long Island Compost to manage its collected leaves. LI Compost has two locations, the 3-acre Westbury site, and a 62-acre facility in Yaphank, which opened in 2000. Each location contains a site for landscapers to drop off organic materials, which the company later produces compost. LI Compost recycles more than 150,000 tons of leaves and grass clippings and 100,000 cubic yards of trees, shrubs and bushes annually. The Town chips brush and woody wastes itself at the landfill.

Over the next several months, the Town will be reviewing aspects of the LI Compost proposal to construct an anaerobic digester in Yaphank. NYSDEC has issued a permit to construct this facility, which can receive and process up to 85,000 tons per year of yard waste, up to 3,000 cubic yards per day of unadulterated wood materials and up to 215,000 tons per year of source-separated organic waste for processing. The anaerobic digester will convert organic waste into fertilizer, biogas fuel, electricity and nutrient-rich water. Benefits said to be associated with operation of the plant are the elimination of 40,000 tons of greenhouse gas emissions and production of the equivalent of 2,000 gallons of diesel fuel. The anaerobic digester residuals will be distributed as compost and fertilizer. The Town has approved the site plan but no building permits have been issued yet.

The Town's working to build public outreach through traditional approaches of mailings, flyers and letters from Town officials. The Town hired a part-time recycling educator in 2014 who began working with the Town in early 2015. Recycle Bank, a recycling incentive program which began in 2011, was not as effective as the Town had hoped and was discontinued.

The educator's main medium for community outreach in 2015 and 2016 was through social media. Presentations for Recycling Education were conducted at schools, organizations, community meetings, festival, fairs and other gatherings reaching 4,000 students and residents in 2016. The presentations comprised of the following:

- Three R's (Reduce, Reuse, Recycling) and Composting
- Handout of what is and is not acceptable as recycling
- Easy Backyard Composting Pamphlet (DEC)
- 50 ways to participate in Earth Day (DEC)
- Gardening using Reduce, Reuse, Recycle, and Compost- repurposing materials and methods to reduce water and fertilizer consumption.
- Water bottles to encourage reduction of store bought one-time use water bottles.
- Cloth totes to encourage a culture moving away from one-time use plastic bags.
- Waste reduction methods such as buying in bulk, less packaging, donating used items, waste free lunch and snack, mending instead or re-buying
- Throwing it Out Guide
- Recycle Schedule
- CURBY Sticker
- Examples of recyclable items, items sold with less packaging, items made from recycled materials
- Examples and photos of what becomes of waste when not disposed of or recycled properly

Instead of a costly printed and distributed Green Gazette, the information is published electronically on the Town's website and include features such as getting involved, green tips of

the month and Greenhaven. Greenhaven is the Town's webpage designated to environmental news, eco-friendly behavior and sustainable operations and living. Mailings for the new year includes a recycling schedule, single stream information on a user-friendly flyer and a letter from the Supervisor encouraging residents to continue participating in the convenient and important recycling program.

In order to promote recycling efforts, the Town implemented a sticker program, free to residents allowing them to select their choice of recycle bin(s). CURBY pails with lids are now purchased from the town for \$20 (lids alone \$6). Compost classes are available by registration and come with an indoor/outdoor compost tumbler. These tumblers are also raffled off at events and available for purchase. The Town also offers free compost and mulch to residents.

The recycling educator has been instrumental in other outreach activities in the Town. These include launching recycling programs in schools, and providing the free collection of recyclables to several schools through a pilot program. The recycling educator has participated in the following:

- Recycle Bin Art Project where school and community youth groups have painted bins designated in 14 Brookhaven Parks to be used as recycle bins expanding recycling throughout these public areas of Brookhaven.
- Promoted and advertised the Special Collection events featuring e-waste collection and paper shredding for recycling and the proper disposal of pharmaceuticals- keeping drugs out of the wrong hands and out of our waterways and groundwater.
- Conducted tours of the Recycling Facility and the Landfill
- Filmed and developed a virtual tour of the Materials Recycling Facility
- Filmed and is developing a virtual landfill tour
- Invited and encouraged schools and youth groups to participate in the NY Recycle Poster Contest
- Encouraged and helped to advertise the Great Brookhaven Clean-up. Asked volunteers to separate collected litter to be recycled in clear bags and other refuse in black bags.

- Provided schools businesses and multifamily complexes with information about mandatory recycling and how to develop recycling programs.
- Conducted Social Media Events for America Recycles Day held on Nov 15, 2016. Participants posted themselves with items to be recycled for a chance to win prizes.

The Town continues to use its landfill to support its waste management framework. The landfill received residues from the MRF. The vast majority of unrecycled waste collected by the Town was shipped to the Covanta Hempstead Waste-to Energy Facility; in exchange, the Town landfilled the plant's ash. The Town also landfilled ash from the Town of Huntington and the Town of Islip over the reporting period, and so manages most of the WTE incinerator ash generated on Long Island. The Town also used its landfill to provide a needed regional disposal facility for processed residues from C&D recovery efforts. Table 2 shows the materials that have been disposed at the site over the past 8 years. The landfill has 8 years of lifespan left, as of 2016. This means that beginning in 2025 the millions of tons of materials that have been managed at the facility will require alternate disposal sites. The last time that Long Island lacked adequate C&D management (circa 1990), there was a regional crisis involving illegal and illicit management of these materials, and NYSDEC made commitments to the New York State Legislature that such a situation would never again be allowed to occur. The Town anticipates working closely with both Region I and Albany staff in their efforts to provide a regional solution to this developing issue.

Multi-Year Landfill Comparison				
	ASH	C & D	ADCM	TOTAL
Year	TONS	TONS	TONS	TONS
2007	325,767.89	467,150.74	320,231.37	1,113,150.00
2008	294,373.77	404,381.26	256,023.61	954,778.64
2009	307,968.12	294,431.20	265,664.10	868,063.42
2010	337,206.68	330,180.33	362,462.72	1,029,849.73
2011	342,756.28	431,412.73	499,290.08	1,273,459.09
2012	337,190.02	506,459.93	390,367.96	1,234,017.91
2013	339,211.25	422,679.15	338,171.10	1,100,061.50
2014	346,405.19	541,749.27	338,622.14	1,226,776.60
2015	367,333.34	546,774.34	272,429.62	1,186,537.30
2016	356,887.57	420,790.43	298,327.58	1,076,005.58
TOTAL	3,355,100.11	4,366,009.38	3,341,590.28	11,062,699.77

Table 2: Multiyear Landfill Comparison

b) Waste reduction and recyclables (WRR) program elements

1. Procedures for implementing WRR program

The Town collects recyclables and waste curbside through contract carters on a weekly basis. The Town collects paper materials (newspaper, corrugated cardboard, junk mail, magazines, catalogs, office/construction/fax/wrapping paper, paperboard boxes, non-metallic wrapping paper, egg containers, food boxes [including cereal and pizza], shoe boxes, and books), and containers (steel, bi-metal, aluminum, plastics #1-7, and glass containers) and other materials (aluminum foil, aerosol cans, waxed cartons used for liquids, rigid plastics [crates, buckets, laundry baskets, lawn furniture, coolers, flower pots, watering cans, plastic drums, water bottles, pallets, pet carriers, shelving, closet organizers, garbage cans], and voluntary set outs of small household metal items). The carters are required to collect set out leaves and brush 20 times per year (according to a pre-arranged, published schedule). White goods are also collected curbside

by Town crews, by appointment, as are bulky items. The Towns carters follow the state ban on the curbside collection of electronics in the disposal of the waste stream. Curbside recyclables, metals, automobile batteries, home electronics, and waste oil are all recycled at the landfill through a drop-off facility. The Town also accepts tires at the landfill which are then sent to a contractor for shredding. Pursuant to a Beneficial Use Determination (BUD), the Town takes the shredded tires back for use as roadbed materials in the landfill. The Town has also established program for the drop off of pharmaceuticals and a paper shredding program for confidential materials at the landfill and at 12 satellite events each year, which is done free of charge, allowing participants to observe that the material are properly destroyed. The shredded paper is baled and marketed through the MRF operator, Hudson Baylor LLC. The STOP facility is open every Saturday, and also on Wednesdays in the summer.

The Town contracts through public bids for waste oil, electronics, leaves, bulk metal recycling, and for STOP facility services. The Town seeks local users for compost from its Manorville site and sells unprocessed compost to bulk users and offers it free of charge to residents. Wood chips are used for municipal purposes. Chipped tires are used for roadways within the landfill. The operator of the MRF, Hudson Baylor LLC, is responsible by contract for marketing materials processed through the MRF. All materials find markets, with the exception of the glass cullet. Glass cullet from the MRF is used as separation berms in the landfill and for gas venting purposes.

2. WRR public education and promotion

In 2014, the Town hired a part-time recycling educator (who began working in early 2015) to promote Town recycling programs. This person is responsible for publishing additional environmental outreach material, including recycling information, and working to promote recycling in schools. The goals of the educator include but are not limited to continue further outreach through social media, website development and through conventional methods, to bring recycling education to school organizations and the community, to develop new and engaging programs like an Art Fair, Swap Meet, and improving attendance for composting classes and to increase the recycling rate and lower the contamination rate by educating residents.

The Town has actively worked to encourage recycling in schools by conducting presentations and has created collection programs for their recyclables. Participants include Center Moriches, Comsewogue, Longwood, Rocky Point South Country, Three Village, William Floyd and Eastport. The Town also collects recyclables from 6 school districts including Center Moriches School District, Comsewogue School District, Longwood School District, Rocky Point School District, South Country School District and Three Village School District.

Each year the Town publishes a calendar with the collection schedule to every household in the Town and is sent at the beginning of every year with a single stream flyer and a letter from the supervisor restating the importance of recycling and encouraging residents to recycle. The Town also maintains an extensive website to educate and inform residents about what materials are recyclable, what and when to set out for recyclables collection, and how to manage other types of wastes, such as e-waste. The Town has a continuing agenda to increase recycling and waste reduction awareness among residents.

The Town provides free stickers for residents to place on bins used for recyclables. Previously, the Town had provided CURBY buckets for recyclables free of charge to residents, but this program was discontinued and replaced with the sticker program in 2010. Stickers were originally mailed with the 2010 waste management and recycling booklets to all households and new stickers may be picked up free of charge from various locations throughout the Town. The town sells CURBY cans with lids at Town Hall and the Town's landfill for \$20 and lids alone for \$6.

The Town had used the Recycle Bank program which assisted in raising public awareness and interest in recycling, but it did not meet the Town's expectations and thus discontinued.

c) Implementation obstacles and efforts to overcome them

The lack of a viable market for glass cullet locally remains an issue. The potential for serious revenue losses for the MRF operator because of recyclable market volatility is also potentially a concern. As a result of recycling efforts, the household fee for waste management has not increased in many years. It is also a benefit to the local and global environment when waste is managed properly in adherence with NY State Law and Town code to source separate

recyclables. Residents are encouraged to recycle plastic bags through the retail stores at which they were acquired. Additionally, residents are asked to exclude plastic bags from recyclables as it adversely affects equipment and efficiency at the MRF facility.

The failure of the State Extended Producer Responsibility program for electronic waste has been a grave disappointment. The State touted the success of this program when in the first flush of the law there was vigorous competition among private sector organizations to pay municipalities for the privilege of offering electronic waste recycling. Now there are substantial costs to municipalities for this mandated service – and residents face fines if they do not comply with the law and separate these goods for recovery. This additional mandate for the Town is not how the State foresaw implementation of the law. The Legislature should advance some changes to the law to relieve this Town and all other NYS municipalities of this fiscal burden.

Illegal dumping is becoming more common across the region. This is despite the availability of reasonable markets for materials that require disposal. The Town is concerned that there has not been sufficient planning for the post 2025 future when the Town landfill closes, and reasonable, local disposal options may no longer exist.

d) Exceptional or unique program aspects

The growing use of the single stream MRF shows that this facility is clearly a regional asset. Its ability to process single stream recyclables sets it apart from other regional MRFs. After the transition of the MRF to single stream, the Town was able to establish more regional agreements with several Towns and villages to bring their recyclables to the MRF. Therefore, the presence of the single stream MRF is helping to encourage single stream recycling throughout the region. In 2017, the MRF operator will expand the tipping floor. The MRF is working with the Parks Department to expand recycling, using an outreach program with the local Girl Scouts. The scouts will decorate cans and bins with recycling themes and set them out in parks to collect recyclables. The MRF has expanded shared service agreements, now working with the Towns of Southampton, Southold, Smithtown, Huntington, and East Hampton, villages in the Town, and the village of Northport in Huntington. The Town operates 12 satellite days (programs) for electronic waste collection, paper shredding, and the drop-off of pharmaceuticals (prescription drugs). The operation of the only area landfill that meets all requirements of the

Long Island Landfill Law is clearly a unique aspect of the Brookhaven program. This facilitates disposal of regional incinerator ash, and allows for disposal of C&D debris, as well as the recovery of recyclables from this C&D stream. The current landfill is expected to close in 8 years; the millions of tons of disposal capacity provided by this facility will no longer exist. To prevent a regional waste management crisis, NYSDEC and all of Long Island needs to become proactive and enter into economically active planning processes to ensure that these wastes are not illegally disposed and that viable solutions are put into place post the closure of the Brookhaven Landfill.

e) Differences between the approved CRA/LSWMP and the current program

The Town developed a new SWMP for the planning period 2012-2022. The Draft was completed and submitted to NYSDEC in June 2012, although the Town is still awaiting comments and approval from NYSDEC. The centerpiece of the previously approved SWMP was the use of a dirty MRF to separate collected wastes into four waste streams: a yard waste component, additional recyclable materials, a MSW compost feedstock, and materials destined for WTE incineration. The Town Board, in light of the C&A Carbone decision, determined that the risk of entering into put-or-pay contracts was too great to allow the project to be implemented. Paradoxically, strong markets through most of the planning period for certain recyclables limited the materials received by the Town. Local villages used paper brokers instead of the Town MRF, and it was apparent that scrap haulers, appliance delivery companies, and even street entrepreneurs were competing with the Town for white goods set for disposal. Therefore, the ambitious tonnage and percent recovery goals of the previous SWMP have not been realized. The Town is hopeful that they will be able to meet the goals set in the new SWMP over the planning period 2012-2022.

f) Progress towards the SWMP goals

The Town has achieved many of the goals set in the previous SWMP. The Town has managed to meet its yard waste goal (removing yard waste from the WTE waste stream) through its mandatory grass clipping “Don’t Bag It” program and the curbside leaves and brush collection programs. The Town has implemented a sound, recycling program including single stream recycling. Recycling rates continue to increase despite the “evolving ton” which has

fewer recyclables in it. The Town hopes that continued public outreach and the work of its recycling educator will help the Town achieve higher public participation in Town programs.

4.3 Resources

a) Funding and staffing levels

The Department expended \$54,421,511 in 2015; \$12,329,379 came from the Refuse & Garbage Division and \$42,092,132 came from the Town's SR - Brookhaven Refuse Recycle Division. This funding is provided by landfill and MRF tipping fees, licenses and permits, and various other fees received by the Town at its facilities.

The Department of Waste Management is managed by a Commissioner, a Chief Deputy Commissioner and a Deputy Commissioner, and an Environmental Facilities Manager. The Town continues to move more of its operations on-line, including many functions in the Department of Waste Management. The Department presently has about 114 employees (104 full time and 10-part time) and is overseen by the Brookhaven Town Board, which is composed of elected officials. The Town maintains contracts with several professional consulting firms for expert and professional assistance.

b) Changes to SWMP funding mechanisms

The combination of tip fee and district collection fees suffice to fund all aspects of the department's activities at this time.

c) Recommendations for State or Federal Actions to support local efforts

The Town landfill has 8 years of lifespan left, as of 2016. This means that beginning in 2025 the millions of tons of materials that have been managed at the facility will require alternate disposal sites. The last time that Long Island lacked adequate C&D management (circa 1990), there was a regional crisis involving illegal and illicit management of these materials. The Town anticipates working closely with both Region I and Albany staff in their efforts to provide a regional planning solution to this developing issue.

One change the Town urges the State to consider is to downgrade the importance of the SWMPs. Most of the infrastructure needed to manage Long Island's solid wastes, for instance, is already in place. There are not many overarching planning needs for most municipal systems.

New York State has indicated great interest in greater organics recycling, particularly of food waste. Considerable funding support would be required for local collection authorities to either a) add another collection round to the existing collection strategy or b) re-invent collection means (to wet-dry or similar alternatives). In addition, specialized transfer sites may be required for these problematic wastes. Few food waste recovery initiatives have been made to date on Long Island, although LI Compost has been approved to construct a 300,000 anaerobic digester (some approvals are still required from the Town before construction can begin). This facility intends to attract most of its feedstock from large quantity generators in New York City, so it is unclear how it will be useful to help promote greater organics recovery on Long Island. Indeed, the Town uses Long Island Compost to manage its collected leaves, but it is not clear how it will operate this portion of its business once the digester is constructed. Please note that LI Compost manages more than 150,000 tons of leaves and grass clippings and 100,000 cubic yards of trees, shrubs and bushes annually from generators on Long Island.

New York State should take steps to support glass recycling in the New York metropolitan area. This could be fostered by requiring glass cullet use in various applications (pipe bedding materials and other structural uses seem most appropriate). The State should consider supporting economic analyses to determine if a facility on Long Island that processes and upgraded recycled glass material could, considering greater distances to market, create usable materials at a reasonable cost.

NYSDEC needs to go to the Legislature and provide some changes to the electronic waste Extended Producer law so that the Town and all other New York State municipalities are no longer fiscally burdened.

The Town supports regulation of mulch operations on Long Island, such as by limiting stockpiling amounts or defining siting specifications. In addition the Town continues to urge NYSDEC to require all mulching operations be in compliance with local zoning. Currently, the industry is unregulated which has caused residential concerns.

The Town eagerly awaits a release of the revised Part 360 regulations and hopes these revised regulations will address some of its concerns.

4.4 Implementation Schedule

a) Status of the implementation schedule

1. *Milestones to be achieved*

In 2012, the Town completed the draft of its new SWMP. This draft has been submitted to NYSDEC, but the Town is still awaiting comments and approval. This SWMP contains a detailed implementation schedule for the period 2012-2022. The program schedule for existing programs and new initiatives for this reporting period (2015-2016), as well as the prior reporting period (2011-2012) are listed below. The general goals highlighted in bold remain pertinent, while those in plain type have already been achieved or are no longer relevant. Many of the goals for the reporting period have been achieved, but efforts should be ongoing so that programs can be further improved in the future.

	Number	Project Element/Goal	Time Period
Existing Programs	1.	Maintain existing curbside recycling program	Continue
	2.	Maintain separate yard waste curbside collection	Continue
	3.	Maintain and enforce grass collection ban	Continue
	4.	Operate MRF for processing paper, cardboard, and commingled containers	Continue
	5.	Participate in Recycle Bank	No longer in effect
	6.	Operate Manorville Yard Waste Composting site and contract composting at private facilities	Continue
	7.	Residential waste from Town's Transfer Station will continue to be transported to Covanta Hempstead plant for incineration	Continue
	8.	Operate Yaphank landfill for ash residue and C&D materials	Continue
	9.	Operate landfill gas collection to energy system with an electrical output of almost 1 MW	Being repaired; operation expected in 2017

	10.	Require private garbage carters under contract with the Town to use Compressed Natural Gas fuel	Continue
	11.	Operate permanent STOP facility for Household Hazardous Wastes at landfill facility	Continue
	12.	Operate e-waste collection at landfill facility	Continue
	13.	Operate resident drop off center for recyclables, oil and tires and landfill facility	Continue
New Solid Waste Initiatives	14.	Hire a recycling coordinator, with the assistance of state grants	Achieved in 2014
	15.	Further investigate possibility of single stream recyclable collection and MRF conversion	Achieved in 2014
	16.	Explore pharmaceutical collection program	Achieved in 2015
	17.	Support for commercial and institutional source separation and separate management of food wastes	Under consideration
	18.	Use of interns from local colleges and universities for public outreach and support	Sporadic
	19.	Expand household hazardous waste program to add new collection event days	Under consideration
	20.	Support retail plastic and paper bag fees/bans on a county wide or regional basis	Under consideration
	21.	Expand public space and public event recyclables collection	2017; ongoing through recycling coordinator
	22.	Promote a culture of repair rather than replacement	Ongoing through recycling coordinator
	23.	Implement mandated paper bag use for yard waste collection	2014
	24.	Support for research/demonstration projects on alternative means of processing organic wastes	Under consideration
	24.	Expansion of curbside collection recyclables where economically feasible	Achieved 2014; ongoing
	25.	Provide home composting bins for interested residents at no-cost or other subsidized purchase	Under consideration

26.	Explore a winter boat wrap program	Under consideration
27.	Continue to examine a Town wide PAYT program	Under consideration
28.	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.	2013 and ongoing
29.	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	Under consideration
30.	Greater enforcement of Town source separation regulations for residential waste generators, especially at residences that are not in the BRRI	Under consideration
31.	Expand/update current Stony Brook University research analyzing comparative recycling performance in different residential CBAs, identifying factors that may affect participation and recycling efficiency	2014
32.	Expand consumer education programs on waste reduction in consumer purchasing decisions	Ongoing through recycling coordinator
33.	Promote existing programs that re-use or redistribute materials in the second-hand marketplace	Ongoing through recycling coordinator
34.	Support for commercial and institutional source separation and separate management of food wastes	Under consideration
35.	Residential collection of select food waste with yard waste for inclusion in current composting programs	Under consideration
36.	Survey recycling/recovery practices in targeted business sectors (especially supermarkets, strip malls, office rental property managers)	Under consideration
37.	Greater enforcement of Town source separation regulations for commercial carter stops, ensuring that all commercial/institutional waste generators have been provided with the tools	Under consideration

		and opportunities to recycling according to Town code	
38.		Explore latex paint collection and recycling drop off program	Under consideration
39.		Explore separate carpet collection and recycling drop off program	Under consideration
40.		Investigate E-waste curbside collection	Under consideration
41.		Greater outreach regarding home composting practices and technologies for organic waste	Under consideration
42.		Consider solar caps in landfill closure programs and other buildings/structures in the Town	Ongoing (2017)
43.		Investigate economic feasibility of removing H₂S and other contaminants from landfill gas from Cells 4,5, and 6 so that gas stream can be combusted for energy production	Ongoing
44.		Coordinate Town, private sector, and state activities to support product stewardship programs	Ongoing
45.		Expand outreach efforts to civic groups and other interested parties on Town programs	Ongoing through recycling coordinator
46.		Expand Town promotional campaigns for recycling awareness and participation	Ongoing through recycling coordinator

2. Revised implementation schedule

In accordance with the new SWMP, the Town seeks to achieve all goals set forth in the new SWMP for the SWMP duration (2012-2022). Most of the goals listed in the new SWMP remain pertinent.

3. Deviations from Implementation Schedule

The Town also continues to research expansion of organics recycling programs, particularly for food waste, as well as to continue expanding recycling efforts by targeting additional recyclable materials. The Town is investigating means to increase recycling within the Town, such as by providing larger recycling carts.

b) WRR/composting potential of other materials

1. *Present and potential markets and specifications*

The Town is committed to expanding waste reduction and recycling programs. The Town would like to support product and packaging stewardship programs to create incentives for waste reduction and increased recycling. Furthermore, over the course of the next reporting period (2017-2018), the Town plans to explore the implementation of construction and demolition waste processing equipment and/or systems. Lastly, the Town plans to continue exploring means to add certain new materials for recycling. Some expansions may be infeasible with existing infrastructure and resources. The Town has also seriously investigated adding textiles to its program. The most feasible technical solution would have involved having residents bag textiles (with “containers,” again leading to certain educational issues) and removing the bags directly from the tipping floor (always a health and safety concern). In addition, many charitable organizations were concerned that the Town would be too competitive to existing used clothing collection programs.

2. *Present and potential technical feasibility*

Over the next ten years, the Town plans to actively explore the technical feasibility of the options for increasing waste reduction and recycling. Some options have clear difficulties, however. Firstly, there are issues with adopting a Pay-As-You-Throw system in the Town. These include the way the program might be implemented (rented containers, purchased bags, lift-arm scales with scanners, etc.), setting pricing so that enough revenues are generated, and rolling out an entirely new way for residents to think about their waste management. Financing the implementation of the program is the single largest issue. Secondly, the Town is interested in expanding organics recovery efforts. However, food recovery would require major changes in collection procedures, which are not feasible given current collection contracts and market conditions.

3. Scheduled implementation date for additional materials

In addition to transitioning to single stream recycling and accepting more materials for recycling, the Town has focused on expanding its recycling program in other ways. In the next planning period, the Town hopes to evaluate expanded organics recovery and to continue exploring other materials which may be accepted for recycling.

c) New solid waste management issues

During the upcoming years, the Town hopes to expand its current operations to allow for greater waste reduction and recycling. To the greatest extent possible, the Town also plans to investigate additional markets for recyclables. However, the Town feels that there is not much that a Long Island township can do to influence national or international markets.

d) Preliminary SWMP schedule

The Town's Draft SWMP was completed in 2012. The Town used LK McLean Associates as its contractor. The Draft SWMP has been submitted to NYSDEC and is awaiting review.

4.5 Solid Waste and Recyclables Inventory

a) Data collection methods

All data presented regarding disposal and recycling tonnages are the result of scale data, with one exception.

b) Sources of data

Data were collected at the scale house of the Town of Brookhaven Waste Management Facility, with the following exceptions:

- Manorville yard waste (Manorville scale house)
- Waste oil converted from gallons
- Metals recovered at the Covanta Hempstead Resource Recovery Facility (the Town took a proportionate share of all facility metals)

c) Destinations for solid waste outside of the Planning Unit

The Town of Brookhaven sent solid waste to the Covanta Hempstead RRF (Garden City, NY and Islip) for disposal in 2015 and 2016.

d) Destinations for recyclables outside of the Planning Unit

All recyclables managed by the Town were recycled within the Town (leaves, brush, waste oil, abandoned cars, chipped tires, glass sand, glass cullet, crushed concrete). Recyclables managed by contractors to the Town (i.e., MRF recyclables by Hudson Baylor, metals at Gershow Recycling and e-Green Recycling for electronic recyclables) are marketed by those contractors. The Town has no direct involvement or knowledge regarding the markets pursued by these independent vendors.

e) 2015 Annual Recycling Report

Attached.

f) 2016 Annual Recycling Report

Attached.

g) Copy of Town Waste Management Code

The Town of Brookhaven Sanitation Code can be obtained electronically at: <http://ecode360.com/8593252>.

Year	District (Curbside) Recycling Percent	Overall Town Recycling Percent
1987		1
1988		1
1989		11
1990		12
1992		28
1993		28
1994		22
1993		28
1994		22
1995		32
1996		34
1997		39
1998		34
1999	12.9	39.0
2000		41.2
2001	11.2	43.0
2002	20.8	44.1
2003	23.4	33.1
2004	21.8	33.0
2005	21.4	27.4
2006	22.1	31.3
2007	20.6	25.6
2008	25.7	30.6
2009	23.8	30.8
2010	23.0	30.3
2011	24.8	34.4
2012	22.7	46.2
2013	21.8	31.8
2014	25.0	38.6
2015	24.9	31.2
2016	24.9	33.0

Table 3: District and Overall Town Recycling Percent