

NYC Commercial Waste Zone Program

Final Generic Environmental Impact Statement

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NEW YORK CITY COMMERCIAL WASTE ZONE PROGRAM
FINAL GENERIC ENVIRONMENTAL IMPACT STATEMENT

Project Name: NYC Commercial Waste Zone Program

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This document is the Final Generic Environmental Impact Statement for the adoption of the CWZ Program. Copies may be downloaded from DSNY's website at www.nyc.gov/commercialwaste. Hard copies can be accessed at repositories located at the Department of Sanitation, Bureau of Legal Affairs, 125 Worth Street, Room 708, New York, NY, 10013; and the Mayor's Office of Environmental Coordination, Hilary Semel, Director, 100 Gold Street, 2nd Floor, New York, NY 10038.

September 2019

Table of Contents

Foreword.....	F-1
Executive Summary	S-1
Chapter 1: Project Description.....	1-1
A. Introduction.....	1-1
B. Background, Purpose, and Need	1-2
C. Description of the Proposed Action	1-5
D. Project Approvals and Coordination.....	1-7
E. Alternatives to the CWZ Program.....	1-8
1. Screening of Alternatives	1-8
Evaluation Criteria	1-8
F. Analysis Framework	1-12
Analysis Year.....	1-12
Three Commercial Density Typologies for Environmental Analysis via Case Study	1-14
Central Business District Study Area.....	1-14
Neighborhood Retail Corridor Study Area	1-14
Lower (Retail) Density Study Area.....	1-15
Selected Case Study Areas	1-15
Chapter 2: Land Use, Zoning, and Public Policy.....	2-1
A. Introduction.....	2-1
B. Existing Conditions.....	2-1
Public Policy	2-1
C. Future without the Proposed Action.....	2-4
Public Policy	2-4
D. Future with the Proposed Action.....	2-5
Public Policy	2-5
E. Conclusion	2-7
Chapter 3: Socioeconomic Conditions	3-1
A. Introduction.....	3-1
Principal Conclusions.....	3-1
B. Methodology	3-2
Background	3-2
Analysis Format	3-3
Neighborhood Case Study Areas	3-3
Data Sources.....	3-5
C. Screening Assessment.....	3-6
1. Direct Residential Displacement	3-6

NYC Commercial Waste Zone Program

2. Direct Business Displacement	3-7
3. Indirect Residential Displacement	3-7
4. Indirect Business Displacement	3-7
5. Adverse Effects on Specific Industries	3-7
D. Preliminary Assessment	3-8
Adverse Effects on Specific Industries	3-8
E. Detailed Analysis of Potential Adverse Effects on Specific Industries	3-9
Approach	3-9
Effects of the Proposed Action on Commercial Waste Carters	3-10
Effects of the Proposed Action on Commercial Waste Customers	3-27
Conclusion	3-49
Chapter 4: Solid Waste and Sanitation Services	4-1
A. Introduction	4-1
B. Existing Conditions	4-2
New York City Laws and Regulations	4-3
2006 Solid Waste Management Plan	4-3
Recycling and Organics Requirements	4-4
Neighborhood Case Study Areas	4-5
C. Future without the Proposed Action	4-10
D. Future with the Proposed Action	4-11
Neighborhood Case Study Areas	4-11
Consistency with SWMP	4-13
E. Conclusion	4-13
Chapter 5: Transportation	5-1
A. Introduction	5-1
B. Transportation Conditions	5-1
Existing Condition	5-1
Future without the Proposed Action	5-2
Future with the Proposed Action	5-3
C. Screening Analysis	5-5
D. Conclusion	5-6
Chapter 6: Air Quality	6-1
A. Introduction	6-1
B. Air Quality Conditions	6-1
Existing Condition	6-1
Future without the Proposed Action	6-2
Future with the Proposed Action	6-3
C. Screening-Level Assessment	6-3
Regional Assessment (Mesoscale)	6-3
Local Assessment (Microscale)	6-4
D. Conclusion	6-4
Chapter 7: Greenhouse Gas Emissions	7-1
A. Introduction	7-1
B. Greenhouse Gas Emissions	7-1

Pollutants of Concern	7-1
Policy, Regulations, Standards, and Benchmarks for Reducing GHG Emissions	7-3
Future without the Proposed Action.....	7-6
Future with the Proposed Action.....	7-7
Chapter 8: Noise.....	8-1
A. Introduction.....	8-1
B. Screening Assessment.....	8-1
C. Conclusion	8-2
Chapter 9: Alternatives	9-1
A. Introduction.....	9-1
B. No Action Alternative	9-1
Land Use, Zoning, and Public Policy.....	9-1
Socioeconomics.....	9-3
Solid Waste and Sanitation Services	9-9
Transportation	9-9
Air Quality.....	9-10
Greenhouse Gas Emissions	9-11
Noise	9-11
C. Exclusive Zone Alternative.....	9-12
Land Use, Zoning, and Public Policy.....	9-12
Socioeconomics.....	9-12
Solid Waste and Sanitation Services	9-14
Transportation	9-15
Air Quality.....	9-16
Greenhouse Gas Emissions	9-17
Noise	9-17
Chapter 10: CWZ Transition Period	10-1
A. Introduction.....	10-1
B. Anticipated Transition Process.....	10-1
Competitive Solicitation Period	10-1
Carter Transition Period	10-2
Customer Transition Period	10-4
City Support during Transition Period	10-4
C. Potential Impacts of Transition Period.....	10-4
Land Use, Zoning, and Public Policy.....	10-5
Socioeconomic Conditions.....	10-5
Solid Waste and Sanitation Services	10-6
Transportation	10-7
Air Quality.....	10-7
Greenhouse Gas Emissions and Climate Change.....	10-8
Noise	10-8
11: Unavoidable Adverse Impacts.....	11-1
A. Introduction.....	11-1

12: Growth-Inducing Aspects of the Proposed Action..... 12-1

13: Irreversible and Irretrievable Commitments of Resources13-1

14: Response to Comments on the DGEIS 14-1

LIST OF APPENDICES

Appendix A: Regulation Tables

Appendix B: Waterfront Revitalization Program

Appendix C: VMT Methodology

Appendix D: Written Comments Received on the DGEIS

List of Tables

3-1	2015 Commercial Carters Operating Expenses.....	3-12
3-2	No Action Condition Change in Diversion Rate.....	3-14
3-3	Cost Associated With 9-Percent Increase in the Rate of Diversion in the No Action Condition.....	3-15
3-4	LL145/2013 Reported Compliance and Anticipated Cost	3-16
3-5	Additional Carter Expenses in the No Action Condition	3-17
3-6	Commercial Carter Expenses in the No Action Condition	3-18
3-7	Proposed Action Anticipated Change in Diversion Rate	3-20
3-8	Cost Associated with a 10 Percent Increase in the Rate of Diversion as a Result of the Proposed Action	3-21
3-9	Operational Expense Reduction as a Result of Zone Routing Efficiencies Introduced by the CWZ Program	3-22
3-10	Proposed Action Cost of GPS Units and GPS Data Service	3-23
3-11	Proposed Action Cost of Health and Safety Program	3-24
3-12	Total Anticipated Expenses to Commercial Carting Operations as a Result of the CWZ Program	3-25
3-13	Change in Commercial Carter Operational Expenses as a Result of the CWZ Program	3-26
3-14	Changes to Trucks as a Result of the CWZ Program.....	3-26
3-15	Changes to Employment as a Result of the Proposed Action	3-27
3-16	Employment-Based Waste Generation Rates.....	3-29
3-17	New York City Commercial Waste Generation.....	3-30
3-18	New York City Annual Carting Costs.....	3-31
3-19	Modeled New York City Square Footage by Industry Sector.....	3-32
3-20	Area of Commercial Development within New York City.....	3-32
3-21	Average Cost for Commercial Carting Services in New York City PSF	3-33
3-22	Midtown Manhattan Waste Generation	3-34
3-23	Midtown Manhattan Annual Carting Costs.....	3-35
3-24	Area of Commercial Development within Midtown Manhattan.....	3-36

Table of Contents

3-25	Average Cost for Commercial Carting Services in Midtown Manhattan PSF	3-36
3-26	Flatbush Nostrand Junction Waste Generation	3-37
3-27	Flatbush Nostrand Junction Annual Carting Costs	3-38
3-28	Area of Commercial Development within the Flatbush Nostrand Junction	3-39
3-29	Average Cost for Commercial Carting Services in the Flatbush Nostrand Junction PSF	3-40
3-30	College Point Waste Generation	3-41
3-31	College Point Annual Carting Costs	3-42
3-32	Area of Commercial Development within College Point	3-43
3-33	Average Cost for Commercial Carting Services in College Point PSF	3-44
3-34	No Action Anticipated BIC Rate Cap	3-45
3-35	No Action New York City Carting Costs	3-45
3-36	No Action Midtown Manhattan Carting Costs	3-46
3-37	No Action Flatbush Nostrand Junction Carting Costs	3-47
3-38	No Action College Point Carting Costs	3-48
3-39	Proposed Action Minimally Viable Rate for Commercial Carting	3-49
4-1	Employment-Based Waste Generation Rates	4-5
4-2	New York City Commercial Waste Generation	4-6
4-3	Waste Generation in Midtown Manhattan Case Study Area	4-7
4-4	Carters Servicing the Midtown Manhattan Case Study Area	4-7
4-5	Waste Generation in the Flatbush Nostrand Junction Case Study Area	4-8
4-6	Carters Servicing the Flatbush Nostrand Junction Case Study Area	4-8
4-7	Waste Generation in the College Point Case Study Area	4-9
4-8	Carters Servicing the College Point Case Study Area	4-9
4-9	Carters Servicing the Case Study Areas with Proposed Action	4-12
5-1	No Action and Proposed Action VMT (Miles/Day) per Case Study Area	5-4
5-2	No Action and Proposed Action Daily Carting Trucks per Case Study Area	5-5
7-1	Global Warming Potential for Major GHG	7-3
9-1	Cost Associated with 4-Percent Increase in the Rate of Diversion in the No Action Alternative	9-4
9-2	LL145/2013 Reported Compliance and Anticipated Cost	9-5
9-3	Additional Carter Expenses in the No Action Alternative	9-6
9-4	Change in Commercial Carter Expenses	9-7

NYC Commercial Waste Zone Program

9-5	No Action Alternative Anticipated BIC Rate Cap	9-8
9-6	No Action and Proposed Action VMT (Miles/Day) per Case Study Area	9-10
9-7	No Action Alternative and Proposed Action Daily Carter Trucks per Case Study Area.....	9-10
9-8	Carter Operational Expenses in the Exclusive Zone Alternative	9-13
9-9	Changes to Carting Trucks and Employment as a Result of the Exclusive Zone Alternative	9-14
9-10	Proposed Action and Exclusive Zone Alternative VMT (Miles/Day) per Case Study Area.....	9-15
9-11	Proposed Action and Exclusive Zone Alternative Daily Carting Trucks per Case Study Area	9-16

List of Figures

Following page:

1-1	Map of Proposed Commercial Waste Zones.....	1-6
1-2	Neighborhood Case Study Areas	1-15
1-3	Midtown Manhattan CBD Case Study Area.....	1-15
1-4	Flatbush Nostrand Junction Neighborhood Retail Corridor Case Study Area	1-16
1-5	College Point Lower Density Retail Case Study Area	1-16
3-1	Midtown Manhattan Central Business District Case Study Area	3-4
3-2	Flatbush-Nostrand Junction Corridor Case Study Area.....	3-4
3-3	College Point Low Density Case Study Area	3-5
5-1	Midtown Manhattan CBD NYCDOT-Designated Truck Routes	5-2
5-2	Flatbush Nostrand Junction Neighborhood Retail Corridor NYCDOT-Designated Truck Routes	5-2
5-3	College Point Lower Density Retail NYCDOT-Designated Truck Routes.....	5-2
5-4	Efficiencies Gained from Existing Condition to Proposed Action in the Flatbush Nostrand Junction Case Study Area	5-4
5-5	Truck Traffic Associated with Just One Day of Operation in the City’s Private Waste Collection Industry	5-4
5-6	Daily Changes in the Amount of Trucks in Case Study Areas	5-5

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Foreword

This document is the Final Generic Environmental Impact Statement (FGEIS) for the Commercial Waste Zone (CWZ) Program (the “CWZ Program” or “Proposed Action”). The New York City Department of Sanitation (DSNY) determined the Draft Generic Environmental Impact Statement (DGEIS) to be complete and issued a Notice of Completion for the DGEIS on February 22, 2019. Duly noticed public hearings on the DGEIS were held at the following times and locations:

- March 11, 2019
Second Floor Auditorium
125 Worth Street, New York, NY, 10013
The hearing was held from 9 AM to 12 PM
- March 14, 2019
Second Floor Auditorium
125 Worth Street, New York, NY, 10013
The hearing was held from 6 PM to 9 PM

Public comments were accepted at the hearings and throughout the comment period, which remained open through April 8, 2019.

This FGEIS addresses all substantive comments made on the DGEIS during the public hearings and subsequent comment period. Those comments are summarized and responded to in Chapter 14, “Responses to Comments.” Changes to the document text and graphics were made between the DGEIS and FGEIS, as necessary, in response to these comments.

The principal changes between the DGEIS and FGEIS include the following:

- Clarifications and/or additional information in response to comments on the DGEIS (see Chapter 3, “Socioeconomic Conditions,” Chapter 4, “Solid Waste and Sanitation Services,” and Chapter 5, “Transportation”).
- Following the publication of the DGEIS, New York City published an updated *OneNYC 2050: Building a Strong and Fair City* in April 2019. References to this guidance strategy have been updated (see Chapter 1, “Project Description,” Chapter 2, “Land Use, Zoning, and Public Policy,” Chapter 7, “Greenhouse Gas Emissions,” and Chapter 10, “CWZ Transition Period”). Specifically, updated greenhouse gas (GHG) guidance and data from this document were incorporated into the GHG analysis as applicable (see Chapter 7, “Greenhouse Gas Emissions”).
- Chapter 14, “Responses to Comments,” has been added to the document.
- Appendix C, “VMT Methodology,” has been added to the document.
- Appendix D, “Written Comments Received on the DGEIS,” has been added to the document.

Text changed or added to the FGEIS is indicated by double-underline; text deleted from the FGEIS is indicated by ~~strikethrough~~. However, underline and strikethrough are not used in this

NYC Commercial Waste Zone Program

Foreword or in Chapter 14, “Responses to Comments,” because they are presented for the first time in this FGEIS. *

A. INTRODUCTION

The City of New York is proposing to improve commercial waste carting by implementing a Commercial Waste Zone (CWZ) Program across the five boroughs of the City, consisting of 20 zones with 3 to 5 private carters authorized to operate per zone (the “CWZ Program” or “Proposed Action”). As lead agency for the required environmental review of the Proposed Action, the New York City Department of Sanitation (DSNY) has prepared this ~~Draft~~ Final Generic Environmental Impact Statement (~~DGEIS~~ FEIS), examining the potential for adverse environmental impacts that could occur as a result of the CWZ Program, in accordance with the State Environmental Quality Review Act (SEQRA) and the City Environmental Quality Review (CEQR) procedures. Implementation of the CWZ Program would involve several discretionary approvals. The City entities that may be potentially involved in the environmental review and approval process for the Proposed Action are:

- Office of the Mayor, City of New York for authorizing legislation;
- New York City Council for authorizing legislation;
- DSNY acting as lead agency for the environmental review,¹ potential rulemaking, and CWZ Program implementation including approvals of zone contracts; and
- New York City Business Integrity Commission (BIC) for oversight and potential rulemaking.

B. DESCRIPTION OF THE PROPOSED ACTION

The CWZ Program would involve an implementation plan and contract-award process to establish a zoned commercial waste system throughout the City’s five boroughs. The CWZ Program would be a non-exclusive system of 20 geographic zones permitting at least 3 but no more than 5 carters operating within each zone. Specifically, 14 zones would allow 3 carters, 4 zones (all in Manhattan) would allow 4 carters, and 2 zones (in midtown Manhattan) would allow 5 carters, for a total of up to 68 zone contracts.

The CWZ Program would regulate the collection of commercial refuse, designated recyclables, and source-separated organic waste. It would exclude specialized or intermittent commercial waste streams, which would continue to be collected in the current manner under existing City and State regulatory requirements. The excluded waste streams include construction and demolition (C&D) debris, hazardous or radioactive waste, medical waste, electronic waste, textiles, yard waste (collected by landscapers); waste hauled by; junk hauler waste or one-time bulk waste services, grease, and waste papers collected for the purposes of shredding or destruction.

¹ Lead agency status has been delegated by the New York City Council and Office of the Mayor to DSNY.

NYC Commercial Waste Zone Program

Private carters would competitively bid for the right to service businesses in each zone. Carters that win zone contracts would be obligated to meet certain contractual requirements aligned with the City's program goals and objectives, as further discussed below. The CWZ Program would standardize the carting contract process by requiring written service agreements between carters and customers and by making the pricing structure more transparent. Customers would be able to negotiate supplemental services beyond the required minimum, for an extra fee.

Each carter would be able to compete for one or more zones throughout the City based on its preferences. No carter would be able to win contracts for more than 15 zones. Qualification requirements would be further defined in a Request for Proposal (RFP). The RFP would provide details on the program goals, methods for implementation, and requirements that carters would respond to in order to apply for contracts with the City to collect waste within specific zones. The proposed carting fee would constitute 40 percent of the selection criteria for each proposal. While the RFP would define the maximum number of carters able to operate in a particular zone, and the City expects to award that number of contracts per zone, the number of carters selected for a zone would be determined by the number and quality of the proposals received and the qualifications of the carters. Additionally, the potential to submit proposals as a consortium with other carters or organized through a broker, as well as certain subcontracting allowances, would provide opportunities for an array of different carters.

Following selection, contracts for the opportunity to collect in a zone will have a 10-year term with extension options available. Extension options will be outlined in the contract, and any extension would be at the discretion of the City for the individual carter. Pricing would be negotiated between individual businesses and carters, subject to rate caps for each carter determined through the contract-award process. The overall BIC rate cap for licensed carters of putrescible waste would no longer apply.

Under the CWZ Program, carters would be required to comply with current regulations so they could compete for business within the CWZ Program, and DSNY would have the mechanism through contract to enforce these regulations if carters fail to comply. The CWZ Program would encourage carters to comply with industry health and safety standards and policies, as well as BIC's health and safety guidance documents. Compliance with requirements for safety equipment and training and necessary equipment maintenance would be documented and tracked.

The CWZ Program would encourage carters to comply with existing recycling and source-separation regulations so they could compete for business within the CWZ Program. As part of the solicitation process, the CWZ Program would require carters to develop "zero waste" plans and identify innovative practices to support waste reduction, reuse, and recycling and provide for additional oversight and reporting requirements to ensure that these practices are being followed. With more recycling and organic materials being separated, less waste would be sent to landfills, saving resources and energy, consistent with the City's sustainability and recycling goals.

Billing would be fairer and more transparent, with written service agreements outlining rates and any fees so that New York City businesses would only pay for the waste that they produce. Implementing this non-exclusive CWZ Program via an orderly transition will enable New York City businesses ~~is expected to result in a transition that can be planned in order for New York City businesses~~ to preserve customer choice, keep prices competitive and the quality of service high, while substantially reducing truck traffic associated with commercial waste collection.

The CWZ Program would be implemented in multiple steps. The competitive solicitation process would be expected to begin in 2020 and the evaluation and contracting with the City would be

expected to last approximately one year. The RFP would be released for all zones, and all proposals would be reviewed and awarded concurrently. Once all contract agreements with the City are executed, customer transition would be expected to begin at the end of 2021 and could take up to two years following the execution of such agreements. Customer transitions to service by an authorized carter would be expected to be complete by 2023 or early 2024. DSNY would continue to serve as the project manager for the CWZ Program, and in this capacity would oversee the competitive solicitation, the negotiation of each zone's contract between the City and the carter for the right to collect waste, and the overall transition to CWZs. DSNY would continue to enforce regulations ~~controlling concerning~~ commercial waste set out, recycling, and organics separation. DSNY would also become the primary administrator of carter zone contracts under the program and would serve as carter of last resort if carters repeatedly fail to perform services for any reason. DSNY would create a Division of Commercial Waste to administer the CWZ Program and consolidate DSNY's commercial waste outreach, enforcement, and regulatory functions in the agency under a single chain of command. The Division of Commercial Waste would oversee the transition processes and ensure that the CWZ Program achieves its stated goals and requirements.

In summary, the CWZ Program would build on the current regulatory system, with a contract-based system where carters are subject to clear, written requirements. The contracts awarded to the selected carters would be long-term, provide for transparent and fair pricing and customer service mechanisms, require improved environmental performance, and ensure compliance with and enforcement of existing and new requirements. Non-compliance could result in monetary penalties or loss of the contract. Overall, the CWZ Program would provide stability to the commercial waste industry by providing carters with predictable business and promoting long-term investments in recycling services and cleaner trucks.

C. PURPOSE AND NEED

Today's commercial waste system achieves its basic goal of collecting and handling the City's commercial waste, but the competitive market has resulted in inefficiencies, with overlapping carting routes and resulting externalities that must be borne by the public, including extra truck traffic, an increased risk to pedestrian safety, traffic congestion, air and noise pollution, road wear, and increased use of fossil fuels and greenhouse gas (GHG) emissions, contributing to climate change. In some parts of the City, based on data reported to BIC by the carting industry, more than 50 carters service a single community district, and an individual commercial block may see dozens of private waste collection trucks on a single night. Compliance with the City's safety equipment and training requirements, and necessary equipment maintenance, are often not enforceable as a practical matter under the current system, and guidance documents, notably BIC's *Trade Waste Safety Manual*, lack the force of law. Compliance with BIC's rate cap relies on self-reporting and self-policing by carters and customers, resulting in efforts by some to evade the requirements.

Commercial business customers of carters note the lack of transparency between carters and customers in the current system. The majority of contracts are oral in nature. There are no set guidelines on what a carter can charge a customer outside of the citywide rate cap, and many payments are made in cash. Furthermore, for their part, carters note that a customer can change carters with little advance notice to the carter, causing inconvenience.

Moreover, although existing regulations require commercial businesses to recycle metal, glass, plastic (MGP), paper, cardboard, and, in some cases, waste from food preparation (organics) and thereby divert such waste from landfills, enforcing and tracking compliance rates is difficult.

NYC Commercial Waste Zone Program

In sum, reforming the City's commercial waste carting system seeks to achieve a series of stakeholder-driven goals. These include:

1. **Environmental Quality and Public Health:** Reduce truck traffic throughout the City to reduce air and noise pollution and improve quality of life for New Yorkers.
2. **Zero Waste:** Reduce commercial waste disposal and incentivize recycling to conserve resources and reduce GHGs.
3. **Pricing:** Provide fair, transparent pricing with competitive prices for businesses large and small.
4. **Customer Service:** Strengthen customer service standards and establish accountability.
5. **Health and Safety:** Improve training and safety standards to make the industry safer for workers and the public.
6. **Labor and Worker Rights:** Improve industry compliance with labor standards and laws regulating ~~uphold~~ workers' rights.
7. **Infrastructure and Waste Management:** Prioritize investments in clean, modern fleets that make up a reliable, resilient, and sustainable waste management system.
8. **Robust, competitive carting sector:** Create a system that works for carters of all sizes and prevents overreliance on any single company.

In August 2016, DSNY, in partnership with BIC, released a feasibility study lead by Buro Happold Engineering on the implementation of a CWZ program in New York City.² The study concluded that a CWZ program would be beneficial in reducing inefficiencies in waste collection routes and would reduce carter truck miles traveled by roughly half. The CWZ Program builds on this initial work.

To determine the structure of the CWZ Program, a robust, year-long stakeholder engagement process was conducted by DSNY, as lead agency, and the consultant team. Starting October 19, 2017, over 150 different stakeholders in the commercial waste industry were consulted, including commercial businesses, labor groups, environmental justice advocates, private carters, Business Improvement District representatives, real estate owners, property managers, trade organizations, other City agencies, traffic safety advocates, and elected officials. A variety of formats were utilized, including structured one-on-one interviews, small group conversations, phone calls, field interviews, and focus groups. The City used the feedback it gained from this process to determine the CWZ Program goals, implementation strategies, and the necessary requirements for the eventual carter contracts. The City and project team are expected to continue to work with stakeholders during public review and implementation of the CWZ Program.

The CWZ Program that emerged from this process is therefore intended to advance the City's efforts to increase commercial recycling, reduce carter truck traffic and associated air, noise, and GHG emissions, and improve carting industry operational standards. The CWZ Program would thereby help advance several key policy objectives, including improving roadway safety—complementing Vision Zero, furthering the environmental sustainability efforts of *One New York: The Plan for a Strong and Just City*, *OneNYC2050: Building a Strong and Fair City* (OneNYC), and reducing the environmental and community impacts of the commercial waste system, a goal of the City's Solid Waste Management Plan (SWMP).

² DSNY, BIC. Private Carter Study. August, 2016. Retrieved from:
<https://www1.nyc.gov/assets/dsny/site/resources/reports/private-carter-study>

D. ANALYSIS FRAMEWORK

The Proposed Action would change the commercial waste collection program throughout New York City's five boroughs. The 2014 *CEQR Technical Manual* serves as the general guide on the methodologies and impact criteria for evaluating the Proposed Action's potential effects on the various environmental areas of analysis in the ~~DGEIS~~FGEIS.

ANALYSIS YEAR

Since the Proposed Action's expected year of full implementation after a two-year transition period is 2024, that is the Analysis Year for the environmental review. As such, the environmental setting is not the current environment, but the future environment. Therefore, the technical analyses and consideration of alternatives assess current conditions and forecast these conditions to the expected 2024 Analysis Year for the purposes of determining potential impacts. Each chapter of the ~~DGEIS~~FGEIS provides a description of the "existing condition" and assessment of Future without the Proposed Action (the "No Action" condition) and the Future with the Proposed Action (the "With Action" condition).

EXISTING CONDITIONS

For each technical area that has been assessed in the ~~DGEIS~~FGEIS, the existing conditions have been described. The analysis framework begins with an assessment of existing conditions because these can be most directly measured and observed. The assessment of existing conditions serves as a starting point for the projection of future conditions with and without the Proposed Action and the analysis of project impacts.

FUTURE WITHOUT THE PROPOSED ACTION (NO ACTION CONDITION)

The No Action condition predicts conditions that would exist in the Analysis Year of 2024 without undertaking the Proposed Action, and thus provides the baseline against which the Proposed Action's impacts may be assessed. Under the No Action condition, it is anticipated existing carters would continue to operate the same as under the existing condition—the routes, frequency, durations and pick-up times would remain approximately the same.

The No Action condition analysis discusses the current commercial waste industry, including its shortcomings, and any regulatory changes to the industry already expected by the Analysis Year of 2024.

FUTURE WITH THE PROPOSED ACTION (WITH ACTION CONDITION)

In the Proposed Action, there would be 20 geographic zones in each of which 3 to 5 carters would be authorized to operate and be required to adhere to certain parameters intended to improve transparency, safety, and customer service. Up to 68 zone contracts would be awarded. The identities of the carters to be awarded zone contracts are to be determined, but are expected to have carting operations and garages in the City or greater metropolitan area.

THREE COMMERCIAL DENSITY TYPOLOGIES FOR ENVIRONMENTAL ANALYSIS VIA CASE STUDY

As the Proposed Action is generic, and the CWZ carter garage locations are not yet known, the ~~DGEIS~~FGEIS studies representative types of commercial clusters and corridors within New York

NYC Commercial Waste Zone Program

City and includes an analysis of the Proposed Action's likely effects on its environmental setting (Future with the Proposed Action) in 2024, the Analysis Year. The analysis examined how proposed changes to the commercial waste system from the CWZ Program might affect three broad classes of commercial development density, into which most development in the City can be categorized. Three representative neighborhood case study areas were selected as typologies of high, medium, and low-density commercial development, respectively, to provide a more detailed and contextual analysis of the potential benefits and adverse impacts of the Proposed Action in such New York City communities. These areas, and the reasons they were selected for study as typologies for the Proposed Action, are discussed below.

Central Business District Study Area

A central business district (CBD) is the commercial and business center of a city and in larger cities is often synonymous with a city's "financial district." In New York City, these high-density commercial areas are primarily found in Lower Manhattan, Midtown Manhattan, and Downtown Brooklyn. Users of waste removal services are typically building operators, including real estate companies, often with multiple buildings within the district. Typical waste producers within CBD districts include large offices, hotels, commercial retail, and restaurants.

Neighborhood Retail Corridor Study Area

Neighborhood retail corridors primarily serve as the retail and commercial hubs of medium-density residential neighborhoods outside of the City's CBDs, such as Long Island City and Roosevelt Avenue in Queens; Fordham Road, the Hub in the Bronx; the Flatbush Nostrand Junction, portions of Atlantic Avenue, and 5th Avenues in Brooklyn; and Dyckman Street in Manhattan. Businesses within these medium-density commercial corridors tend to be smaller in footprint and produce less waste per footprint area than larger buildings found in the City's CBDs. Commercial waste customers within these neighborhood retail corridors include medium-sized office buildings, small commercial retailers, neighborhood supermarkets, delis, and restaurants.

Lower (Retail) Density Study Area

Lower commercial density areas are characterized by commercial retail uses scattered throughout the district, as opposed to being concentrated in defined clusters or corridors. These low-density districts are found in the more automobile-oriented neighborhoods of the outer boroughs, including Howard Beach and College Point in Queens, Canarsie in Brooklyn, and neighborhoods throughout Staten Island. Businesses in these areas vary and include a wide variety of different retailers including chain convenience stores, gas stations, bodegas, fast-casual and take-out restaurants, other automotive businesses, big box retail, and pharmacies such as Rite Aid and Duane Reade.

Selected Case Study Areas

The following three case study areas are discussed in this ~~DGEIS~~FGEIS: the Midtown Manhattan CBD; a neighborhood retail corridor in the Flatbush Nostrand Junction within Brooklyn; and a lower-density study area in College Point, Queens. These study areas are used in the technical area analyses to provide detailed and contextual analyses of impacts from the CWZ Program upon these classes of commercial density and thus demonstrate the types of issues, potential effects, and benefits that could result in any section of the City as a result of the Proposed Action.

SCREENING ASSESSMENTS

Detailed analyses are provided for land use, zoning, and public policy; socioeconomic conditions; solid waste; transportation; air quality; GHG emissions; and noise. Based on the anticipated limited impact of the Proposed Action, the following *CEQR* technical areas did not warrant detailed discussion: community facilities and services; open space; shadows; historic and cultural resources; urban design and visual resources; natural resources; hazardous materials; water and sewer infrastructure; energy; public health; neighborhood character; and construction.

E. PROBABLE IMPACTS OF THE PROPOSED ACTION

LAND USE, ZONING, AND PUBLIC POLICY

The Proposed Action is limited to regulatory changes regarding the collection of commercial solid waste throughout the City and would not change land use or result in any new or different development. Therefore, the analysis focused on the impact to public policy.

The CWZ Program would be authorized through the enactment of a new local law to be developed by the New York City Council. The new local law would specify the basic elements of the program, including the RFP requirements and contract-award process.

In addition, under the Proposed Action, carters would be required to comply with existing legal requirements in order to compete for business, and DSNY and BIC would have the mechanism via contract to enforce these laws and regulations if carters fail to comply. These include Local Law 145 of 2013 (LL145/2013), which requires all trucks to implement Best Available Retrofit Technology (BART) such as diesel particulate traps or be equipped with a U.S. ~~United States~~ Environmental Protection Agency (EPA)-certified 2007 model year or later engine by January 1, 2020, and LL56 of 2015 (LL56/2015), which requires all licensed carting trucks to be equipped with side guards designed to protect pedestrians and cyclists by January 1, 2024.

LL146/2013 requires DSNY to assess, at least annually, the available regional capacity to process organic waste and to designate certain categories of businesses that must separate this material for a beneficial use, such as composting or anaerobic digestion to produce biogas. Under the Proposed Action, there would be an increase in the collection rate of organic material from 3 percent under the No Action condition to 6 percent throughout the City under the Proposed Action, due to improved diversion, recycling collection, and enforcement facilitated by the CWZ Program.³

Additional enforcement of other recycling requirements would also occur under the ~~With Action condition~~ Proposed Action, for the same reasons. Under the Proposed Action, the recyclable collection rate is projected to increase to 38 percent, compared to 30 percent under the No Action condition.

The Proposed Action would support the goals of the SWMP and would further the environmental sustainability ~~efforts-objectives~~ of *OneNYC*. The Proposed Action would be consistent with goals of the New York City Waterfront Revitalization Program (WRP).

Therefore, the Proposed Action would not result in significant adverse impacts to land use, zoning, or public policy.

³ Collection rate is the amount of designated recyclables or organic material collected in the system.

SOCIOECONOMIC CONDITIONS

The CWZ Program is not anticipated to result in significant adverse effects on the commercial waste carting industry, or on the customers of commercial waste carters. While the CWZ Program has the potential to reduce the total number of commercial carters operating within the City of New York, carters that fail to win zone contracts may ~~transition into~~ instead undertake the collection of ~~non-CWZ~~ CWZ Program excluded waste streams such as C&D, engage in other agreements such as subcontracts to support contracted carters and/or consolidate companies, concentrate on carting opportunities in the metropolitan area outside New York City, or remove themselves from the industry. Despite the potential for some carters to close, the remaining commercial carters continuing to operate in the Proposed Action condition are anticipated to continue providing effective waste collection services across the City.

In the Proposed Action ~~condition~~, potential changes in commercial carting industry operational costs would not jeopardize the viability of the industry, or the ability to provide citywide carting services at a reasonable cost to commercial businesses. In total, as a result of the efficiencies associated with zoned routing, including the reduction in routes necessary to collect an equal amount of waste, the total operational expenses to be incurred by the carting industry are anticipated to decrease by approximately 2 percent as compared to the No Action condition, despite additional equipment and administrative costs associated with the CWZ Program.

Expenses associated with commercial carting are anticipated to decrease in the Proposed Action ~~condition~~ as a result of efficiencies in the daily operation of the commercial carting industry. These efficiencies, ~~however,~~ include ~~some~~ the reduction in total industry staffing necessary to collect commercial waste in the Proposed Action. Based on the reported baseline employment estimates provided by BIC 2015 Carter Financial Statements the CWZ Program would reduce employment by an estimated 2 percent compared to the No Action condition. However, as a result of the increase in diversion from disposal under the CWZ Program, as discussed above, it is anticipated that as a result of the CWZ Program employment within secondary markets such as the recyclable sorting and processing industry could ~~would~~ increase.

Businesses ~~customers of that pay for~~ commercial carting services would likely benefit from the Proposed Action. ~~The,~~ as the CWZ Program would not result in a substantial increase to the expenses associated with the commercial waste collection. Customers, regardless of industry sector or location, would likely receive improved services, including free waste assessments, and access to a dedicated call center, at a competitive rate and with the increased transparency as a result of the CWZ Program.

Therefore, the CWZ Program is not anticipated to result in significant adverse environmental impacts on the socioeconomic conditions of New York City, as the changes introduced by the CWZ Program would make carting more efficient, thereby decreasing the expenses associated with the operation of the commercial carting industry compared to the No Action condition, which is not anticipated to substantially increase ~~reduce~~ the cost of waste collection services for commercial customers within the City.

SOLID WASTE MANAGEMENT AND SANITATION SERVICES

The Proposed Action would not result in significant adverse impacts to solid waste or sanitation services.

One goal of the CWZ Program is to increase recycling and organics diversion. To help achieve this goal, those carters awarded contracts for the right to collect waste in a zone would be required

to provide recycling and organics collection as standard services in addition to refuse collection and carters would be allowed to form consortiums or subcontract with other carters for these services. In addition, under the Proposed Action, both carters and customers would be required by their contracts to comply with existing laws regarding recycling and organics separation of commercial waste, and with any new or revised laws or regulations enacted during the contract term. With more recycling and organic materials being separated under the Proposed Action, less waste would be sent to landfills, saving resources and energy, consistent with the City's sustainability and recycling goals.

As such, the Proposed Action would not be expected to increase the volume of waste being produced or collected but would result in a redistribution of what waste would be collected and by which carter it would be collected. Under the Proposed Action, there would be an expected shift in the waste streams collected, with due to an increased emphasis on diversion and increased enforcement of diversion, from an estimated 30 percent collection rate of recyclables and 3 percent of organics in the No Action condition to a 38 percent collection rate of recyclables and 6 percent of organics with the Proposed Action.⁴

The CWZ Program would be able to maintain adequate carting service for the commercial sector. DSNY would serve as a carter of last resort if a contracted zone carter were unable to perform.

The CWZ Program would not directly affect any facility identified in the SWMP for the transfer, sorting, or disposal of refuse, organics or recyclables, or change New York City's plan to rely on remote disposal capacity such as landfills and waste-to-energy plants for refuse. Further, existing recycling and organic processing facilities within New York City and the ~~surrounding regional area~~ are anticipated to have adequate capacity to accommodate the increase in diversion as a result of the CWZ Program.

Another goal of the Proposed Action is to reduce truck ~~trips~~ traffic related to the commercial waste industry. In creating zones and limiting the number of carters servicing those zones, there is expected to be more efficient routing and truck loading (e.g., filling to capacity), reducing the overall waste carting truck traffic. This would support the SWMP truck traffic reduction goals and thereby reduce truck traffic-related impacts to communities, including noise and air emissions, and enhance pedestrian safety while still providing sufficient capacity to collect the commercial waste generated within New York City.

~~Therefore, the Proposed Action would not result in significant adverse impacts to solid waste or sanitation services.~~

TRANSPORTATION

The Proposed Action would not result in a significant adverse impact with respect to transportation.

Under the Proposed Action, the number and type of carting customers would be expected to remain the same as under the No Action condition but the. ~~However, the Proposed Action would limit on the number of carters within geographic zones, which would result in increased efficiency in waste collection routes and reduced, such that associated~~ Vehicle Miles Traveled (VMT) and overall carter truck traffic ~~would decrease~~.

⁴ Collection rate is the percentage of designated recyclables or organic material collected in the system.

NYC Commercial Waste Zone Program

To help achieve the Proposed Action's goal of increasing recycling and organic diversion, carters would be required to provide recycling and organics collection in addition to refuse collection as standard services. To do this, carters would be able to form consortiums or subcontract with other carters for these services. Collection trucks carting recyclables or organic waste do not carry the same density of waste as similar-sized putrescible refuse collection trucks, thus a net increase in the total number of waste collection trucks would be expected as a result of the increased diversion to recycling and organics. However, under the Proposed Action, the increased efficiency coupled with the increased diversion to recycling and organics would result in an overall decrease of overlapping truck routes along road segments, which would result in decreased VMT within New York City and region-wide for travel to transfer stations and garages in New Jersey, Long Island, and nearby upstate New York counties. The Proposed Action is expected to reduce citywide commercial carter truck VMTs by approximately 50 percent from the No Action condition, and by 47 to 60 percent within the case study areas.

Therefore, there would be no predicted exceedance of the *CEQR Technical Manual* Level 1 Traffic Screening threshold to warrant further analysis. Additionally, the collection times, duration of collections, collection dates, and frequency of collections would not significantly change with the Proposed Action. Therefore, detailed traffic analyses are not warranted and the Proposed Action is not anticipated to result in any significant adverse transportation impacts.

AIR QUALITY

The CWZ Program would not cause a significant adverse air quality impact.

As noted above, under the Proposed Action, the number and type of customers, pick-up times, and frequency of pick-ups would be expected to remain the same as under the No Action condition, but the CWZ Program would result in an overall decrease of overlapping commercial carter truck routes and related trips.

The increased efficiency in routes coupled with the increased diversion to recycling and organics would result in decreased VMTs within New York City and region-wide for truck routes to and from transfer stations and garages in Long Island, upstate New York, and New Jersey. Fleet-wide emissions associated with commercial carting trucks would be reduced from levels in both the existing condition and No Action condition.

With the expected 50 percent reductions in VMT from the CWZ Program, the fleet-wide emissions associated with commercial carting trucks would be reduced from levels in both the existing condition and No Action condition.

The Proposed Action would not result in an exceedance of the respective screening levels for carbon monoxide and fine particulate matter (PM_{2.5}) in the *CEQR Technical Manual* for incremental peak hour vehicles at intersections within any of the three case study areas; therefore, there would be no potential for mobile source air impacts from the Proposed Action.

GREENHOUSE GAS EMISSIONS

The Proposed Action would not result in a significant adverse impact with respect to greenhouse gas (GHG) emissions.

As noted above, a key goal of the CWZ Program is to reduce local commercial carting ~~travel truck traffic~~ by improving the efficiency of the carting system and reducing the amount of overlapping truck collection routes. The CWZ Program would not change the mode of transport of commercial

waste (for example, from truck to rail or barge), nor would the Proposed Action result in increased distances traveled by commercial waste from waste transfer stations to disposal facilities, such as landfills or waste-to-energy plants. Likewise, the CWZ Program would not require a change in the disposal technology for such waste. The CWZ Program would reduce result in a potential reduction to the distance-commercial carter trucks VMT travel within the New York City region and thus would reduce GHG emissions from mobile sources. The increased diversion of organics from landfills under the CWZ program would reduce GHG emissions from landfill disposal.

In addition, the contracts awarded to selected carters would include incentives to provide improved environmental performance. Some of these improvements could include the conversion of commercial carter trucks to electric vehicles or the use of compressed natural gas, which is a cleaner fuel. These improvements in performance, if implemented, would further reduce GHG emissions with the CWZ Program.

As a result, GHG emissions are expected to be reduced with the CWZ Program compared to baseline existing condition and No Action condition levels. Therefore, the Proposed Action would be consistent with the City's earlier 80 by 50 GHG reduction goals (80 percent GHG reductions by 2050) and the superseding citywide carbon neutral goals (net-zero GHG emissions by 2050) under OneNYC.

NOISE

The Proposed Action would reduce inefficiencies in commercial waste collection routes, resulting in a 50 percent reduction in commercial carting truck traffic VMT. As a result, the Proposed Action would not cause any roadway segments to experience an increase in maximum hourly truck volume. The Proposed Action would not require changes in operations that would affect collection times, duration of collections, collection dates, frequency of collections, or number of nighttime collections. Consequently, the Proposed Action would not generate any increase in noise from mobile sources.

Commercial carter trucks are stationary when compacting refuse and, therefore, would, also be considered a stationary noise source at such times. The compacting cycle noise from all commercial carter trucks is already regulated by Subchapter 5, §24-225 of the New York City Noise Control Code to a consistent level of noise emission. Fewer commercial trucks are expected at any one time in the case study areas than under the No Action condition. Commercial carter trucks compacting refuse at a given location would not result in a change in the level of stationary noise generated during collections. Consequently, the Proposed Action would not generate any increase in noise from stationary sources.

Since the Proposed Action would not result in additional mobile or stationary source noise at any noise receptors, a more detailed noise analysis is not warranted, and the Proposed Action would not have the potential to result in a significant adverse noise impact.

ALTERNATIVES

Although the ~~DGEIS~~ FGEIS has not identified a significant adverse impact from the Proposed Action with respect to any CEQR environmental category, nevertheless, two alternatives to the CWZ Program were considered: the No Action Alternative (required by SEQRA/CEQR to be studied) and the Exclusive Zone Alternative.

NYC Commercial Waste Zone Program

NO ACTION ALTERNATIVE

The No Action Alternative is the same as the No Action condition, and predicts the environmental conditions that would exist if the CWZ Program ~~was were~~ not implemented. Under the No Action Alternative, the commercial waste industry would remain unchanged, with the exception of any regulatory changes to the industry already expected by the Analysis Year of 2024.

As with the Proposed Action, the No Action Alternative would not result in significant adverse impacts to land use, zoning, and public policy; socioeconomic conditions; solid waste; transportation; air quality; GHG emissions and noise. However, many benefits of the Proposed Action—advancing the City’s efforts to increase commercial recycling, reducing carter truck traffic and associated air, noise, and GHG emissions, improving carting industry operational standards and establishing a contract mechanism to enforce applicable regulations—would not be realized.

EXCLUSIVE ZONE ALTERNATIVE

Under the Exclusive Zone Alternative, a single carter would be awarded the exclusive right to provide collection services within each designated service zone as compared with three to five carters per zone under the non-exclusive CWZ Program. The goals of the Exclusive Zone Alternative would be the same as the CWZ Program, and the same 20-zone configuration ~~would be used~~ was used in the analysis; however, ~~only a single carter would operate within each zone as compared with 3 to 5 carters per zone under the CWZ Program~~.

As with the Proposed Action, the Exclusive Zone Alternative would not result in significant adverse impacts to land use, zoning and public policy; socioeconomic conditions; solid waste and sanitation services; transportation; air quality; GHG emissions; or noise.

The Exclusive Zone Alternative would reduce carter VMT somewhat more than the non-exclusive CWZ Program would. However, the Exclusive Zone Alternative would have drawbacks in comparison with the preferred CWZ Program option, with respect to anticipated price increases to customers as a function of reduced competition, greater risks ~~to~~ from carter insolvency within a restrictive market, the elimination of customer choice, and increased risk of inability of the exclusive carter to meet the diverse customer needs in a district. The elimination of competition within commercial waste zones has the potential to increase the costs of commercial carting services on customers and could lead to a reduction in customer service and satisfaction due to the single-service provider monopoly created by an exclusive zone system. Further, implementing the Exclusive Zone Alternative has the potential to be a substantial logistical and administrative challenge, as few carters have the capacity to exclusively service a single zone, a larger number of customers would be required to change service providers in the transition period, and potential future service issues could develop if the single carter is unable to successfully provide the necessary services, increasing the potential that DSNY may be called upon to provide substitute collection service at public expense. Therefore, the CWZ Program remains the preferred alternative.

CWZ TRANSITION PERIOD

As other cities around the United States have adopted similar programs to the Proposed Action, the City has been able to review their transition and implementation, adopt best practices, and implement lessons learned from these peer cities. These best practices and lessons learned have

been incorporated into the planning, transition, and implementation of the CWZ Program to minimize adverse impacts to the City during the transition period.

The CWZ Program would likely be implemented in multiple steps. The transition would begin with a period for competitive solicitation of contracts through RFPs in ~~late 2019 to 2020~~. Upon selection of the carters for the CWZ Program, a two-year transition period from 2021 to 2023 would begin the customers' transition to the awarded carters and allow for a smooth transition. Full implementation of the CWZ Program is expected ~~by the Analysis Year of~~ in 2024.

The two-year transition period is longer than transition periods seen for commercial waste zone systems implemented in other cities. This is due to the size of the New York City commercial waste market in comparison to other cities and to allow a longer period of time for carters to adjust to new customers and service requirements. Customer transition may occur in multiple phases, with certain zones transitioning prior to other zones.

Overall, activities associated with the transition period of the Proposed Action are not expected to result in significant adverse impacts to land use, zoning, and public policy; socioeconomic conditions; solid waste; transportation; air quality; GHG emissions; or noise.

UNAVOIDABLE ADVERSE IMPACTS

Unavoidable significant adverse impacts resulting from the CWZ Program have not been identified in any of the technical areas.

GROWTH-INDUCING ASPECTS OF THE PROPOSED ACTION

The Proposed Action would not add substantial new land use, new residents or employment that could induce additional development, nor will the Proposed Action introduce or expand infrastructure capacity.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The Proposed Action would not involve construction of new buildings or infrastructure on land. As such, the Proposed Action would not constitute a long-term commitment of resources typically associated with construction projects, including the materials used in construction; energy in the form of fuel and electricity consumed during construction and operation of the projects; and the human effort (i.e., time and labor) required to develop, construct, and operate various components of the projects. Further, the Proposed Action would not constitute a long-term commitment of land resources.

The Proposed Action's commitment of resources consists principally of the use of fuel consumed by the commercial carter trucks for the collection of refuse, recyclables and organics throughout the City under the CWZ Program. This commitment is expected to be higher during the transition period but will be reduced by the Proposed Action overall as a result of more efficient truck routes after full program implementation. This short-term increase is considered irretrievably committed because its reuse for some purpose would be highly unlikely. However, the Proposed Action would result in a net reduction in the use of fossil fuels, compared to the No Action condition, and thus lead to a net reduction in the irreversible and irretrievable commitment of resources.

The short-term, minor increase in the commitment of resources during the transition period ~~are is~~ weighed against the overall net reduction under the full program, and the Proposed Action's goals of creating a safer and more efficient collection system that would provide high-quality, low-cost service while advancing the City's sustainability and recycling goals. The CWZ Program would

NYC Commercial Waste Zone Program

improve customer service, public and worker, safety, ~~and labor standards~~; promote fairness and transparency; and reduce adverse environmental impacts from commercial carting trucks upon traffic, pedestrians, air quality, and noise levels. In addition, the CWZ Program would help meet the City's sustainability goals by furthering the goals of the SWMP and *OneNYC* (including increasing recycling and reducing landfill disposal of waste and reducing GHG emissions). *

A. INTRODUCTION

The City of New York is proposing to improve commercial waste carting by implementing a Commercial Waste Zone (CWZ) Program across the five boroughs of the City, consisting of 20 zones with 3 to 5 private carters authorized to operate per zone (the “CWZ Program” or “Proposed Action”). As lead agency for the required environmental review of the Proposed Action, the New York City Department of Sanitation (DSNY) has prepared this ~~Draft~~ Final Generic Environmental Impact Statement (~~EGEIS~~ DGEIS) examining the potential for adverse environmental impacts that could result from it, in accordance with the State Environmental Quality Review Act (SEQRA) and the City Environmental Quality Review (CEQR) procedures.

An initial Environmental Assessment Statement was prepared and released on November 5, 2018, based on which DSNY concluded that the CWZ Program has the potential for at least one significant adverse environmental impact. This determination, a Positive Declaration, noted that a detailed Draft Generic Environmental Impact Statement (DGEIS) was warranted and would be prepared under DSNY’s direction for consideration by the public, other agencies, and decision makers, prior to taking action on the proposal. Accordingly, DSNY ~~caused~~ prepared a Draft Scope of Work for the DGEIS ~~to be that was~~ released for public comment on November 9, 2018. Public comments on the Draft Scope of Work for the DGEIS were invited, ~~and the public comment period was extended to January 4, 2019.~~ Public notices of the Positive Declaration and Public Scoping Meeting were published in the City Record, the Environmental Notice Bulletin, and newspapers of general circulation (the *New York Post*, the *El Diario* and the *Chinese World Journal*), and circulated to community boards and elected officials. The public Scoping Meeting was held on December 11, 2018 to receive comments on the Draft Scope for the DGEIS and the public comment period was extended to January 4, 2019.

The Final Scope of Work for the DGEIS was released on February 22, 2019, consisting of revisions to the Draft Scope of Work, and DSNY’s responses to public comments received on that document. ~~The~~ This DGEIS, the Final Scope of Work for the DGEIS, and other environmental review documents were made ~~are~~ available on DSNY’s website <http://www.nyc.gov/commercialwaste>. Hard copies can be accessed at repositories located at the Department of Sanitation, Bureau of Legal Affairs, 125 Worth Street, Room 708, New York, NY, 10013; and the Mayor’s Office of Environmental Coordination, Hilary Semel, Director, 253 Broadway, 14th Floor, New York, New York 10007. The DSNY Contact Person for further information regarding the Environmental Review is Abas Braimah, DSNY Bureau of Legal Affairs, 125 Worth Street, Room 708, New York, NY 10013 Tel: 646-885-4993; email: abraimah@dsny.nyc.gov, Fax: 212-442-9090.

The DGEIS is based on the Final Scope of Work. DSNY ~~invited~~ invites public comments on the DGEIS and ~~held~~ will hold public hearings to receive oral and written comments at the following times and locations:

NYC Commercial Waste Zone Program

March 11, 2019

Second Floor Auditorium

125 Worth Street, New York, NY, 10013

The hearing ~~was~~will be held from 9 AM to 12 PM.

March 14, 2019

Second Floor Auditorium

125 Worth Street, New York, NY, 10013

The hearing ~~was~~will be held from 6 PM to 9 PM.

Public comments on the DGEIS ~~can~~are ~~also~~also be sent electronically to DSNY at cwzcomments@dsny.nyc.gov or by fax, mail or hand delivery to the DSNY Contact Person; comments received by 5 PM on ~~March 25, 2019~~April 8, 2019 ~~were~~will be considered. After the public comment period on the DGEIS ~~closed~~closes, ~~this a Final GEIS (FGEIS) was~~will be prepared, including a summary of the comments and responses on the DGEIS and any revisions to the DGEIS (see Chapter 14, "Response to Comments"). DSNY, as lead agency, ~~then~~ prepare a Statement of Findings that describes the environmental impacts of the Proposed Action and any required mitigation.

This chapter of the ~~FGEIS~~DGEIS describes the current commercial waste system, including a background discussion of the purpose and need for the CWZ Program. The chapter then includes a detailed discussion of the CWZ Program, and identifies the public actions required to implement it. Next, the chapter summarizes the methodology used to consider the potential environmental impacts of this generic action. Lastly, the chapter identifies the Exclusive Zone Alternative that was analyzed in the ~~FGEIS~~DGEIS, along with the No Action Alternative, and discusses the range of alternatives to the CWZ Program which DSNY considered in a preliminary way as it formulated the Proposed Action as the preferred Alternative.

In accordance with the Scope of Work for the DGEIS, consideration is given in the following chapters to the impacts of the CWZ Program upon the relevant environmental impact categories. These include land use, zoning, and public policy; socioeconomic conditions; solid waste and sanitation services; transportation; air quality; greenhouse gases; noise; neighborhood character; and public health. A chapter is also devoted to discussing the expected transition period for implementing the CWZ Program.

B. BACKGROUND, PURPOSE, AND NEED

Waste management is one of the lifelines of New York City. Effective waste management has kept the City functioning and clean since the reforms to the Department of Street Cleaning (now DSNY) in 1895. The City's waste comes in two broad categories: residential waste and commercial waste. DSNY is responsible for residential and institutional waste collection, while commercial waste is collected by privately owned waste collection companies (private carters). Private carters entered the City's commercial waste collection system in the late 1950s.

Each year, more than 100,000 New York City office buildings, retailers, restaurants, manufacturers, and other commercial establishments generate more than 3 million tons of waste (i.e., refuse, recyclables, and organics).¹ A network of approximately 95 private carters with

¹ BIC 2017 Q2-Q4 Customer Registry. This dataset includes customer information reported by individual carters on a regular basis to BIC.

approximately 1,100 trucks collect waste from these businesses.² As defined for the purpose of the Proposed Action, “private carters” refer only to commercial carters licensed by the Business Integrity Commission (BIC) to collect putrescible waste—refuse, recycling and organics—and not to other BIC-licensed or registered entities that collect construction and demolition (C&D) debris, waste oil, or perform other services outside the scope of the Proposed Action.

Most waste pickups occur overnight between the hours of 8:00 PM and 6:00 AM. Daytime pickups are between 6:00 AM and 8:00 PM. Typically, approximately 23 percent of all pickups occur in the daytime and approximately 77 percent occur at night, with 15 percent occurring in the early nighttime hours between 8:00 PM and 10:00 PM, 35 percent occurring around midnight (between 10:00 PM and 2:00 AM) and 27 percent occurring in the early morning hours from 2:00 AM and 6:00 AM.³ These pick-up patterns occur across all business types, with no real difference between industry sectors.

Currently, New York City’s commercial waste system is an open market, regulated system in which private waste carters collect refuse, recyclables, and organics from commercial businesses and compete for contracts with each business. BIC licenses and oversees the private carter industry; this oversight includes setting a citywide rate cap, which is a maximum price that carters can charge customers for collection and disposal services. DSNY regulates the setout (the curbside placement of waste) and transfer of commercial waste at solid waste transfer stations within the City and enforces against illegal dumping. DSNY regulates commercial recycling requirements, registers recycling processors within the City, and enforces the separation of designated recyclables from refuse by commercial waste generators (i.e., the customer).

More specifically, each private carter must register with BIC prior to being allowed to operate within the system. Private carters are required to provide BIC with information such as the number of vehicles in their fleet, tax identifiers, insurance policies, state permits, up-to-date customer information, and financial statements. BIC’s Commissioner also has the ability to request additional information through a Commissioner Directive.⁴ In addition, BIC sets operational requirements that private carters must comply with in order to retain their license to operate. These requirements include (1) operating in a safe and sanitary manner, (2) following DSNY commercial waste source-separation and recycling requirements, (3) properly labeling containers and waste-hauling vehicles, and (4) keeping customer and employee data up to date.⁵

² BIC, 2015, Private Carter Financial Statements
BIC, 2015, Private Carter Customer Register
BIC, 2017 Q2–Q4, Private Carter Customer Register
BIC, 2017, LL145/2013 Compliance Plan Reports
BIC, 2018, LL145/2013 Compliance Reports.

³ 2018 Routing Data collected between March 4, 2018 and March 17, 2018. BIC, 2018, Private Carter Routing Data collected for one week between March 4 to March 10, 2018 and supplemental days between March 11 to March 17, 2018 to replace the data collection on days impacted by snow. This 2018 route data collection was done, and was collected to provide carters the opportunity to provide more up-to-date routing data from the 2014–2015 data.

⁴ The two most recent Commissioner Directives were made on February 22, 2018 and March 7, 2018. These asked carters to submit routing data for carter operations from March 4 to 11, 2018 and March 13 to 17, 2018.

⁵ The Rules of the City of New York, Title 17: BIC, Chapter 1: Trade Waste, Subchapter A: General Provisions, § 1-09 General Prohibitions and Subchapter E: Conduct of Licensee.

NYC Commercial Waste Zone Program

In addition to BIC and DSNY regulations, carters must also comply with all other Federal, State, and local regulations that apply to their business operations (e.g., minimum wage laws).

According to BIC's 2017 Q2–Q4⁶ customer register, the current system contains approximately 100,000 customers covered by approximately 117,000 customer register entries served by carters across the City. Based on the customer registry, large carters serve approximately 62 percent,⁷ medium carters serve 22 percent, and small carters serve the remaining 16 percent. Customers are considered unique if they are listed in the customer register under a unique name and location. In recent years, the commercial waste industry has begun to see market consolidation through acquisitions on the part of some of the larger operating carters.

Today's commercial waste system achieves its basic goal of collecting and handling the City's commercial waste, but the competitive market has resulted in inefficiencies, with overlapping carting routes and resulting externalities that must be borne by the public, including extra truck traffic, an increased risk to pedestrian safety, traffic congestion, air and noise pollution, road wear, and increased use of fossil fuels and greenhouse gas (GHG) emissions, contributing to climate change. In some parts of the City, based on data reported to BIC by the carting industry, more than 50 carters service a single community district, and an individual commercial block may see dozens of private waste collection trucks on a single night. Compliance with the City's safety equipment and training requirements, and necessary equipment maintenance, are often not enforceable as a practical matter under the current system. Moreover, guidance documents, notably BIC's *Trade Waste Safety Manual*, lack the force of law. Compliance with BIC's rate cap relies on self-reporting and self-policing by carters and customers, resulting in efforts by some to evade the requirements.

Commercial business customers of carters note the lack of transparency between carters and customers in the current system. The majority of contracts are oral in nature. There are no set guidelines on what a carter can charge a customer outside of the citywide rate cap and many payments are made in cash. Furthermore, for their part, carters note that a customer can change carters with little advance notice to the carter, causing inconvenience.

Moreover, although existing regulations require commercial businesses to recycle metal, glass, plastic (MGP), paper, cardboard, and, in some cases, waste from food preparation (organics) and thereby divert such waste from landfills, enforcing and tracking compliance rates is difficult.

In sum, reforming the City's commercial waste carting system seeks to achieve a series of stakeholder-driven goals. These include:

1. **Environmental Quality and Public Health:** Reduce truck traffic throughout the City to reduce air and noise pollution and improve quality of life for New Yorkers.

⁶ This dataset includes customer information reported by individual carters on a regular basis to BIC for the 2017 Q2–Q4 Customer Register. The number of customers is not linked to the number of commercial businesses serviced by carters since in large office buildings carters may collect waste from multiple businesses but may only report the single building management company as a customer. 2017 Q2–Q4 Carter Customer Register counts: 117,384 rows reported (some customers are listed in 1 row with multiple waste streams; others are listed in multiple rows for multiple waste streams); 100,302 unique customers (unique by name and location); 172,503 by customer and waste stream (all customers are split up into 1 entry per waste stream serviced).

⁷ As used here, small carters each capture less than 1 percent of the market share (defined by the number of customers). Medium carters each capture between 1 and 3 percent of the market share. Large carters each capture greater than 3 percent of the market share.

2. **Zero Waste:** Reduce commercial waste disposal and incentivize recycling to conserve resources and reduce GHGs.
3. **Pricing:** Provide fair, transparent pricing with competitive prices for businesses large and small.
4. **Customer Service:** Strengthen customer service standards and establish accountability.
5. **Health and Safety:** Improve training and safety standards to make the industry safer for workers and the public.
6. **Labor and Worker Rights:** Improve industry compliance with labor standards and laws regulating uphold workers's rights.
7. **Infrastructure and Waste Management:** Prioritize investments in clean, modern fleets that make up a reliable, resilient, and sustainable waste management system.
8. **Robust, competitive carting sector:** Create a system that works for carters of all sizes and prevents overreliance on any single company.

In August 2016, DSNY, in partnership with BIC, released a feasibility study led by Buro-Happold Engineering on the implementation of a CWZ program in New York City.⁸ The study concluded that a CWZ program would be beneficial in reducing inefficiencies in waste collection routes and would reduce carter truck miles traveled by roughly half. The CWZ Program described herein builds on this initial work.

To determine the optimal structure of the CWZ Program, a robust, year-long stakeholder engagement process was conducted by DSNY, as lead agency, and the consultant team. Starting October 19, 2017, over 150 different stakeholders in the commercial waste industry were consulted, including commercial businesses, labor groups, environmental justice advocates, private carters, Business Improvement District representatives, real estate owners, property managers, trade organizations, other City agencies, traffic safety advocates, and elected officials. A variety of formats were utilized, including structured one-on-one interviews, small group conversations, phone calls, field interviews, and focus groups. The City used the feedback it gained from this process to determine the program goals, implementation strategies, and the necessary requirements for the eventual carter contracts. The City and project team are expected to continue to work with stakeholders during public review and implementation of the CWZ Program.

The CWZ Program that emerged from this process is therefore intended to advance the City's efforts to increase commercial recycling, reduce carter truck traffic and associated air, noise, and GHG emissions, and improve carting industry operational standards. The CWZ Program would thereby help advance several key policy objectives, including improving roadway safety, complementing Vision Zero; furthering the environmental sustainability efforts of ~~One New York: The Plan for a Strong and Just City~~ OneNYC2050: Building a Strong and Fair City (OneNYC); and reducing the environmental and community impacts of the commercial waste system, a goal of the City's Solid Waste Management Plan (SWMP).

C. DESCRIPTION OF THE PROPOSED ACTION

The CWZ Program would involve an implementation plan and contract-award process to establish a zoned commercial waste system throughout the City's five boroughs. The CWZ Program would be a non-exclusive system of 20 geographic zones permitting at least 3 but no more than 5 carters

⁸ New York City Department of Sanitation, City of New York BIC. Private Carter Study. August, 2016. Retrieved from: <https://www1.nyc.gov/assets/dsny/site/resources/reports/private-carter-study>

NYC Commercial Waste Zone Program

operating within each zone (see **Figure 1-1**). Specifically, 14 zones would allow 3 carters, 4 zones (all in Manhattan) would allow 4 carters, and 2 zones (in midtown Manhattan) would allow 5 carters.

The CWZ Program would regulate the collection of refuse, designated recyclables, and source-separated organic waste. It would exclude specialized or intermittent waste streams, which would continue to be collected in the current manner under existing City and State regulatory requirements. The excluded waste streams include C&D debris; hazardous or radioactive waste; medical waste; electronic waste; textiles; yard waste (collected by landscapers); waste hauled by junk haulers or one-time bulk waste services; grease; and waste papers collected for the purposes of shredding or destruction.

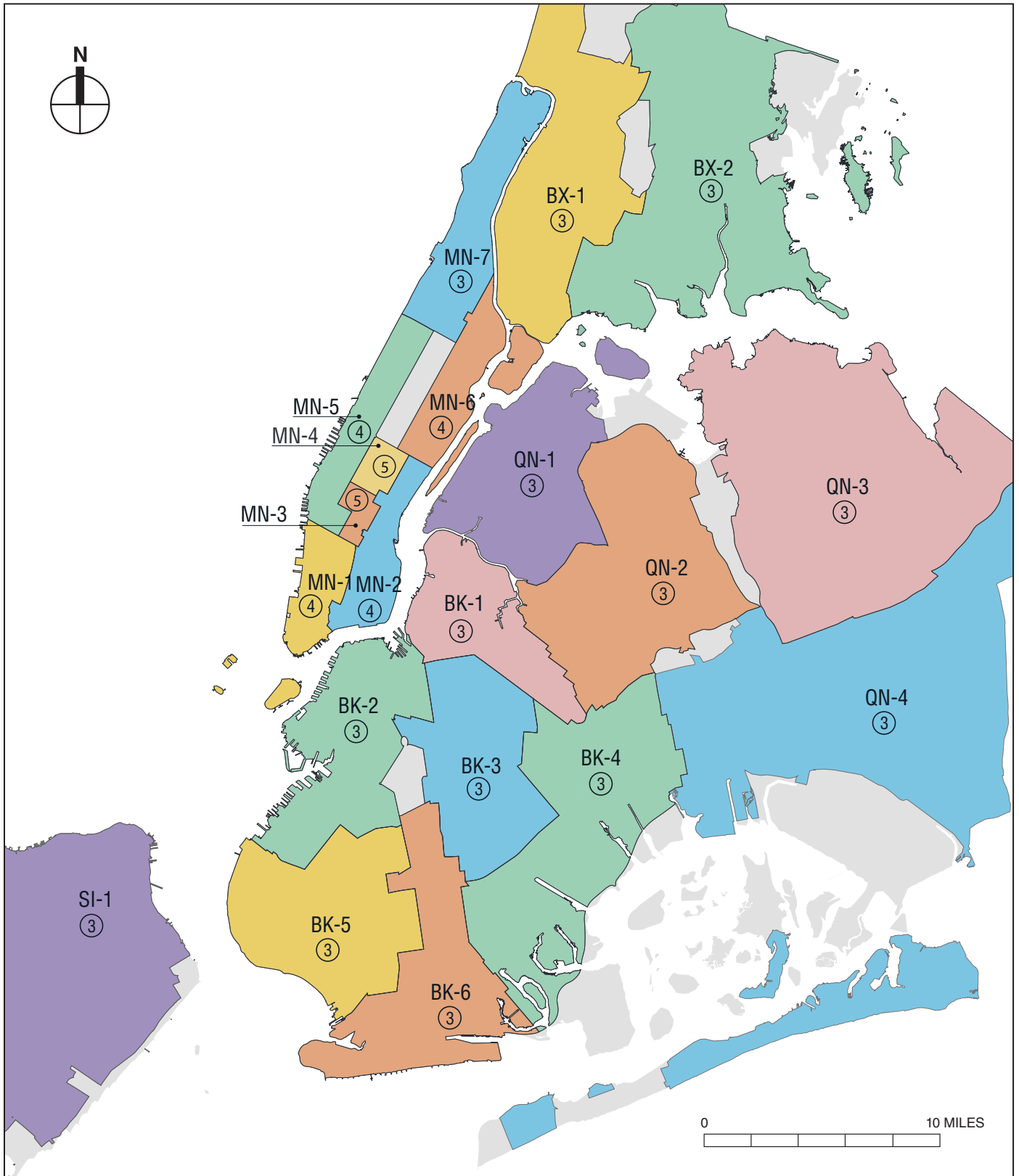
Private carters would competitively bid for the right to service businesses within each zone. Carters that win zone contracts would be obligated to meet certain contractual requirements aligned with the City's program goals and objectives, as further discussed below. The CWZ Program would standardize the carting contract process by requiring written service agreements between carters and customers and making the pricing structure more transparent. Customers would be able to negotiate supplemental services beyond the required minimum, for an extra fee.

Each carter would be able to compete for one or more zones throughout the City based on its preferences. No carter would be able to win contracts for more than 15 zones. Qualification requirements would be further defined in a Request for Proposal (RFP). The RFP would provide details on the program goals, methods for implementation, and requirements that carters would respond to in order to apply for contracts with the City to collect waste within specific zones. The proposed carting fee would constitute 40 percent of the selection criteria for each proposal. While the RFP would define the maximum number of carters able to operate in a particular zone, and the City expects to award that number of contracts per zone, the number of carters selected for a zone would be determined by the number and quality of the proposals received and the qualifications of the carters. Additionally, the potential to submit proposals as a consortium with other carters or organized through a broker, as well as certain subcontracting allowances, would provide opportunities for an array of different carters.

Following selection, contracts for the opportunity to collect in a zone will have a 10-year term with extension options available. Extension options will be outlined in the contract, and any extension would be at the discretion of the City for the individual carter. Pricing would be negotiated between individual businesses and carters, subject to rate caps for each carter determined through the contract-award process. The overall BIC rate cap for licensed carters of putrescible waste would no longer apply.

Under the CWZ Program, carters would be required to comply with current regulations so they could compete for business within the CWZ Program, and DSNY would have the mechanism through contract to enforce these regulations if carters fail to comply. The CWZ Program would encourage carters to comply with industry health and safety standards and policies, as well as BIC's health and safety guidance documents. Compliance with requirements for safety equipment and training and necessary equipment maintenance would be documented and tracked.

The CWZ Program would encourage carters to comply with existing recycling and source-separation regulations so they could compete for business within the CWZ. As part of the solicitation process, the CWZ Program would require carters to develop "zero waste" plans and identify innovative practices to support waste reduction, reuse, and recycling and provide for additional oversight and reporting requirements to ensure that these practices are being followed.



Ⓝ Number of Carters to Operate in Each Zone

With more recycling and organic materials being separated, less waste would be sent to landfills, saving resources and energy, consistent with the City's sustainability and recycling goals.

Billing would be fairer and more transparent, with written service agreements, outlining rates and any fees so that New York City businesses would only pay for the waste that they produce. Implementing this non-exclusive CWZ Program via an orderly transition will enable New York City businesses ~~is expected to result in a transition that can be planned in order for New York City businesses~~ to preserve customer choice, keep prices competitive and the quality of service high, while substantially reducing truck traffic associated with waste collection.

The CWZ Program would be implemented in multiple steps. The competitive solicitation process would be expected to begin in 2020 and the evaluation and contracting with the City would be expected to last approximately one year. The RFP would be released for all zones, and all proposals would be reviewed and awarded concurrently. Once all contract agreements with the City are executed, customer transition would be expected to begin at the end of 2021 and could take up to two years following the execution of such agreements. Customer transitions to service by an authorized carter would be expected to be complete by 2023 or early 2024. DSNY would continue to serve as the project manager for the CWZ Program, and in this capacity would oversee the competitive solicitation, the negotiation of each zone's contract between the City and the carter for the right to collect waste, and the overall transition to CWZs. DSNY would continue to enforce regulations controlling concerning commercial waste set out, recycling, and organics separation. DSNY would also become the primary administrator of carter zone contracts under the program and would serve as carter of last resort if carters repeatedly fail to perform services for any reason. DSNY would create a Division of Commercial Waste to administer the CWZ Program and consolidate DSNY's commercial waste outreach, enforcement, and regulatory functions in the agency under a single chain of command. The Division of Commercial Waste would oversee the transition processes and ensure that the CWZ Program achieves its stated goals and requirements.

In summary, the CWZ Program would build on the current regulatory system, with a contract-based system where carters are subject to clear, written requirements. The contracts awarded to the selected carters would be long-term, provide for transparent and fair pricing and customer service mechanisms, require improved environmental performance, and ensure compliance with and enforcement of existing and new requirements. Non-compliance could result in monetary penalties or loss of the contract. Overall, the CWZ Program would provide stability to the commercial waste carting industry by providing carters with predictable business and promoting long-term investments in recycling services and cleaner trucks.

D. PROJECT APPROVALS AND COORDINATION

Implementation of the CWZ Program would involve several local approvals. The City entities that may be potentially involved in the environmental review and approval process for the Proposed Action are:

- Office of the Mayor, City of New York for authorizing legislation;
- New York City Council for authorizing legislation;
- DSNY acting as lead agency for the environmental review,⁹ potential rulemaking, and CWZ Program implementation including approvals of zone contracts; and

⁹ Lead agency status has been delegated by the New York City Council and Office of the Mayor to DSNY.

- New York City BIC for oversight and potential rulemaking.

E. ALTERNATIVES TO THE CWZ PROGRAM

1. SCREENING OF ALTERNATIVES

EVALUATION CRITERIA

In addition to the No Action Alternative, the ~~FGEIS~~^{DGEIS} studies the impacts from the Exclusive Zone Program Alternative, whereby each zone would have just one authorized private carter for commercial waste. The following section discusses the screening process that DSNY used to formulate the CWZ Program, which included consideration of a number of possible alternatives.

Potential zone configurations and CWZ Program elements were formulated and analyzed through a comprehensive data analysis process, including review of routing and customer data submitted by private carters to BIC. The process to develop the CWZ Program design involved consideration of various iterations of potential zone configurations based on a wide consideration of factors, including the types of zone boundaries, level of exclusivity (i.e., the number of carters per zone), the number of zones, and the size of each zone, as further described below. Final zone designs were assessed using stakeholder feedback, ease of regulatory oversight, and potential pricing impact.

Zone Boundary Consideration

Two boundary types were considered in the shaping of potential zones for the CWZ Program: governmental boundaries and transportation infrastructure boundaries. Governmental boundaries included the City, boroughs, community districts, zip codes, and census tracts. Transportation infrastructure included certain existing major roadways, among other infrastructure.

Governmental boundaries such as zip codes and census tracts were rejected as CWZ boundaries given that these would create a system with a high number of potential zones relative to the total number of carters operating in the City.

Designating one zone that covered the City as a whole was also rejected for both exclusive and non-exclusive programs as it would not achieve the goals of the CWZ Program. The current private carter system is based on approximately 95 carters competing in one citywide zone, resulting in the inefficiencies discussed above. Moreover, creating one citywide zone exclusive to one carter would not be feasible as one carter cannot service the entire City.

Community districts were determined to be the most appropriate governmental boundaries as a basis for the CWZ Program, as they produced zones of manageable size and number. Moreover, in implementing the CWZ Program, DSNY could benefit from its long experience of using community district boundaries for its residential waste collection service areas. For zones delineated using community districts, both exclusive and non-exclusive zone designs were considered.

Borough boundaries were considered for zone boundaries in one non-exclusive “extreme case” design option that would reduce the overall change and thus result in the least impact to the waste carting industry. Borough boundaries were not considered for any exclusive design options as very few New York City licensed carters could effectively service an entire borough on their own.

Transportation boundaries were removed from the zone design selection process, since basing boundaries upon transportation infrastructure would create new boundaries within the City, which was determined to be undesirable from a management and community accountability perspective,

which could otherwise be avoided using governmental boundaries. However, access to major roads, tunnels, and bridges were used as a secondary metric to refine zone designs when choosing which community districts to cluster or to split into single zones.

Level of Exclusivity

The first rounds of the CWZ Program design considered various levels of exclusivity (i.e., the number of carters that should be included in each zone), including an exclusive system, non-exclusive system, limited exclusive system, limited non-exclusive system, material stream or generator type system, and the current market share system. Each is explained below:

- **Exclusive zone system:** one carter obtains the right to operate alone or exclusively in the zone.
- **Non-exclusive zone system:** multiple carters are allowed to operate within each zone.
- **Limited exclusive zone system:** grants the exclusive right to provide a certain type of collection services, such as residential or commercial organics collection in designated zones, and the non-exclusive right to compete with each other to provide other services, such as commercial collection within the zone.
- **Limited non-exclusive zone system:** establishes service zones and awards the right to provide service non-exclusively to a set number of carters that are then eligible to compete in a specific zone or zones.
- **Material stream or generator type zone system:** specifies a material stream (e.g., organics such as food waste) or generator type (e.g., institutions) for which carters are allowed to provide collection service. This could apply to either an exclusive or a non-exclusive system.
- **Current market share zone system:** establishes an exclusive system in which zones are designated and awarded to carters currently operating within the jurisdiction based on their existing market share.

As the last four zone system types are variations of exclusive and non-exclusive zones and DSNY already collects waste generated by residences and institutions, these four options were eliminated and consideration of zone system types was simplified in a first level of screening analysis and limited to either exclusive or non-exclusive systems for commercial generators.

Exclusive zone options would restrict each zone to one operating carter. Non-exclusive zone options would restrict each zone to a set number of carters. In refining the CWZ Program design, the number of carters per zone was set at three to five based on customer density and existing waste tonnage. Five carters was considered the upper limit for number of carters per zone due to the fact that truck route overlap increases as more carters operate in each zone, and the economic and operational benefits of a zone contract to a carter are reduced with each carter added to a zone. The range of three to five carters per zone would also minimize disruption to the regulated carter market by still allowing for competition within each of the zones, encouraging price stability while allowing customers to continue to have a choice of carter to serve them.

Number of Zones

Based on discussions with DSNY and analysis of the City's current carters, the analysis focused on a range of 15 to 30 zones. Data on Vehicle Miles Traveled (VMT)¹⁰—the amount of miles

¹⁰ VMT is a parameter that represents the number of miles that all trucks drive to pick up and drop off waste each day, and is generally referred to as an average value. The route begins at the garage, continues to

NYC Commercial Waste Zone Program

traveled by carters to complete their routes—was also considered under various zone scenarios. This sensitivity analysis showed that varying the number of zones generally had minimal impact on VMT reduction. However, the more zones that are included in the system, the more difficult it would be to manage that number of zones, especially under a non-exclusive system with up to five contracts per zone.

If the City were to have fewer than 15 zones, smaller carters would lack the ability to serve the resulting large zones. This would likely give larger carters, which have the ability to serve a larger customer base, a competitive edge resulting in a less competitive CWZ Program contract award process. Therefore, a program with fewer than 15 zones was removed from further consideration. To understand the VMT reduction benefit of either a very limited or a large number of zones, this analysis also considered two additional options: one with only 5 zones—one for each borough—and one with 59 zones, mirroring the established New York City community district boundaries.

Customer density per zone was considered. The customer entries from the 2016 Q4–2017 Q1 Customer Register dataset¹¹ provided by BIC showed that the number of commercial waste customers in each community district (excluding parks and airports) ranged from 653 in the Bronx Community District 3 to approximately 11,300 in Manhattan Community District 5. Manhattan had the greatest density of customers.

After several revisions to the zone sizing methodologies, the analysis considered zone design options with 15, 20, 25, and 30 zones of relatively equal sizes, as well as a zone design option of 23 mixed-sized zones. Based on customer counts and data from existing routes, individual community districts had customer counts so low that several community districts were combined to form comparable zones. The grouping methodology for equal-sized zones aimed to group community districts so that each zone had a roughly equal number of customers, while minimizing the disruption to the current system. The grouping methodology for equal-sized zones grouped zones primarily based on number of route connections between community districts derived from the 2014–2015 routing data.¹² For community districts with a similar level of connectivity, customer counts from the 2016 Q4–2017 Q1 Customer Register were used to balance the zones.

Zone Design Options

The zone design selection process used a top-down, tiered approach. At the highest level, generic zone design options as described above (e.g., types of zone boundaries, level of exclusivity—the number of carters per zone—number of zones, size of each zone) were analyzed based on industry knowledge and best practices in the communities around the country. Surveys across 21 cities and counties across the United States were conducted to obtain best practices. Those surveyed included Los Angeles, Fresno, Long Beach, Oakland, Sacramento, San Diego, San Jose, and Santa Barbara

each customer for waste collection, then to the transfer station for waste disposal/removal, and ends back at the garage, for the total VMT.

¹¹ This dataset includes customer information reported by individual carters on a regular basis to BIC. The 2016 Q4–2017 Q1 dataset contains information from 119,000 customer entries and 94 carters that collect refuse, recyclables, and organics across New York City, including names of customers, addresses, customer business types, contact information, and prices charged for the collection of nine waste streams. Five of those waste streams (refuse, food waste, paper, cardboard, and MGP) are included under the scope of the CWZ Program.

¹² BIC 2014–2015 routing data covers 96,000 customers and was collected via a Commissioner Directive from BIC. It covers 3 weeks in 2014 and 1 week in 2015.

County in California; Austin and Fort Worth in Texas; Hillsborough County and Palm Beach County in Florida; Boston, Massachusetts; Chicago, Illinois; Las Vegas, Nevada; Minneapolis, Minnesota; Philadelphia, Pennsylvania; Phoenix, Arizona; Portland, Oregon; and Seattle, Washington.

Fifty-nine zones (one for each community district) and five zones (one for each borough) were considered the maximum and the minimum numbers, respectively, for the zones to be studied. This range was chosen to show the range of VMT reduction and market impact that could be achieved with the CWZ Program. Community districts were then grouped into zones based on the number of customers in each zone, creating equal-sized (by customer count) or mixed-sized zones. Finally, the level of exclusivity, or the range in the number of carters operating in each zone, was chosen. In a fully exclusive zone, only one carter is allowed to operate in the zone. For non-exclusive zone design, the analysis settled on a maximum of five carters within one zone, given the contract management challenges that higher numbers of carters would place on the City.

As the next step in the zone design process, 11 possible specific zone configurations were formed based on DSNY input, stakeholder feedback, and configurations that proved effective in other jurisdictions in the United States. Of these 11 potential zone designs, 5 were exclusive systems based on governmental/community district boundaries for the City. Another 6 were non-exclusive systems based on similar boundaries. Since governmental/community district boundaries already exist, these were grouped together to form the zones. Of the 11 potential zone designs, 3 were composed of mixed-sized zones to provide opportunities for small carters to bid on zones of similar size to their existing market share. The others varied between 15 to 30 zones of roughly equal size based on the number of customers per zone. Ultimately, as noted above, exclusive zones were removed from further consideration given concerns about anticipated price increases as a function of reduced competition, carter solvency within a restrictive market, and the ability to meet the needs of the customer. Non-exclusive options were considered to reduce potential adverse impacts on customer service by providing a level of competition.

From the 11 zone design options, 4 finalist options for the CWZ Program were chosen for further evaluation. All 4 finalist options were non-exclusive. These design options were (a) 15 zones with a cap of 5 carters per zone; (b) 20 zones with 2 to 5 carters per zone, based on waste tonnage; (c) 23 zones with 2 to 4 carters per zone, based on tonnage with the inclusion of a small zone in every borough; and (d) 30 zones with a cap of 2 carters per zone.

PREFERRED ZONE DESIGN OPTION

Following the zone selection process, the four finalist zone design options were provided to the stakeholders to receive and incorporate their feedback. The stakeholder groups were divided into four large groups listed below, with their respective concerns:

- **Customer Businesses:** price, quality of service, and ability to keep existing carter;
- **Carters:** ability to compete in the market, and ability of smaller carters to continue operations;
- **Environment:** truck traffic, safety, air and GHG emissions, and noise;
- **New York City Administration:** ease of management, ease of transition process, and increase in recycling.

Based on consideration of stakeholder feedback, the preferred zone design consists of 20 non-exclusive zones with 3 to 5 carters allowed to operate within each zone. This preferred zone design was chosen due in part to a desire to maintain competition, fair pricing, and profitability for carters—and thus minimize market disruption. Customer businesses would be able to choose from

a number of carters, allowing prices to be competitive. Carters would be able to protect profitability through competitive pricing and maintaining their customer base.

With multiple carters allowed to operate within a zone, there would be opportunities for both larger and smaller carters to win the rights to operate within a zone. Smaller carters may benefit in proposal evaluations from a strong local presence in a given zone and knowledge of a particular neighborhood. Moreover, multiple carters could join in a consortium to serve a particular zone. The CWZ Program thus accounts for the current market structure and would give carters of all sizes the opportunity to compete in the new system.

F. ANALYSIS FRAMEWORK

The Proposed Action would change the commercial waste collection program throughout New York City's five boroughs. The 2014 *CEQR Technical Manual* serves as the general guide on the methodologies and impact criteria for evaluating the Proposed Action's potential effects on the various environmental areas of analysis in this ~~DGEIS~~FGEIS.

ANALYSIS YEAR

Since the Proposed Action's expected year of full implementation after a two-year transition period is 2024, that is the Analysis Year for the environmental review. As such, the environmental setting is not the current environment, but the future environment. Therefore, the technical analyses and consideration of alternatives assess current conditions and forecast these conditions to the expected 2024 Analysis Year for the purposes of determining potential impacts. Each chapter of the ~~DGEIS~~FGEIS provides a description of the "existing condition" and assessment of Future without the Proposed Action (the "No Action" condition) and the Future with the Proposed Action (the "With Action" condition).

EXISTING CONDITIONS

For each technical area that has been assessed in the ~~DGEIS~~FGEIS, the existing conditions have been described. The analysis framework begins with an assessment of existing conditions because these can be most directly measured and observed. The assessment of existing conditions serves as a starting point for the projection of future conditions with and without the Proposed Action and the analysis of project impacts.

FUTURE WITHOUT THE PROPOSED ACTION (NO ACTION CONDITION)

The No Action condition predicts conditions that would exist in the Analysis Year of 2024 without undertaking the Proposed Action, and thus provides the baseline against which the Proposed Action's impacts may be assessed. Under the No Action condition, it is anticipated existing carters would continue to operate the same as under the existing condition—the routes, frequency, durations and pick-up times would remain essentially the same.

The No Action condition analysis discusses the current commercial waste industry, including its shortcomings, and any regulatory changes to the industry already expected by the Analysis Year of 2024. Current commercial waste regulations are listed in **Appendix A**, and summarized below.

The current commercial waste industry is regulated largely by Titles 16 and 16A of the New York City Administrative Code, and Titles 16 and 17 of the Rules of the City of New York. Titles 16 and 16A of the Code establish waste collection and recycling requirements for commercial

business owners and grant DSNY certain authority in connection with the commercial waste industry. Commercial business establishments must have waste removed by a licensed carter, with specified exceptions. In addition, the Administrative Code defines waste set-out requirements for commercial businesses and authorizes DSNY to adopt and enforce recycling rules.

Title 16 of the Rules of the City of New York provides requirements specific for the commercial waste carters. The rules broadly (a) allow commercial establishments generating less than a defined amount of waste per week to share a disposal location with another commercial establishment; (b) define designated recyclable materials for commercial waste; (c) set forth source-separation, set-out, and collection requirements and responsibilities; (d) allow the Commissioner of DSNY to conduct inspections; and (e) establish commercial waste-hauling vehicle requirements and specifications.

Title 16A of the Code establishes BIC as the body that provides oversight for the commercial waste carting industry. Title 17 of the City Rules defines rate caps for waste collection, outlines licensing requirements for carters and brokers, sets license application requirements, provides terms for license application rejection, and specifies certain procedures for investigations, license revocation, license suspension, penalties, liabilities, enforcement, hearings, and other steps related to addressing improper carter and broker conduct.

In addition, commercial carters are required to comply with a number of Local Laws (LLs) that will take effect over the next six years. LL145 of 2013 (LL145/2013) requires heavy-duty diesel waste-hauling truck engines older than Model Year 2007 to be upgraded to reduce their exhaust emissions either by installing a newer engine from 2007 or later, or to retrofit the engine with pre-approved Best Available Retrofit Technology (BART) emission controls, such as diesel particulate traps, by January 1, 2020. It provides an option for carters to apply for a waiver based on financial burden, which would potentially extend the time allowed to modify the fleet until 2025. In the absence of a waiver, commercial waste carters must be in compliance by the year 2020. The requirements of LL145/2013 take effect before the customer transition for the proposed CWZs. LL56 of 2015 (LL56/2015) requires all trade waste hauling vehicles to be equipped with side guards to protect pedestrians and cyclists by January 1, 2024. Since the CWZ Program Analysis Year is 2024, operating carters are expected to be in full compliance with LL145/2013 and LL56/2015 and they are considered part of the No Action condition.

The SWMP, adopted by New York City in July 2006 and approved by New York State in October 2006, is a five-borough plan that addresses New York City's waste management needs. The City is required to adopt a SWMP for at least a 10-year period under New York State Environmental Conservation Law. The current plan is in effect through 2025, at which point a new plan will be evaluated and initiated. The SWMP provides for the shift from a long-haul trucking-oriented system for DSNY-managed waste, by which such waste is transported by trucks from area transfer stations to landfills and waste-to-energy plants outside the City, to a system of transporting such waste from marine and rail transfer stations located throughout the five boroughs. Overall, the SWMP has two major goals: (1) the gradual elimination of long-haul truck transport of DSNY-managed municipal solid waste and (2) the improvement of neighborhood equity with respect to waste management by reducing the intensity of waste transfer activity in certain affected neighborhoods and reducing related truck traffic. These goals are being achieved through the reconstruction of four marine transfer stations and building a rail-based transfer station, contracts for rail export from four other facilities, the construction of a central, barge-based recycling handling and recovery facility, and the reduction of solid waste transferred in certain overburdened districts of Brooklyn, the Bronx, and Queens with disproportionate numbers of waste transfer stations. In particular, the SWMP seeks to

NYC Commercial Waste Zone Program

improve environmental and public health effects of waste collection through the reduction in truck transport. Full implementation of the SWMP will reduce annual City-collection truck travel by nearly 3 million miles and reduce private long-haul truck travel on City streets by 2.8 million miles and reduce noise, traffic congestion, and air pollution.

Implementation of the current SWMP is considered part of the No Action condition.

FUTURE WITH THE PROPOSED ACTION (WITH ACTION CONDITION)

In the With Action condition, there would be 20 geographic zones in each of which 3 to 5 carters would be authorized to operate and be required to adhere to certain parameters intended to improve transparency, safety, and customer service. Up to 68 zone contracts would be awarded. The identities of the carters to be awarded zone contracts are to be determined, but are expected to have carting operations and garages in the City or greater metropolitan area.

THREE COMMERCIAL DENSITY TYPOLOGIES FOR ENVIRONMENTAL ANALYSIS VIA CASE STUDY

As the Proposed Action is generic, and the CWZ carter garage locations are not yet known, the ~~DGEIS~~FGEIS studies representative types of commercial clusters and corridors within New York City and includes an analysis of the Proposed Action's likely effects on its environmental setting (Future with the Proposed Action) in 2024, the Analysis Year. The analysis examined how proposed changes to the commercial waste system from the CWZ Program might affect three broad classes of commercial development density, into which most development in the City can be categorized. Three representative neighborhood case study areas were selected as typologies of high, medium, and low-density commercial development, respectively, to provide a more detailed and contextual analysis of the potential benefits and adverse impacts of the Proposed Action in such New York City communities. These areas, and the reasons they were selected for study as typologies for the Proposed Action, are discussed below. As the CWZ Program is implemented and specific zones are selected for award to specific carters with known garage locations, consideration will be given as appropriate to the potential for significant individual or cumulative impacts that were not studied in the ~~DGEIS~~FGEIS. Such further review under CEQR would be based on guidance impact thresholds and criteria in the *CEQR Technical Manual*.

CENTRAL BUSINESS DISTRICT STUDY AREA

A central business district (CBD) is the commercial and business center of a city and in larger cities is often synonymous with a city's "financial district." In New York City, these high-density commercial areas are primarily found in Lower Manhattan, Midtown Manhattan, and Downtown Brooklyn. Users of commercial waste services are typically building operators, including real estate companies, often with multiple buildings within the district. Typical waste producers within CBD districts include large offices, hotels, commercial retail, and restaurants.

NEIGHBORHOOD RETAIL CORRIDOR STUDY AREA

Neighborhood retail corridors primarily serve as the retail and commercial hubs of medium-density residential neighborhoods outside of the City's CBDs, such as Long Island City and Roosevelt Avenue in Queens; Fordham Road, the Hub in the Bronx; the Flatbush Nostrand Junction, Atlantic and 5th Avenues in Brooklyn; and Dyckman Street in Manhattan. Businesses within these medium density commercial corridors tend to be smaller in footprint and produce less waste per footprint area than larger buildings found in the City's CBDs. Commercial waste

customers within these neighborhood retail corridors include medium-sized office buildings, small commercial retailers, neighborhood supermarkets, delis, and restaurants.

LOWER (RETAIL) DENSITY STUDY AREA

Lower commercial density areas are characterized by commercial retail uses scattered throughout the district, as opposed to being concentrated in defined clusters or corridors. These low-density districts are found in the more automobile-oriented neighborhoods of the outer boroughs, including Howard Beach and College Point in Queens, Canarsie in Brooklyn, and neighborhoods throughout Staten Island. Businesses in these areas vary and include a wide variety of different retailers including chain convenience stores, gas stations, bodegas, fast-casual and take-out restaurants, other automotive businesses, big box retail, and pharmacies such as Rite Aid and Duane Reade.

SELECTED CASE STUDY AREAS

The following three case study areas are discussed in this ~~DGEIS~~^{DGEIS}: the Midtown Manhattan CBD; a neighborhood retail corridor in the Flatbush Nostrand Junction within Brooklyn; and a lower-density study area in College Point, Queens (see **Figure 1-2**). These study areas are used in the technical area analyses to provide detailed and contextual analyses of impacts from the CWZ Program upon these classes of commercial density and thus demonstrate the types of issues, potential effects, and benefits that could result in any section of the City as a result of the Proposed Action.

MIDTOWN MANHATTAN CBD

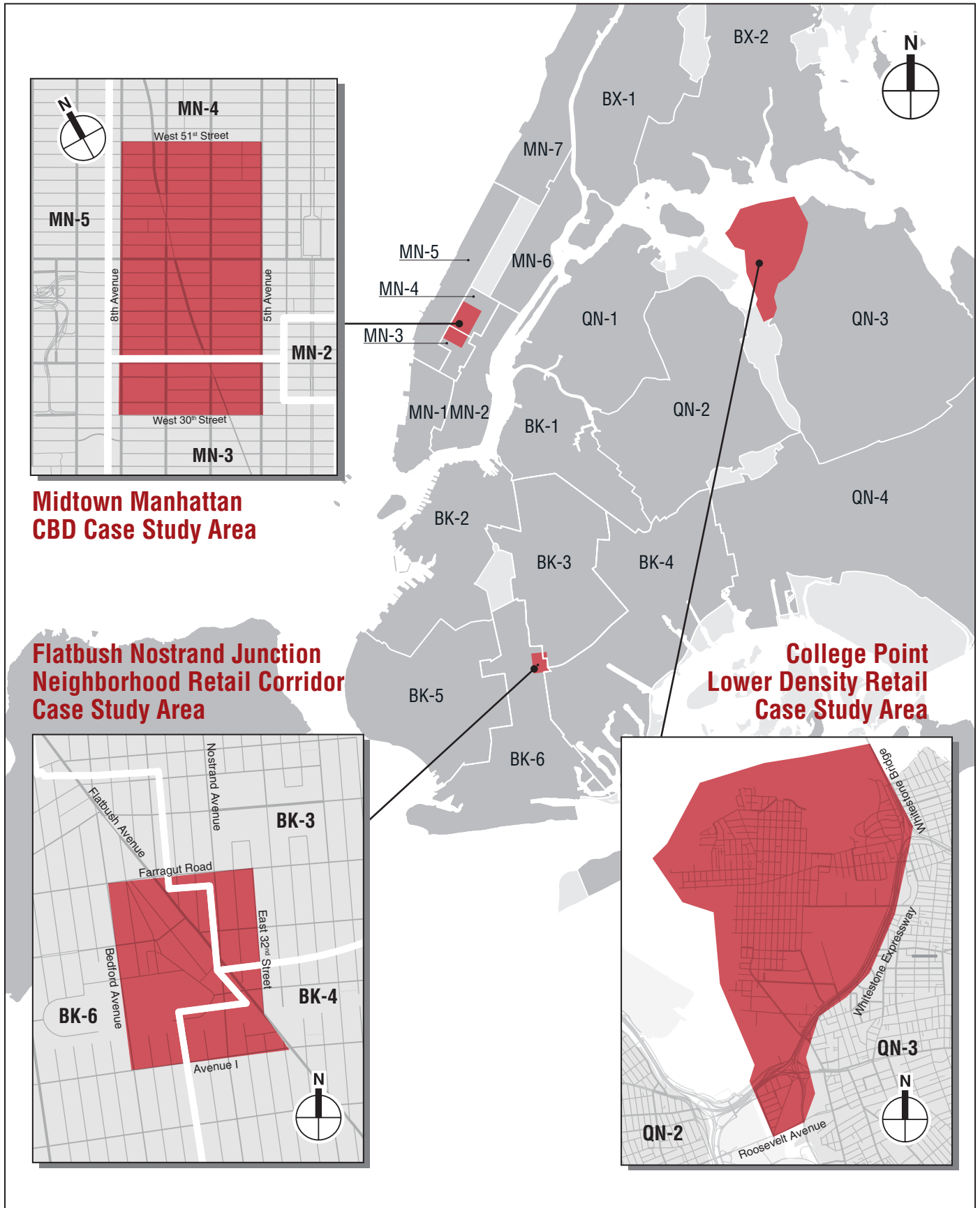
The Midtown Manhattan CBD was selected since it is representative of a high-density CBD. Midtown Manhattan has a high diversity of commercial waste producers, ranging from small-scale retail and restaurants to large offices. The area also includes large destination retail, as well as major entertainment destinations. The study area's density and diversity of waste generators make it suited to understand the effects of the Proposed Action on the City's other large commercial districts. The Midtown Manhattan CBD study area represents an area approximately 0.56 square miles in size and would be located within CWZ Zones MN-3 and MN-4 (see **Figure 1-3**).

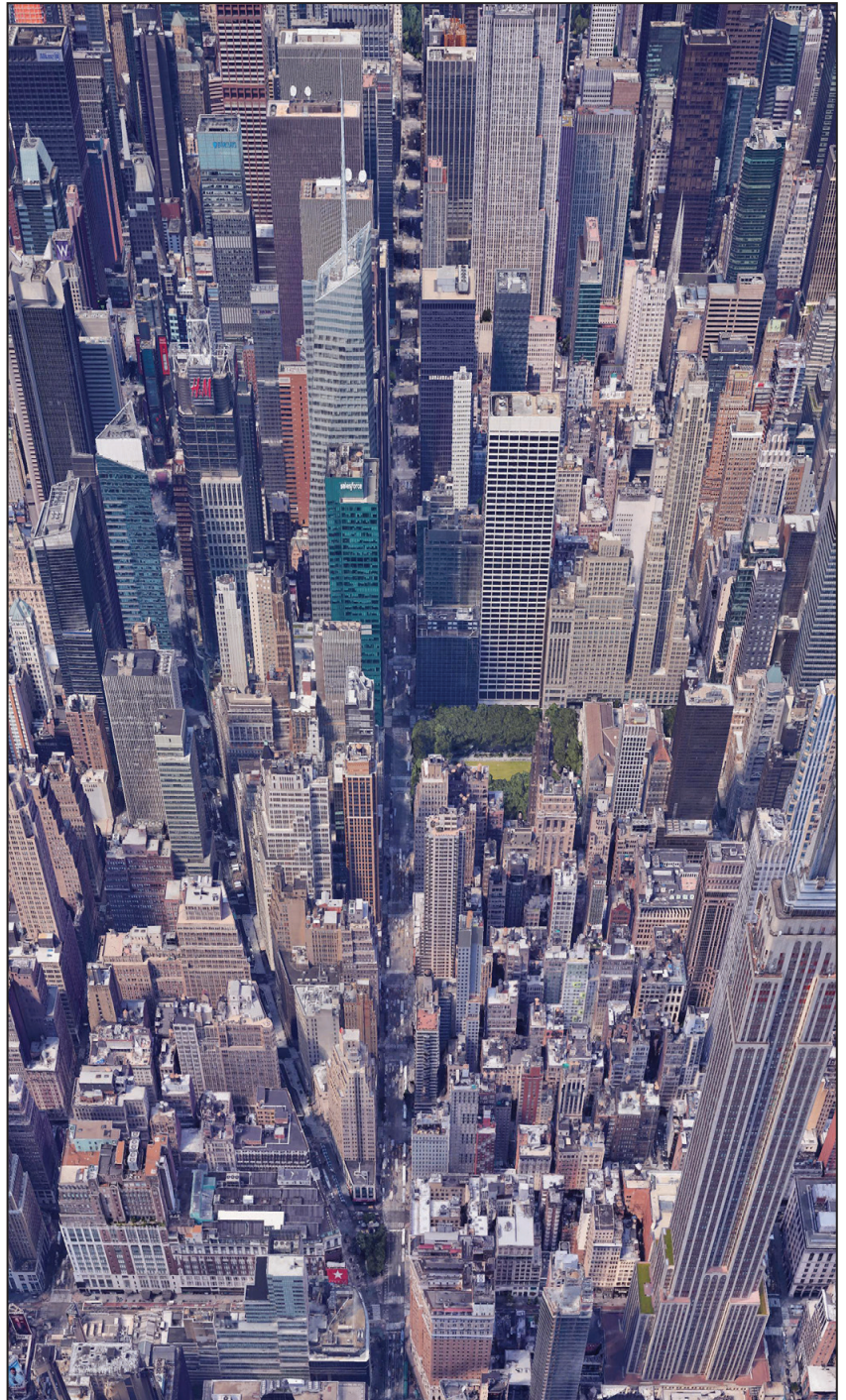
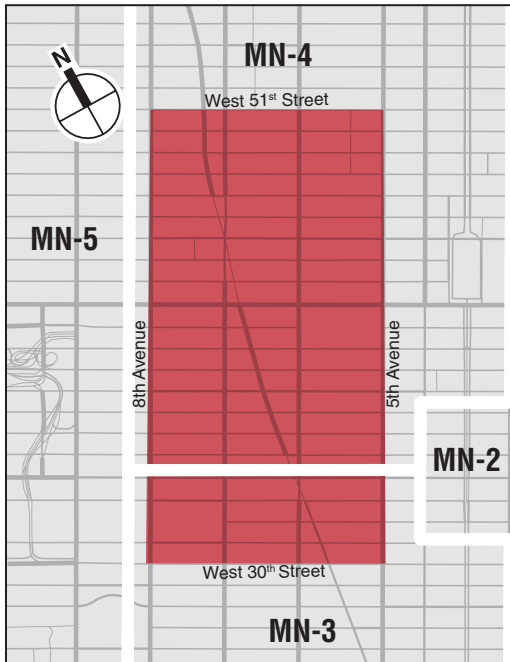
The Midtown Manhattan CBD case study area is characterized by approximately 17,000 unique¹³ commercial waste customers currently served by 38 different carters. Half of the businesses in this area are classified as office (approximately 50 percent), followed by non-food retail¹⁴ (approximately 31 percent), and manufacturing businesses (approximately 11 percent). Combined, the businesses in this area generates approximately 218,900 tons of waste per year at a median rate of \$8.90 per 100 pounds of waste.¹⁵ This is below the BIC rate cap (as of August 9, 2018) of \$13.62 per 100 pounds of refuse. There are no transfer stations or carter garages within this study area.

¹³ Unique customers could represent individual business entities or landlords covering multiple commercial business entities.

¹⁴ Non-food retail includes motor vehicle and parts dealers; furniture and home furnishings stores; electronics and appliance stores; building material and garden equipment and supplies dealers; health and personal care stores; gasoline stations; clothing and clothing accessories stores; sporting goods; hobby, musical instrument, and book stores; general merchandise stores; miscellaneous store retailers; and non-store retailers.

¹⁵ This dataset includes customer information reported by individual carters on a regular basis to BIC for the 2017 Q2–Q4 Customer Register.





FLATBUSH NOSTRAND JUNCTION NEIGHBORHOOD RETAIL CORRIDOR

The Flatbush Nostrand Junction was selected as a case study area as it is representative of a medium-density mixed-use neighborhood corridor and commercial cluster. The Flatbush Nostrand Junction serves as a major retail and transportation center in central Brooklyn. It primarily serves the Flatbush and Midwood neighborhoods of Brooklyn, as well as the Brooklyn College campus to the west of the area. The Interborough Rapid Transit (IRT) Nostrand Avenue subway line (Nos. 2 and 5 trains) terminate at the Flatbush Nostrand Junction and the area is well served by buses, including the B44 Select Bus Service, which runs along Nostrand Avenue. Commercial retail within the district includes small businesses, and in recent years, larger corporate stores, including those within the new Flatbush Nostrand Junction mall development. In addition, the Flatbush Nostrand Junction includes various small offices and other commercial spaces, adding to the mix of businesses found within the area. This high intensity commercial cluster with waste generators of various sizes makes the Flatbush Nostrand Junction well suited as a case study to understand the effects of the Proposed Action more generically on neighborhood retail corridors and clusters throughout the City. The Flatbush Nostrand Junction case study area represents an area approximately 0.18 square miles in size and would be located within CWZ Zones BK-3, BK-4, and BK-6 (see **Figure 1-4**).

The Flatbush Nostrand Junction study area is characterized by approximately 370 unique customers, currently served by 17 different carters. Nearly half of businesses in this area are classified as office (approximately 47 percent), followed by non-food retail (approximately 26 percent), and food services¹⁶ (approximately 15 percent). Combined, the businesses within the Flatbush Nostrand Junction case study area generates approximately 3,380 tons of commercial waste per year at a median rate of \$ \$11.30 per 100 pounds of waste, below the current BIC rate cap.¹⁷ There are no transfer stations or carter garages within this area.

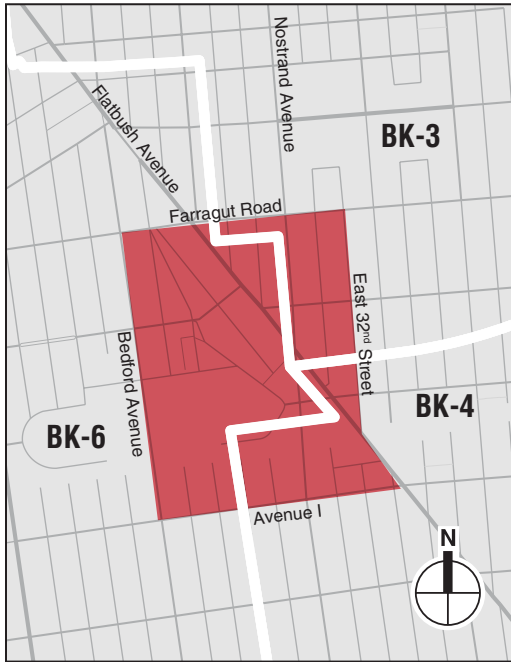
COLLEGE POINT, QUEENS LOWER DENSITY AREA

The College Point neighborhood in Queens was selected as a case study as it is representative of a lower-density district. College Point's businesses are not centralized within a defined cluster or corridor but are distributed throughout the neighborhood. College Point is primarily a low-density residential neighborhood with limited access to public transit. This character makes the district more automobile-oriented than neighborhoods located closer to the Midtown Manhattan CBD. Commercial waste generators within the College Point neighborhood include small businesses such as restaurants, and local retail; however, the district also includes larger commercial waste producers including the Pepsi-Cola Bottling Plant, New York Times Printing Facility, and a large commercial retail center. The low-density, automobile-oriented character of College Point makes it suited to understanding the effects of the Proposed Action on lower density areas of New York City. The College Point study area represents an area approximately 3.4 miles in size and would be located within CWZ Zone QN-3 (see **Figure 1-5**).

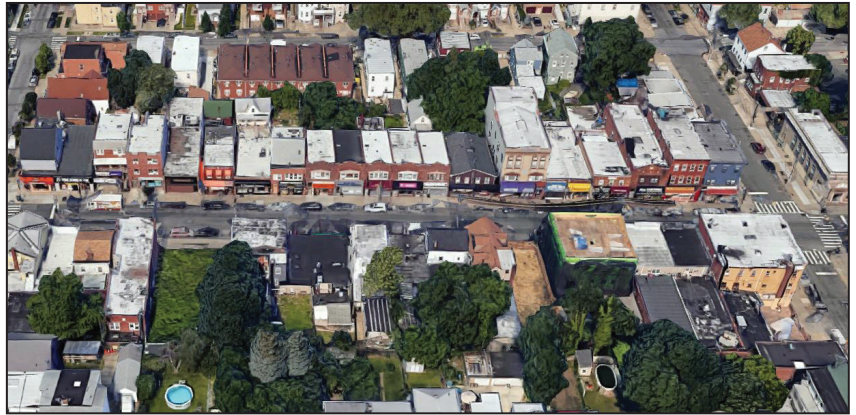
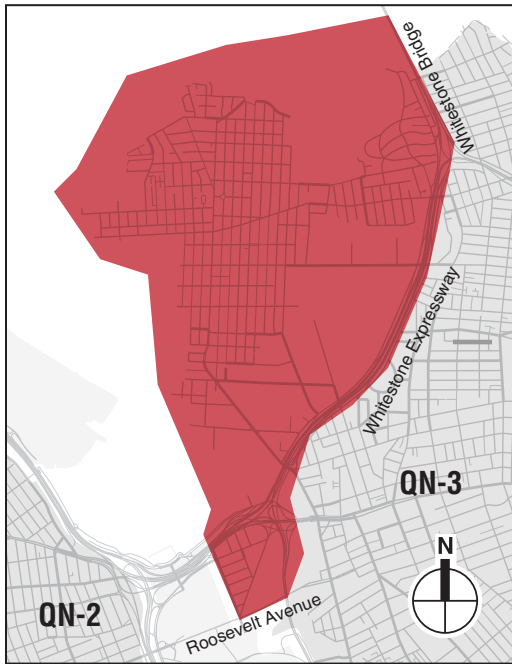
This College Point case study area is characterized by approximately 700 unique customers, served by 23 different carters. A majority of businesses in this area are classified as office (approximately 38 percent), followed by non-food retail (approximately 35% percent) and

¹⁶ Food services include restaurants and bars.

¹⁷ This dataset includes customer information reported by individual carters on a regular basis to BIC for the 2017 Q2–Q4 Customer Register.



Flatbush Nostrand Junction
Neighborhood Retail Corridor
Case Study Area
Figure 1-4



manufacturing (approximately 14 percent). Combined, this study area generates approximately 19,300 tons of commercial waste per year at a median rate of \$10.80 per 100 pounds of waste, below the current BIC rate cap.¹⁸ This case study area includes the Tully Transfer Station located to the south of Flushing Creek on Willets Point and two carter garages. *

¹⁸ This dataset includes customer information reported by individual carters on a regular basis to BIC for the 2017 Q2–Q4 Customer Register.

A. INTRODUCTION

In accordance with the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, the Land Use, Zoning, and Public Policy analysis evaluates the land uses and development trends of an area and determines how a proposed project may affect them. It also considers a project's effect on the area's zoning and applicable public policies.

As described in Chapter 1, "Project Description," the City of New York is proposing to establish and implement a Commercial Waste Zone (CWZ) Program across the five boroughs of the City to improve the carting of refuse, recyclables, and organic waste from commercial businesses (the "CWZ Program" or "Proposed Action").

Since the Proposed Action is limited to regulatory changes regarding the collection of commercial solid waste throughout the City and is not expected to change land use or result in any new or different development, a detailed analysis of land use is not warranted. Similarly, the Proposed Action would not modify or otherwise affect any zoning regulations; therefore, a detailed analysis of zoning is not warranted.

This chapter evaluates whether the Proposed Action is consistent with any officially adopted public policies and initiatives. Drawbacks of the current commercial waste system and future benefits with implementation of the Proposed Action are also addressed in this chapter.

B. EXISTING CONDITIONS**PUBLIC POLICY**

New York City requires commercial business owners to comply with solid waste collection standards pursuant to a variety of Business Integrity Commission (BIC) and New York City Department of Sanitation (DSNY) regulations, Local Laws (LLs), and public policy programs. Below, this section describes the policies that are relevant to solid waste collection for commercial businesses.

NEW YORK CITY ADMINISTRATIVE CODE

Title 16 of the New York City Administrative Code requires commercial businesses to acquire a Trade Waste Removal License, indicate the name of the carter they employ, and sets forth requirements to manage recyclables separately from refuse, per the City's Recycling Law.

Title 16A, Chapter 1 of the New York City Administrative Code defines how BIC licenses, registers, and oversees businesses that remove, collect, or dispose of trade waste. It gives BIC the right to establish and regulate appropriate safety and service standards, appoint employees, and provide educational programs to inform both carters and customers about their rights and responsibilities.

NYC Commercial Waste Zone Program

LL145 of 2013 (LL145/2013) is an amendment to the New York City Administrative Code that seeks to reduce pollution and emissions from commercial carter trucks. It requires all trucks to implement Best Available Retrofit Technology (BART) such as diesel particulate traps or be equipped with a United States Environmental Protection Agency (EPA)-certified 2007 model year or later engine by January 1, 2020. The New York City Department of Environmental Protection (DEP) and BIC enforce this law. Waivers are available to carters facing financial burden, but all trucks must comply by 2025. Approximately 64 carters that fall under the scope of the CWZ Program submitted compliance data in 2017. As of summer 2017, the total number of compliant commercial carter trucks in the industry represented at least one third of the total applicable commercial waste trucks operating in the New York City region.¹

In 2013, the New York City Council passed LL146 of 2013 (LL146/2013) amending the New York City Administrative Code (codified as §16-306.1) which requires DSNY to assess, at least annually, the available regional capacity to process organic waste and to designate certain categories of businesses that must separate this material for beneficial use, such as composting or anaerobic digestion to produce biogas.

LL56 of 2015 (LL56/2015) requires all large trucks in the City's fleet to be equipped with side guards designed to protect pedestrians and cyclists by January 1, 2024.

LL152 of 2018 (LL152/2018) amends the New York City Administrative Code to reduce the permitted capacity at putrescible and non-putrescible solid waste transfer stations in four overburdened community districts in New York City.

RULES OF THE CITY OF NEW YORK

Title 16 of the Rules of the City of New York provides requirements specific for commercial waste carters. The rules broadly (a) allow commercial establishments generating less than a defined amount of waste per week to share a disposal location with another commercial establishment; (b) define designated recyclable materials for commercial waste; (c) provide source-separation, set-out, and collection requirements and responsibilities; (d) allow the Commissioner of DSNY to request inspections; and (e) define commercial carter truck requirements and specifications.

Title 17 of the Rules of the City of New York establishes BIC as the body that provides oversight for the commercial waste industry. Title 17 also establishes rate caps (e.g., maximum carting fees) for waste collection, outlines licensing requirements for carters and brokers, sets license application requirements, provides terms for license application rejection, and specifies certain procedures for investigation, license revocation or suspension, penalties, liabilities, enforcement, hearings, and other steps related to addressing improper carter and broker conduct.

2006 SOLID WASTE MANAGEMENT PLAN

The current Solid Waste Management Plan (SWMP), adopted in July 2006 and approved by New York State in October 2006, is a five-borough plan that addresses New York City's waste management needs. The City is required to adopt a SWMP for at least a 10-year period under New York State Environmental Conservation Law. The current plan is in effect through 2025, at which point a new plan will be evaluated and initiated.

¹ BIC, 2017 LL145/2013 Compliance Plan Reports provided by carters by request of BIC.

The SWMP generally projects waste quantities and identifies the facilities that would manage the transfer of residential and commercial waste, including designated recyclables, putrescible waste, construction and demolition debris, and fill material such as dirt, concrete, brick and rock. The adopted SWMP emphasizes three broad categories of goals: (1) the improvement of conditions around transfer stations upon which both public and private carters currently rely; (2) transitioning from a system reliant on trucks to export waste from local waste transfer stations to one that takes advantage of barge and rail transport, reducing local waste truck traffic; and (3) the redistribution of transfer stations so that low-income and minority communities are not disproportionately burdened. In addition, the SWMP sets ambitious goals for recycling within the City, which will ultimately reduce the exportation of waste.

ONE NEW YORK: THE PLAN FOR A STRONG AND JUST CITY

In April 2007, the Mayor's Office of Long Term Planning and Sustainability released *PlaNYC: A Greener, Greater New York (PlaNYC)*. In 2015, the Mayor's Office updated *PlaNYC* to build on its original sustainability goals and amend its objectives and strategies. The new plan, entitled ~~*One New York: The Plan for a Strong and Just City*~~ *OneNYC2050: Building a Strong and Fair City (OneNYC)* is not a mandate, but sets forth a variety of goals related to urban growth, equity, environmental sustainability, resiliency, and diversity.

The mission of *OneNYC* is to motivate growth, equity, sustainability, resiliency, and diversity through public policy. Among its hundreds of initiatives, *OneNYC* committed the City to conducting a comprehensive study of CWZs as well as including increasing recycling and reducing landfill disposal of waste.

WATERFRONT REVITALIZATION PROGRAM

The Federal Coastal Zone Management Act (CZMA) of 1972 was enacted to support and protect the distinctive character of the waterfront and to set forth standard policies for reviewing proposed development projects along coastlines. The program responded to City, State, and Federal concerns about the deterioration and inappropriate use of the waterfront. The CZMA emphasizes the primacy of State decision-making regarding the coastal zone. In accordance with the CZMA, New York State adopted its own Coastal Management Program (CMP), designed to balance economic development and preservation by promoting waterfront revitalization and water-dependent uses. At the same time, it was designed to protect fish, wildlife, open space, scenic areas, farmland, and public access to the shoreline in order to minimize adverse changes to ecological systems, erosion, and flood hazards. The New York State CMP provides for local implementation when a municipality adopts a local waterfront revitalization program (WRP), as is the case in New York City.

The New York City WRP is the City's principal coastal zone management tool, originally adopted in 1982 and approved by the New York State Department of State (NYSDOS) for inclusion in the New York State CMP. The WRP establishes the City's policies for the development and use of the waterfront and provides a framework for evaluating activities proposed within the Coastal Zone. Revisions to the WRP were approved by the New York City Council on October 30, 2013. The revisions are intended to reflect policy elements included in the New York City Department of City Planning's (DCP) 2011 *Vision 2020: New York City Comprehensive Waterfront Plan*, including incorporation of climate change and sea level rise considerations to increase the resiliency of the waterfront area, promotion of waterfront industrial development and both commercial and recreational water-borne activities, increased restoration of ecologically significant areas, and design

of best practices for waterfront open spaces. The changes were recently approved by NYSDOS and the United States Department of Commerce.

C. FUTURE WITHOUT THE PROPOSED ACTION

The Future without the Proposed Action (the “No Action” condition) includes the current commercial waste industry and any regulatory changes to the industry expected by the Analysis Year of 2024, as described in Chapter 1, “Project Description.”

PUBLIC POLICY

NEW YORK CITY ADMINISTRATIVE CODE AND RULES OF THE CITY OF NEW YORK

As discussed in “Existing Conditions,” the commercial waste industry is regulated largely by Titles 16 and 16A of the New York City Administrative Code and Titles 16 and 17 of the Rules of the City of New York. These laws and regulations would continue to regulate the industry and carters would need to comply with applicable policies; however, similar to the current system, there would be no adequate enforcement mechanisms to ensure that the private carters comply with these regulations.

As noted above, LL145/2013 requires commercial carter truck engines older than Model Year 2007 to be upgraded to reduce their exhaust emissions either by installing a newer engine from 2007, or later, or to retrofit the engine with pre-approved BART emission controls, such as diesel particulate traps, by January 1, 2020. Under the No Action condition, all operating carters are expected to be fully compliant with LL145/2013 in the 2024 Analysis Year.

LL56/2015 requires that all commercial carter trucks be equipped with side guards by January 1, 2024. Accordingly, 100-percent compliance with LL56/2015 would be part of the No Action condition.

LL152/2018 requires the reduction of permitted capacity at putrescible and non-putrescible solid waste transfer stations in four overburdened community districts in New York City. Under the No Action condition, such reductions would occur at the identified transfer stations and waste that would be displaced from these facilities by these reductions would be distributed to other transfer stations.

Existing regulations require commercial businesses to recycle metal, glass, plastic (MGP), paper, cardboard and, in some cases, food preparation waste (organics) and, thereby, divert such waste from landfills; however, enforcement and tracking compliance rates is difficult. LL146/2013 requires DSNY to assess, at least annually, the available regional capacity to process organic waste and to designate certain categories of businesses that must separate this material for composting or digestion. Under the No Action condition, businesses would continue to comply with LL146/2013, and carters would collect the organics waste. It is estimated that 30 percent of commercial waste would be collected as recyclables (i.e., cardboard, paper, and MGP) and 3 percent of commercial waste would be collected as organics throughout the City under the No Action condition.² This reflects a slight increase from existing conditions in which an estimated 24 percent of commercial waste is collected as recyclables and 1 percent is collected as organics throughout the City.

² Collection rate is the percentage of designated recyclables or organic material collected in the system.

2006 SOLID WASTE MANAGEMENT PROGRAM

Implementation of the SWMP would continue under the No Action condition.

ONENYC

The City would continue to encourage sustainability and recycling under the No Action condition. However, as under the existing condition, there would be no adequate enforcement mechanisms and it would be expected the City would fall short on meeting such goals set forth in *OneNYC*.

WATERFRONT REVITALIZATION PROGRAM

Under the No Action condition, there would be no changes to the commercial waste industry to warrant review against the WRP policies.

D. FUTURE WITH THE PROPOSED ACTION

The Future with the Proposed Action (the “With Action” condition) evaluates the changes to public policy conditions that would exist in the Analysis Year of 2024 as a result of the implementation of the Proposed Action.

PUBLIC POLICY

The Proposed Action would not replace existing laws and regulations. Rather, the Proposed Action would require compliance with the laws and regulations to obtain contracts under the CWZ Program, and DSNY and BIC would have the mechanism through contract to enforce these regulations if carters fail to comply. Further, the Proposed Action would enhance the goals of public policies. The current public policies described in “Existing Condition,” and how the CWZ Program supports and enhances these public policies are discussed below.

NEW YORK CITY ADMINISTRATIVE CODE AND RULES OF THE CITY OF NEW YORK

The CWZ Program would be implemented through the enactment of a new local law to be developed by the New York City Council. The new local law would provide provisions for the program, including the Request for Proposal (RFP) requirements and contract-award procedures.

In addition, under the Proposed Action, carters would be required to comply with the relevant regulations in order to compete for business, and DSNY and BIC would have the mechanism via contract to enforce these regulations if carters fail to comply.

As noted previously, LL145/2013 requires commercial carter truck engines older than Model Year 2007 to be upgraded to reduce their exhaust emissions either by installing a newer engine from 2007, or later, or to retrofit the engine with pre-approved BART emission controls, such as diesel particulate traps, by January 1, 2020. Under the Proposed Action—as with the No Action condition—all commercial carter trucks operating in the City are anticipated be in full compliance with the requirements of LL145/2013 by the 2024 Analysis Year.

LL56/2015 requires that all commercial carter trucks be equipped with side guards by January 1, 2024. Accordingly, under the Proposed Action there would be 100 percent compliance with LL56/2015.

LL146/2013 requires DSNY to assess, at least annually, the available regional capacity to process organic waste and to designate certain categories of businesses that must separate this material for

NYC Commercial Waste Zone Program

composting or digestion. Under the Proposed Action, there would be an increase in organic waste from 3 percent collection rate under the No Action condition to 6 percent collection rate throughout the City due to improved enforcement facilitated by the CWZ Program.

Additional enforcement of other recycling requirements would also occur under the Proposed Action, for the same reasons. Under the Proposed Action, the blended recyclables collection rate would increase to 38 percent, compared to 30 percent under the No Action condition.

2006 SOLID WASTE MANAGEMENT PROGRAM

The Proposed Action would support the goals of the SWMP. One of the goals of the CWZ Program is to increase diversion—the carters who are awarded contracts will be required to collect all waste that the program applies to, including refuse, recycling and organics. As mentioned, under the Proposed Action, the capture rate of both recycling and organics would increase.

In addition, another goal of the Proposed Action is to reduce traffic related to the commercial waste industry. In creating zones and limiting the number of carters servicing those zones, it is anticipated that the overall truck trips would be reduced. This would be in line with the SWMP goal and addressing concerns of truck traffic-related impacts to communities, including noise and air quality.

ONENYC

The Proposed Action would further the environmental sustainability ~~efforts~~ objectives of *OneNYC*.

One goal of the Proposed Action is to increase diversion of waste in order to work towards the City's zero waste goals. The CWZ Program would encourage carters to comply with existing recycling and source-separation regulations so they could compete for contracts. As part of the RFP process, carters would develop “zero waste” plans and identify innovative practices to support waste reduction, reuse, and recycling and provide for additional oversight and reporting requirements to ensure that these practices are being followed. With more recycling and organic materials being separated, less waste would be sent to landfills, saving resources and energy, consistent with the City's sustainability and recycling goals that align with *OneNYC*'s goals and adhere to the proposed policies pertaining to recycling and the disposal of organic waste.

In addition, the CWZ Program would advance the City's efforts to increase commercial recycling, reduce carter truck traffic and associated air, noise and greenhouse (GHG) emissions, and improve carting industry operational standards. Reduction in truck traffic would result in a reduction in GHG emissions and noise, as well as improve air quality, thereby adhering to *OneNYC*'s goals.

WATERFRONT REVITALIZATION PROGRAM

The Proposed Action would be implemented throughout the City, including in areas within the City's Coastal Zone Boundary and, therefore, the Proposed Action would be subject to review for consistency with the policies of the WRP.

The WRP includes policies designed to maximize the benefits derived from economic development, environmental preservation, and public use of the waterfront, while minimizing the conflicts among those objectives. The WRP Consistency Assessment Form (CAF) lists the WRP policies and indicates whether the Proposed Action would promote or hinder a particular policy, or if that policy would not be applicable (see **Appendix B**). The Proposed Action would be

consistent with goals of the WRP. This section provides additional information for the policies that have been checked “promote” in the WRP CAF.

Policy 7: Minimize environmental degradation and negative impacts on public health from solid waste, toxic pollutants, hazardous materials, and industrial materials that may pose risks to the environment and public health and safety.

Policy 7.3: Transport solid waste and hazardous materials and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.

The CWZ Program would convert the current open market to a zoned system for commercial waste collection. The CWZ Program would be intended to reduce the existing overlap of commercial carter routes and enhance efficiency, worker and pedestrian safety, transparency in contracting, and customer service. It would also further the City’s recycling and sustainability goals and reduce truck traffic and associated air, noise and GHG emissions. Currently, New York City’s commercial waste system is an open market, regulatory-based system in which private service providers, licensed and overseen by BIC, collect waste and recyclables from commercial businesses and compete for contracts with each business. The Proposed Action would establish a CWZ program that would create geographic zones with a limited number of service providers licensed to operate within each zone. Adverse environmental impacts from commercial waste carting would be reduced. Therefore, the Proposed Action would promote Policy 7.3.

E. CONCLUSION

In view of the foregoing, it can be concluded that the CWZ Program would not cause a significant adverse impact to public policy. *

A. INTRODUCTION

As described in Chapter 1, “Project Description,” the City of New York is proposing to establish and implement a Commercial Waste Zone (CWZ) Program across the five boroughs of the City to improve the carting of refuse, recyclables, and organic waste from commercial businesses (the “CWZ Program” or “Proposed Action”).

This chapter describes the potential impacts of the Proposed Action on socioeconomic conditions within the City of New York. As stated in the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, the socioeconomic character of an area includes its population, housing, and economic activities. Even when socioeconomic changes would not result in impacts under CEQR, they are disclosed if they would affect land use patterns, low-income populations, the availability of goods and services, or economic investment in a way that changes the socioeconomic character of the area. This analysis focuses on how potential changes to the commercial waste carting industry could change socioeconomic conditions within certain areas or for the City as a whole.

In some cases, the predicted socioeconomic changes may be substantial but not adverse. In other cases, these changes may be good for some groups, but bad for others. The objective of the CEQR analysis is to disclose whether any changes created in the Future with the Proposed Action (the “With Action” condition or the “Proposed Action” condition) would result in a significant adverse socioeconomic impact compared with what would happen in the Future without the Proposed Action (the “No Action” condition). Specifically, this analysis focuses on the potential for the Proposed Action to increase the costs of commercial carting operations to the point that commercial carting becomes too expensive to be a viable industry and carting businesses close, or to increase the costs associated with commercial carting services to the point that local businesses are unable to pay for carting services, refuse remains uncollected, and these businesses ultimately close due to the burden associated with commercial waste collection.

PRINCIPAL CONCLUSIONS

This analysis finds that the Proposed Action would not result in significant adverse socioeconomic impacts. The following summarizes the conclusions for each of the five CEQR areas of socioeconomic concern.

DIRECT RESIDENTIAL DISPLACEMENT

A screening-level assessment finds that the Proposed Action would not result in significant adverse impacts due to direct residential displacement as the Proposed Action would not directly displace residents. The Proposed Action is a generic city regulatory program that would change the operations of specific businesses within New York City, not a site-specific development project that could directly displace a residential population.

DIRECT BUSINESS DISPLACEMENT

A screening-level assessment finds that the Proposed Action would not result in significant adverse impacts due to direct business displacement as the Proposed Action would not directly displace any businesses. The Proposed Action is a generic city regulatory program that would affect the commercial carting businesses operating within New York City, not a site-specific development project that could directly displace businesses. The potential loss of jobs in the carting industry is addressed in the specific industries assessment (see Screening Criteria #5).

INDIRECT RESIDENTIAL DISPLACEMENT

A screening-level assessment finds that the Proposed Action would not result in significant adverse impacts due to indirect residential displacement as the Proposed Action would be a generic citywide regulatory program which would affect the commercial carting businesses within New York City, and would not result in changes to residential development within the City of New York.

INDIRECT BUSINESS DISPLACEMENT

A screening-level assessment finds that the Proposed Action would not result in significant adverse impacts due to indirect business displacement as the Proposed Action not result in any commercial development that could influence market conditions in specific neighborhoods. The Proposed Action's potential to affect the viability of commercial waste carters and carting customers (i.e., individual neighborhood businesses) is addressed as part of the specific industries assessment (see below).

ADVERSE EFFECTS ON SPECIFIC INDUSTRIES

A detailed analysis finds that the Proposed Action would not result in significant adverse impacts on the viability of the commercial carting industry, or on businesses that rely on the commercial carting industry. The Proposed Action would reduce the costs of commercial carting operations within the City of New York, streamlining the operation of commercial carting businesses, despite additional costs associated with the Proposed Action. Employment within the commercial carting industry would be reduced by approximately 2 percent as the industry becomes more efficient with the CWZ Program, requiring shorter routes and fewer hours of carting truck operation, and some carting companies may close.

Further, commercial businesses that rely on the commercial carting industry are anticipated to be provided more transparent (e.g., clearly defined rate caps) and reliable services (e.g., through the provision of customer service hotlines), while paying a more competitive rate for carting services. As a result of the Proposed Action, these businesses would receive an enhanced and more affordable service, as compared to the No Action condition.

B. METHODOLOGY

BACKGROUND

An assessment of socioeconomic impacts of a proposed project typically distinguishes between impacts on residents and businesses in an area and separates these impacts into direct and indirect impacts, measured by the displacement it may cause for both segments. The Proposed Action is not tied to a specific location but may affect the operation and viability of a specific industry not necessarily tied to a specific location. In such cases, the CEQR review process involves an assessment of the economic impacts of a project on that specific industry, and any businesses that

may rely on that industry to operate. This analysis therefore considers the CWZ Program's potential impact on both the commercial carters, and the businesses which rely on commercial waste collection (i.e., commercial customers) to assess whether industry changes could jeopardize the viability of the carting industry in New York City and result in adverse socioeconomic impacts.

ANALYSIS FORMAT

Based on *CEQR Technical Manual* guidelines, the analysis begins with a screening-level assessment (see Section C, "Screening Assessment") that determines for each of the five areas of socioeconomic concern whether there would be expected results that would warrant further review in the form of a "preliminary" assessment:

1. Direct displacement of a residential population;
2. Direct displacement of existing businesses and institutions;
3. Indirect displacement of a residential population;
4. Indirect displacement of businesses and institutions due to increased rents or retail market saturation; and
5. Adverse effects on specific and important industries within the City of New York.

The *CEQR Technical Manual* defines thresholds for analysis for each of the five categories. The screening assessment found that further preliminary assessment was necessary to determine if the Proposed Action would result in significant adverse impacts to industries within the City of New York.

The objective of the preliminary assessment is to learn enough about the potential effects of the Proposed Action to either rule out the possibility of significant adverse impacts or determine that a more detailed analysis is required to fully determine the extent of potential impacts. As detailed in Section D, "Preliminary Assessment," the preliminary assessment found that additional detailed analysis was warranted in order to determine whether the Proposed Action could result in significant adverse impacts on specific industries.

Section E, "Detailed Analysis of Potential Adverse Effects on Specific Industries," is structured to provide the existing condition as a baseline and then assesses the No Action condition and Proposed Action, by the Analysis Year 2024. As discussed in Chapter 2, "Land Use, Zoning, and Public Policy," specific policies that are implemented in the No Action condition are identified, as these public policies have the potential to change the socioeconomic conditions within the area of study. The No Action condition is then compared to the Proposed Action in order to determine the potential for significant adverse impacts as a result of the Proposed Action.

NEIGHBORHOOD CASE STUDY AREAS

As described in Chapter 1, "Project Description," the Proposed Action is a generic, citywide action that would affect commercial waste collection throughout the entire City of New York. In order to provide a more localized geography for analysis and the effects of the Proposed Action on neighborhood socioeconomic conditions, three representative neighborhood case study areas were selected as typologies of high, medium, and low-density commercial development, respectively, to provide a more detailed and contextual analysis of the potential benefits and adverse impacts of the Proposed Action in such New York City communities. These three study area typologies are used to analyze the Proposed Action's likely effects on its environmental setting (Proposed Action) in the 2024 Analysis Year.

CENTRAL BUSINESS DISTRICT STUDY AREA—HIGH-DENSITY

A Central Business District (CBD) is a commercial and business center of a city and in larger cities is often synonymous with a city's "financial district." In New York City, these high-density commercial areas are primarily found in Lower Manhattan, Midtown Manhattan, Western Queens, and Downtown Brooklyn. Users of commercial waste services are typically building operators, including real estate companies, often with multiple buildings within the district. Typical waste producers within CBD districts include large offices, hotels, commercial retail, and restaurants.

The Midtown Manhattan CBD was selected as representative of a high-density CBD, as it contains a large number of highly diverse commercial waste producers, ranging from small-scale retail and restaurants to large office buildings. In addition, the area includes large destination retail as well as major entertainment venues. In contrast to the other two typologies, the Midtown Manhattan CBD study area is characterized by a high density of businesses and large-volume waste producers.

The analysis of the socioeconomic conditions relies on demographic analysis. Therefore, it is appropriate to adjust the socioeconomic study area to conform to the census tract delineation that most closely approximates the desired study area boundary in order to provide a geography large enough for a meaningful demographic analysis. As shown in **Figure 3-1**, the Midtown Manhattan CBD study area includes New York County Census Tracts 76, 84, 96, 101, 104, 109, 113, 119, 125, and 131. This is roughly equivalent to the area bounded by 54th Street to the north, Fifth Avenue to the east, 30th Street to the south, and Eighth Avenue to the west.

NEIGHBORHOOD RETAIL CORRIDOR STUDY AREA—MEDIUM DENSITY

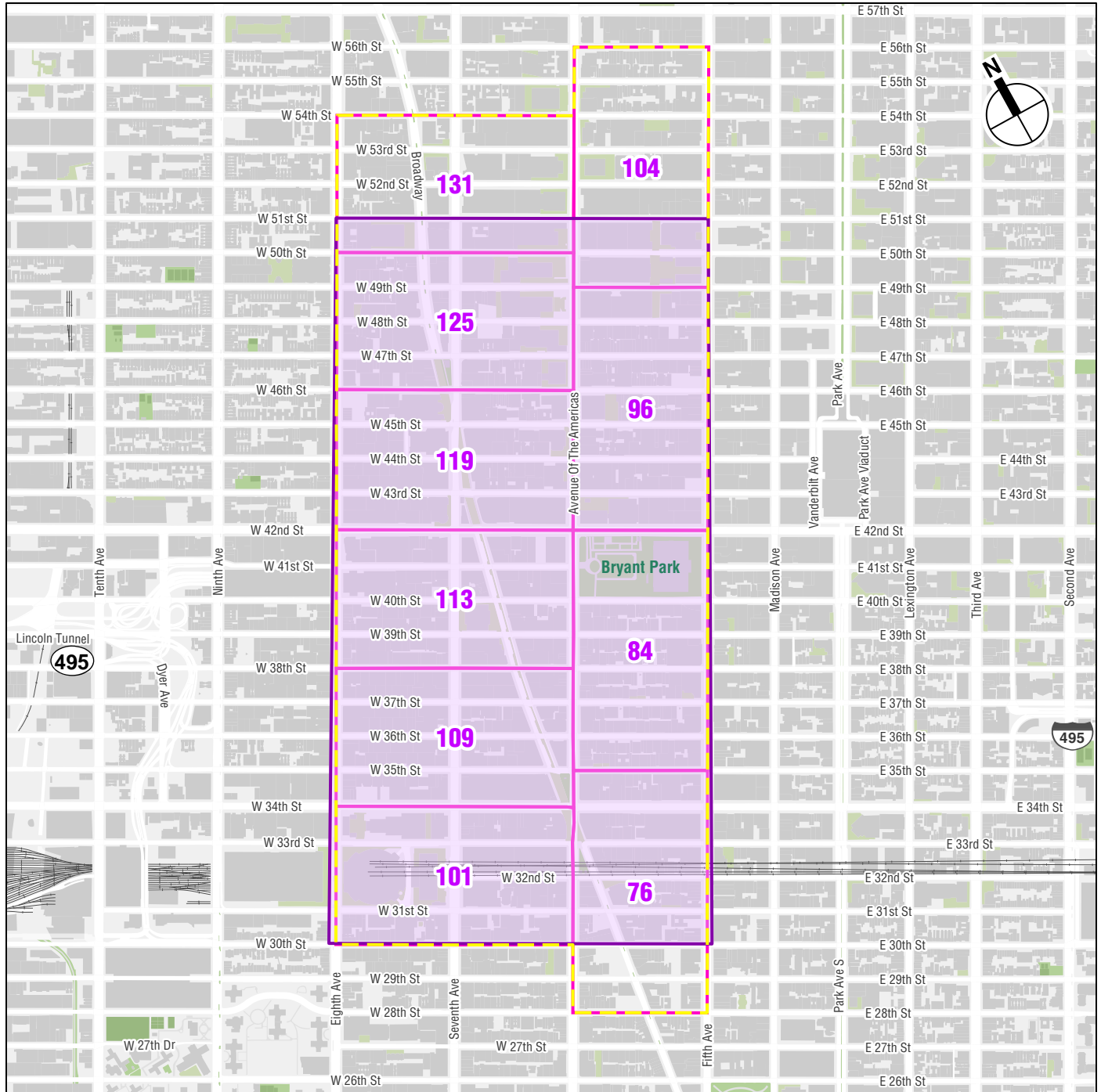
A neighborhood retail corridor or cluster is the primary commercial hub of a typical medium-density neighborhood outside of the City's CBDs. These are often located in proximity to subway stations and include areas such as Roosevelt and Steinway Avenues in Queens, Fordham Road and the Hub in the Bronx, Dykeman Street in Manhattan, and portions of Atlantic and 5th Avenues in Brooklyn. Commercial waste customers within neighborhood retail corridors include medium-sized office buildings, small commercial retailers, neighborhood supermarkets, delis, and restaurants.

The Flatbush Nostrand Junction was selected as a case study area as it is representative of a medium-density mixed-use neighborhood corridor and commercial cluster. The study area contains a large variety of commercial activity, including both medium-sized department store retail, and smaller retail businesses, such as bakeries, barber shops, and jewelry stores. The Flatbush Nostrand Junction's central location within Brooklyn, surrounded by large low- and medium-density residential neighborhoods and proximity to transit, makes it a typical commercial cluster found in the outer boroughs.

As shown in **Figure 3-2**, the Flatbush Nostrand Junction study area includes Kings County Census Tracts 770, 772, 774, 776, 786, and 788. This is roughly equivalent to the area bounded by Foster and Farragut Avenues to the north, New York and Albany Avenues to the east, Avenue I to the south, and Ocean Avenue to the west.

LOWER (RETAIL) DENSITY STUDY AREA

Lower density retail areas are characterized by commercial uses scattered throughout a district, as opposed to being concentrated in defined clusters or corridors. These lower density districts are found in more automobile-oriented areas of the outer boroughs, with fewer public transportation options, such as Howard Beach and College Point in Queens, Canarsie in Brooklyn, and various neighborhoods in Staten Island. Businesses within these areas vary but include a variety of

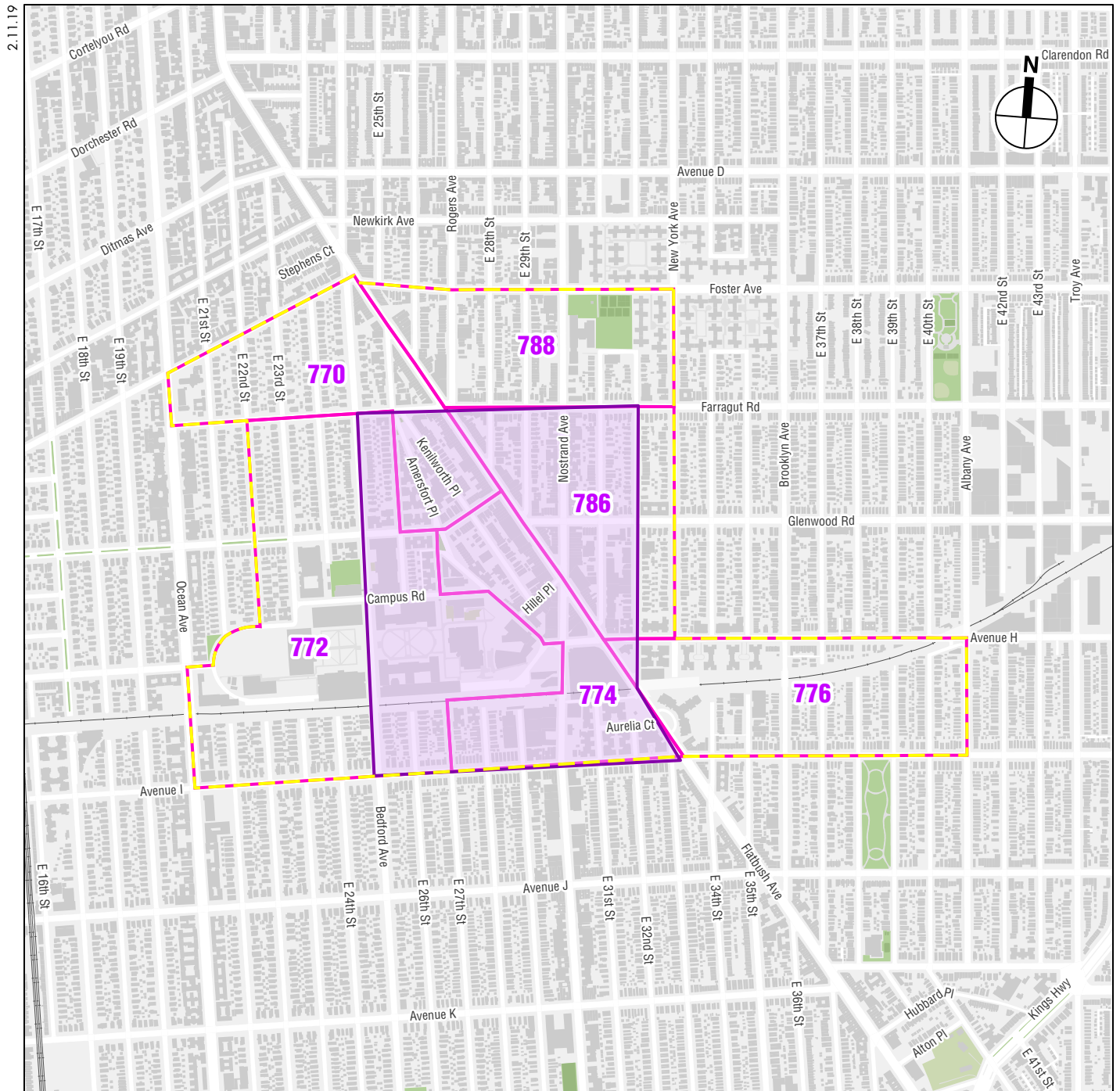


0 1,000 FEET

- Commercial Area
- Socioeconomic Case Study Area
- Census Tracts



Midtown Manhattan Central Business District
Case Study Area



Flatbush Nostrand Junction Corridor
Case Study Area

retailers, including chain convenience stores, gas stations, fast-casual restaurants, automotive businesses, and big-box retail.

College Point, Queens was selected as the representative case study area for a low-density retail district. This neighborhood was selected as it is a low-density automobile-oriented neighborhood, which includes a variety of commercial waste generators, including small restaurants, stores and larger commercial waste producers such as the Pepsi-Cola Bottling Plant, *New York Times* printing facility, and a large shopping center. The College Point study area also includes the Tully Environmental waste transfer station located on Willets Point just south of Flushing Creek.

As shown in **Figure 3-3**, the College Point study area includes Queens County Census Tracts 383.01, 907, 919, 925, 929, 939, 945, and 947. This is roughly equivalent to the area bounded by the East River to the north, the Whitestone Expressway to the east, Flushing Creek to the south (with the exception of the Census Tract 383.01, which is just to the south of Flushing Creek bounded by Flushing Bay to the north, Flushing Creek to the east, Roosevelt Avenue to the south, and 126th Street to the west), and Flushing Bay to the west.

DATA SOURCES

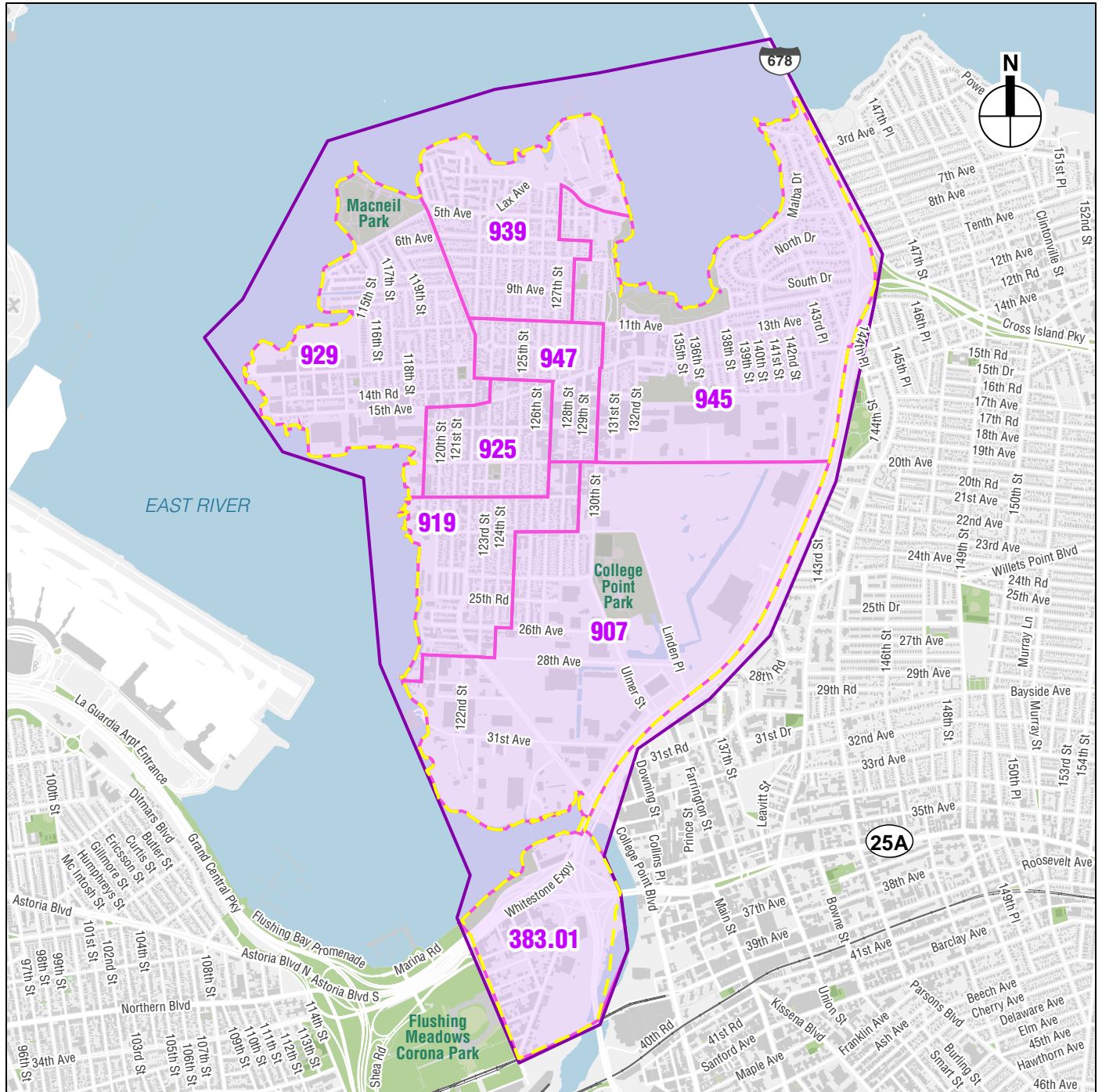
The socioeconomic analysis of the Proposed Action was conducted utilizing a variety of data sources, including publicly accessible data such as census data collected by the New York State Department of Labor (NYSDOL), data reported by commercial carters and compiled by the Business Integrity Commission (BIC), and supplemented by data provided by private companies, including Esri. This data provided inputs and assumptions used to model the socioeconomic effects of the Proposed Action on the commercial carting industry, as well as commercial businesses served by commercial carters.

In order to analyze the potential effects of the Proposed Action on the commercial carting industry, a variety of datasets and sources were utilized. In order to assess the existing revenues and expenses of commercial carters, the 2015 Private Carter Financial Statements were utilized.¹ Data on equipment costs and additional expenses anticipated to be introduced as a result of the CWZ Program were provided in the “New York City Department of Sanitation, Commercial Waste Zones: A Plan to Reform, Reroute, and Revitalize Private Carting in New York City” (CWZ Implementation Plan) and through market research.² Estimated payroll and employment data for the commercial waste industry was provided by the NYSDOL Quarterly Census of Employment and Wages (QCEW) dataset, which provides a census of wages and employment in New York City. In addition to the data collected, outreach to the commercial carting industry was conducted during 2018. In multiple advisory committee meetings, commercial carters and other stakeholders provided information and commentary on the CWZ Program in order to inform both this analysis and the Implementation Plan.

The potential effects of the Proposed Action on commercial businesses served by commercial carters was modeled and analyzed through an examination of carter expenses and the cost of carting services throughout New York City. This examination included a preliminary inventory of

¹ For the purpose of analysis, the 2015 Private Carter Financial Statements were utilized as it is the most complete dataset currently available. More recent Private Carter Financial Statements were not used for this analysis. This is because as of January 2019, carters were still submitting data for 2017 reports.

² DSNY, Commercial Waste Zones: A Plan to Reform, Reroute, and Revitalize Private Carting in New York City (2018).



0 2,000 FEET

- Commercial District
- Socioeconomic Case Study Area
- Census Tracts



College Point Low Density Case Study Area

the carting industry, including equipment used, waste collected and employment. In order to model waste generation within New York City and within the three case study areas, total employment and commercial businesses counts were identified utilizing the NYSDOL QCEW data, which provides both employment and business estimates by industry category within the State of New York. Additional employment and business data for the City of New York was provided by Esri's Business Analyst Online (BAO)—a private data services company. Waste generation rates from the CalRecycle 2014 Generator Based Characterization of Commercial Sector Disposal and Diversion in California employment were utilized to model commercial waste generation within New York City and the three study areas.³ This dataset was selected because it provides employment-based multipliers based on identified North American Industry Classification Survey (NAICS) codes. While the *CEQR Technical Manual* provides generic waste generation rates for uses within the City of New York (see *CEQR Technical Manual* Table 14-1), the detailed industry analysis required more refined waste generation rate estimates that align with the identified NYSDOL QCEW employment data and NAICS codes used to analyze the industry sectors affected by the CWZ Program. Additional waste generation methodologies were considered; however, for the purposes of this analysis, they were determined to be insufficient as they did not utilize employee based generation rates necessary for the purposes of socioeconomic analysis, or were not applicable to the New York City context. Waste generation rates provided in the CalRecycle model were further modified in order to normalize the modeled waste generation rates with reported waste rates provided to DSNY and BIC by transfer stations and carters within New York City. Specifically, this normalization was based on tonnages recorded at waste transfer stations and recycling facilities, supplemented by private carter surveys and routing data, which catalog the real-world waste collected by commercial carters.^{4,5,6} Other supplemental data was provided by the 2017 Q2–Q4 BIC Carter Customer Register dataset, including the average and median cost charged to commercial customers within the three study areas.

C. SCREENING ASSESSMENT

The screening assessment applies the *CEQR Technical Manual* threshold guidelines to determine if the Proposed Action warrants further assessment based on one or more of the five principal areas of concerns discussed below.

1. DIRECT RESIDENTIAL DISPLACEMENT

Would the proposed project directly displace residential population to the extent that the socioeconomic character of the neighborhood would be substantially altered? Displacement of fewer than 500 residents would not typically be expected to alter the socioeconomic character of a neighborhood.

The Proposed Action would be a generic citywide regulatory program that would change the operations of specific businesses within New York City, not a site-specific development project

³ CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California.

⁴ DSNY, 2014–2017, NYC Transfer Station and Recycling Facility Tonnage Reports.

⁵ DSNY, 2014–2016, Private Carter Inbound/Outbound Tonnage Surveys

⁶ BIC, 2014–2015, Private Carter Routing Data. In this analysis, BIC, 2014–2015, Private Carter Routing Data is used only to help estimate the proportion of waste generated in NYC but disposed of outside of NYC. For all other part of this analysis, BIC, 2018, Private Carter Routing Data is used.

that could directly displace a residential population. Therefore, direct residential displacement is not an area of concern for the socioeconomic analysis.

2. DIRECT BUSINESS DISPLACEMENT

Would the proposed project directly displace more than 100 employees, or would it displace any business that is unusually important because its products or services are uniquely dependent on its location, are subject to policies or plans aimed at its preservation, or that serves a population uniquely dependent on its services in its present location?

The Proposed Action would be a generic citywide regulatory program that would affect the commercial carting businesses operating within New York City, not a site-specific development project that could directly displace businesses. Therefore, direct business displacement is not an area of concern for the socioeconomic analysis. The potential loss of jobs in the carting industry is addressed in the specific industries assessment (see Screening Criteria #5).

3. INDIRECT RESIDENTIAL DISPLACEMENT

Would the Proposed Project result in substantial new development that is markedly different from existing uses, development, and activities within the neighborhood? Residential development of 200 units. Development of 200 units or less would typically not result in significant socioeconomic impacts.

As the Proposed Action would be a generic citywide regulatory program affecting commercial waste collection, it would not introduce any residential development or result in changes to the residential market conditions of New York City. Therefore, indirect residential displacement is not an area of concern warranting further analysis.

4. INDIRECT BUSINESS DISPLACEMENT

Would the proposed project result in substantial new development that is markedly different from existing uses, development, and activities within the neighborhood.

The Proposed Action would not result in any commercial development that could influence market conditions in specific neighborhoods. Therefore, indirect business displacement is not an area of concern warranting further analysis. The Proposed Action's potential to affect the viability of commercial waste carters and carting customers (i.e., individual neighborhood businesses) is addressed as part of the specific industries assessment (see Screening Criteria #5).

5. ADVERSE EFFECTS ON SPECIFIC INDUSTRIES

Is the Proposed Project expected to affect conditions within a specific industry? This could affect socioeconomic conditions if a substantial number of workers or residents depend on the goods or services provided by the affected businesses, or if the project would result in the loss or substantial diminishment of a particularly important product or service within the city.

The Proposed Action affects the operation of commercial waste carters within New York City. This industry includes approximately 95 private commercial carters that are permitted to operate within the City that handle putrescible waste, recyclables, and organics. Of these 95, 74 have provided the required Private Carter Financial Statements to BIC, detailing that they employ over 2,600 workers

in a variety of positions.⁷ In addition, the Proposed Action would affect private businesses within New York City that rely on commercial waste carters to remove waste generated daily by these businesses. Based on the screening assessment, and as all private businesses within New York City rely on commercial waste carting and these services are considered an important service within the City, a preliminary assessment of adverse effects on specific industries is warranted.

D. PRELIMINARY ASSESSMENT

ADVERSE EFFECTS ON SPECIFIC INDUSTRIES

According to the *CEQR Technical Manual*, a significant adverse impact to an industry may occur if an action would quantifiably diminish the viability of a specific industry that has substantial economic value to the City's economy; for example, if new regulations are introduced that prohibit or restrict the use of certain processes that are critical to certain industries. Using *CEQR Technical Manual* assessment criteria (in bold italics below), this preliminary assessment considers ways in which the Proposed Action could affect the commercial waste carting industry within New York City, including its effects on carting operations, employment, and the operations of businesses that rely on the waste-removal services provided by the commercial waste carting industry. If the answer to the question posed is not clearly "no," further analysis is warranted.

1. ***Would the Proposed Action significantly affect business conditions in any industry or any category of business within or outside of the Study Area?***

The commercial carting industry provides a unique and particularly important service within the City of New York. The CWZ Program is intended to improve the operations of commercial carters, while maintaining their ability to effectively service commercial businesses throughout the five boroughs of the City. In the existing condition, licensed commercial carters are able to compete for customers throughout New York City without restrictions, while in the Proposed Action, commercial carters would bid for the right to provide carting services within specific zones. The Proposed Action also has the potential to affect the commercial carting industry through the additional costs associated with regulatory compliance introduced by the Proposed Action, including health and safety training, hiring additional employees, and acquiring new equipment.

2. ***Would the Proposed Project indirectly substantially reduce employment or have an impact on the economic viability in the industry or category of business?***

Further analysis is required to determine whether the Proposed Action could result in a substantial reduction of employment or have an impact on the economic viability of the industry or a category of businesses within the industry. The CWZ Program would award a potential total of 68 contracts to commercial carters, lower than the approximately 95 carters which currently operate within the industry. Based on this limit, it is expected that some carters may decide to consolidate (e.g., smaller carters may partner with larger carters), or may remove themselves from the market.

In addition to estimating potential changes in industry employment, the detailed analysis will consider whether the Proposed Action could result in the disruption of commercial waste carting services (e.g., if commercial carters are not able to recoup the cost of compliance with the

⁷ Analysis of BIC, 2015, Private Carter Financial Statements and NYSDOL, 2015–2017, Occupational Wages for New York City Region accounts for approximately 2,600 workers for 74 reporting carters. While approximately 21 carters remain unaccounted in this data, these 21 carters make up approximately 5.3 percent of the commercial carting industry based on customer coverage.

Proposed Action through waste collection fees). Such disruptions would be an environmental concern because, without adequate servicing, commercial waste may remain on City streets, potentially negatively affecting neighborhood conditions, quality of life, and public health.

In addition, the Proposed Action has the potential to affect the costs associated with waste carting services and, therefore, the fees charged to commercial businesses for collection services. An increase in waste removal fees may affect the operating costs of neighborhood businesses and, thus may ultimately, their profitability and viability. Businesses burdened by higher waste costs may not be able to operate profitably and close or relocate, resulting in increased commercial vacancies within the City and the loss of employment associated with these businesses.

This preliminary assessment finds that a more detailed analysis is warranted in order to determine if the Proposed Action could result in significant adverse effects on the commercial carting industry or businesses that rely on the industry. See Section E, “Detailed Analysis of Potential Adverse Effects on Specific Industries.”

E. DETAILED ANALYSIS OF POTENTIAL ADVERSE EFFECTS ON SPECIFIC INDUSTRIES

APPROACH

The detailed analysis evaluates business conditions within the carting industry, including the interaction of commercial carters and commercial waste service customers, (commercial businesses) and the potential effects of the Proposed Action on the industry. Both analysis sections utilize the *CEQR Technical Manual’s* analysis format evaluating the existing condition as a baseline for analysis and then comparing that baseline to the No Action condition, and to the Proposed Action in the 2024 Analysis Year.

The Commercial Waste Carters section, below, assesses the potential for costs introduced by the Proposed Action to affect the carting industry or subsets of the industry and compares these costs to potential carter costs in the No Action condition. The Commercial Waste Service Customers section, below, assesses if the Proposed Action could increase pricing for carting services and place an undue burden on businesses, limiting their ability to successfully operate.

The assessment of potential effects on commercial carters begins by describing the existing operational and financial characteristics of the carting industry, particularly the expenses associated with the operation of the commercial waste carting industry. The analysis then considers the incremental cost to carters from the implementation of policies and regulations anticipated to take effect with or without the Proposed Action as described in Chapter 2, “Land Use, Zoning, and Public Policy,” including Local Law (LL) 145 of 2013 (LL145/2013), which requires all diesel carting trucks to implement Best Available Retrofit Technology (BART) such as diesel particulate traps or be equipped with a United States Environmental Protection Agency (EPA)-certified 2007 model year or later engine by January 1, 2020 and LL146 of 2013 (LL146/2013), which addresses citywide organics diversion. Finally, the operational expenses and operational efficiencies associated with the No Action condition and Proposed Action are estimated in order to evaluate their potential effect on the commercial carting industry’s ability to operate effectively under the Proposed Action.

Similarly, the assessment of potential effects on commercial waste service customers describes the major industry sectors served by the carting industry (e.g., manufacturing, office, non-food retail, food retail, food services, and hotel) and evaluates the costs associated with waste removal

services in the existing condition, the No Action condition, and Proposed Action. The case study areas are utilized to provide contextual and local analysis of costs and potential socioeconomic effects at smaller geographies compared to the City overall. The analysis models waste generation volume by industry sector and the prices charged to businesses for waste removal services. In both the No Action condition and Proposed Action, the potential changes in customer pricing, as a function of additional carter expenses, are assessed to understand whether potential changes in customers' rates could jeopardize the financial viability of businesses (customers) or a subset of businesses.

EFFECTS OF THE PROPOSED ACTION ON COMMERCIAL WASTE CARTERS

COMMERCIAL WASTE CARTERS—EXISTING CONDITION

This section describes the operational characteristics of the commercial carting industry. Currently, carters are able to collect waste from any business across the City, which achieves the basic goal of collecting the City's commercial waste; however, the system is inefficient. Nightly, lengthy collection routes extend across the City, with collection routes taking an average of 10 hours to complete. Based on routing data, dump ticket reporting and discussions with commercial carters, even with long routes, trucks do not necessarily fill to capacity, with trucks collecting approximately ½-ton at the low end to approximately 25 tons on the high end. On average, trucks fill to approximately 9 tons nightly.⁸ Some Community Districts are served by 50 or more carters, resulting in overlapping truck trips with dozens of trucks servicing the same individual commercial blocks, resulting in noise and air pollution. Under the current regulatory framework, competition for customers is high, and carters compete with each other to provide customers the lowest price, and as a result, safety and customer service are often sacrificed.

Business Composition of the Carting Industry

The commercial carting industry serves every commercial business within the City, from standalone retail to large office buildings. According to BIC's 2017 Q2–Q4 customer register, there are approximately 100,000 commercial waste customers within the City.⁹ Approximately 95 commercial carting companies service commercial customers within New York. Of those carters, 74 provided financial statements to BIC in 2015 (this covers approximately 78 percent of licensed carters, which service 95 percent of the commercial customers served by the carting industry).¹⁰ These 74 carters collectively employ an estimated 2,600 workers based on employment reported

⁸ Analysis of BIC, 2018, Private Carter Routing Data and BIC, 2018, Private Carter Dump Tickets

⁹ This dataset includes customer information reported by individual carters on a regular basis to BIC. The number of unique "customers" identified in the 2017 Q2–Q4 Carter Customer Register (these customers can also be understood conceptually as unique billing entities) is not linked to the number of commercial businesses serviced by carters, since in large office buildings carters may collect waste from multiple businesses but may only report the single building management company as the billing entity.

¹⁰ For the purpose of analysis, these 74 carters which have reported financial data, and service approximately 95 percent of total commercial waste market based on number of customers were used to represent the costs associated with operation of the commercial carting industry.

by carters in the 2015 BIC Private Carter Financial Statements including an estimated 1,800 field workers, operating approximately 975 waste collection trucks.^{11,12}

Of these 74 carters there are 50 carters considered small operators that each collect less than 1 percent of the commercial waste market, 16 carters considered medium operators that each collect between 1 and 3 percent of the commercial waste market, and 8 carters considered large operators that each collect more than 3 percent of the commercial waste market. Other carters beyond the 74 reporting carters either collect other types of waste (e.g., tires and grease) or did not accurately report revenues or expenses and are, therefore, uncounted within the 2015 Private Carter Financial Statements.

Carter Revenues

As self-reported by commercial carters in 2015 to BIC, during that year, the commercial carting industry reported generating approximately \$566 million in gross revenue.^{13,14} As the CWZ Program would only affect putrescible, recyclable and organic waste, other specialized waste streams would continue to be collected in the existing manner under existing City and State requirements, and are, therefore, not included in the commercial carter costs and revenues analysis. These excluded waste streams include construction and demolition (C&D), hazardous or radioactive waste, medical waste, electronic waste, textiles, yard waste (collected by landscapers), junk carter waste or one-time bulk waste services, grease, and paper that is collected for the purposes of shredding or destruction. Of the \$566 million in revenue generated from commercial carters that collect waste covered under the CWZ Program, \$445 million was generated in revenue from the collection of putrescible, organic, and recyclable waste, approximately 79 percent. The remaining \$122 million in revenue that these carters generate is from collecting material that is excluded from the CWZ program and will remain unchanged.

Carter Expenses

The operation of the commercial carting industry requires carters to take on numerous operational expenses associated with the collection of waste (including commercial waste covered by the Proposed Action, and other waste streams not covered by the Proposed Action) within New York City. These costs must be offset by the revenue carters collect from commercial businesses for the commercial carting industry to remain viable. Currently, based on data self-reported by commercial carters to BIC, the commercial carting industry incurs an estimated \$553 million in

¹¹ BIC, 2015, Private Carter Financial Statements

¹² Real employment within the industry is thus higher than the reported 2,600 workers since 21 commercial carters provided no financial reporting to BIC in 2015. It is more realistic to assume that employment ranges from 2,500 to 3,000, however for the purposes this analysis the reported 2,600 workers was utilized as the basis for calculations presented within the ~~DGEIS~~FGEIS.

¹³ BIC, 2015, Private Carter Financial Statements

¹⁴ Commercial carter revenues as reported by BIC, 2015, Private Carter Financial Statements. Dollar values have been adjusted for inflation and are presented in 2018 dollars. Note that this may not reflect the total revenue collected by the commercial waste industry as approximately 5 percent of the carting market (by market share) is not captured in the data and those reporting to BIC are potentially underreporting revenues.

NYC Commercial Waste Zone Program

operational expenses, such as employee payroll, waste disposal, fleet maintenance, and other expenses such as garage rental and utilities (see **Table 3-1**).^{15,16}

Table 3-1
2015 Commercial Carters Operating Expenses

Expense	Cost ¹	Percent of Total Expenses ²
Disposal Costs	\$203,270,074	37
Operating Payroll	\$149,450,237	27
Sales, General and Administrative Payroll	\$50,855,376	9
Total Payroll	200,305,613	36
Truck and Equipment	\$74,939,119	14
Other Expenses ³	\$74,733,006	14
Total	\$553,247,812⁴	100
Notes: ¹ Dollar values have been adjusted for inflation and are presented in 2018 dollars. ² Due to rounding, totals may not add up to 100 percent. ³ Other Expenses includes garage rental, utilities, insurance, office supplies, service vehicles, third-party labor, and other costs not associated with the day-to-day provision of commercial waste carting services. ⁴ Total expense reporting comes from the 74 commercial carters which submitted reporting to BIC in the 2015 Private Carter Financial Statements. This accounts for approximately 78 percent of licensed carters operating within New York City, and 95 percent of the carting market in terms of customers. Sources: BIC, 2015, Private Carter Financial Statements		

Disposal Costs

As shown in **Table 3-1**, disposal costs are the largest share of carter expenses. Annually, carters pay approximately \$203 million (approximately 37 percent of total expenses) to dispose of commercial waste at waste transfer stations throughout New York City. Carters pay waste transfer stations to process and then transport waste outside of New York City for disposal.

Payroll

Payroll costs carters approximately \$200 million per year, 36 percent of the total expense associated with the operation of the commercial carting industry. Operations payroll includes all payments to field workers employed by carters, including drivers, helpers, and support staff such as mechanics, dispatchers, and garage workers. Sales, general, and administrative payroll includes all payments to officers and administrative staff. NYSDOL Occupational Wage and QCEW data were used to estimate total industry employment and wages within the industry.¹⁷

In total, approximately 2,600 workers are employed by the 74 commercial carters that reported information to BIC in the 2015 Private Carter Financial Statements. Based on NYSDOL Occupational Wage data for the New York City Region, field staff make an estimated \$64,010 per annum, company officers make an estimated \$76,060 per annum, and administrative roles make

¹⁵ BIC, 2015, Private Carter Financial Statements.

¹⁶ BIC, 2015, Private Carter Financial Statements do not require carters to break out expenses by waste type; therefore, carter expenses also include expenses associated with collecting waste that the Proposed Action excludes, such as C&D debris, and medical waste.

¹⁷ NYSDOL, 2015–2017, Occupational Wages for New York City Region with comparisons from NYSDOL, 2015–2017, QCEW and NYSDOL, 2018 Prevailing Wage Schedule for Public Work

an estimated \$47,540 per annum.¹⁸ For the purposes of the socioeconomic analysis, it is assumed that all employees working for commercial carters are paid at the wages identified above.

Truck and Equipment

Trucks and equipment cost carters approximately \$75 million annually, representing approximately 14 percent of total expenses. This cost includes the purchase and maintenance of trucks and other equipment necessary to perform waste collection services. As reported by BIC 2015 Private Carter Financial Statements covering the 74 reporting carters, there are approximately 975 trucks within New York City's commercial carting fleet. The average age of a commercial waste truck is 12 years old.¹⁹ New trucks cost approximately \$300,000; however, the primary cost associated with operating the fleet is related to maintenance rather than the purchase of new equipment.²⁰

Other Expenses

Other expenses, including garage rental, utilities, insurance, office supplies, service vehicles, and any third-party labor contracted by a carting company, cost approximately \$75 million annually and represent approximately 14 percent of total expenses.²¹

While carters of varying sizes have differing expenses and break-even points, the carting industry overall generates approximately \$553 million in annual operational expenses. Currently, as reported by carters to BIC in 2015, total revenues associated with commercial carting, including C&D and other excluded waste streams, totaled approximately \$566 million. When compared with expenses, the industry generates operational profits of approximately \$13 million per year.²²

COMMERCIAL WASTE CARTERS—FUTURE WITHOUT PROPOSED ACTION

The No Action condition includes the current commercial waste industry and any regulatory changes to the industry expected by the Analysis Year of 2024, as described in Chapter 1, "Project Description."

As described in Chapter 2, "Land Use, Zoning, and Public Policy," policies to be implemented in the No Action condition include, but are not limited to, an increased collection of organic and recyclable waste by commercial carters, retrofit of older collection trucks with modern engine technology per LL145/2013, and installation of side guards on all commercial carting vehicles per LL156/2015. Compliance with these regulatory changes in the No Action condition will increase the costs associated with commercial waste collection and will require substantial investments by the commercial carting industry, which will increase the costs of commercial waste carting services. Therefore, this section describes the anticipated changes to the commercial carting industry in the No Action condition and estimates the incremental operating cost to the industry.

Recycling and Organics Collection Requirements

The City launched a progressive recycling program in 1989 (LL19 of 1989 codified at New York City Administrative Code §16-306), which mandated recycling requirements for City residents,

¹⁸ NYSDOL, 2014–2017, Occupational Wages for New York City Region. Wages have been adjusted for inflation and are presented in 2018 dollars.

¹⁹ BIC, 2017, LL145 of 2013 Compliance Plan Reports

²⁰ BIC, 2015, Private Carter Financial Statements

²¹ BIC, 2015, Private Carter Financial Statements

²² Analysis assumes that commercial waste carters are accurately reporting revenues to BIC through annual Private Carter Financial Statements. However revenues reported to BIC by commercial carters may be underreported.

NYC Commercial Waste Zone Program

businesses, and institutions. The Citywide Recycling Program requires curbside recycling of designated recyclable materials, including paper, cardboard, metal, glass, and plastic (MGP) as well as other materials such as textiles. On February 5, 2016, the DSNY adopted new rules to allow for single stream collection of recycling (i.e., when all designated recyclable MGP and paper are placed in the same bags or bins by a business) and co-collection of recyclables (i.e., when all designated recyclable MGP is source separated from designated paper by the business, but a private carter places the source-separated materials into the same compartment of a waste carting truck). The intent of the new rule was to help make commercial recycling easier to manage and increase diversion of recyclables from landfills.

As seen in **Table 3-2** it is estimated that in the No Action condition 30 percent of commercial waste would be collected as recyclables (i.e., cardboard, paper, and MGP) and 4 percent of commercial waste would be collected as organics throughout the City under the No Action condition.²³ This reflects a slight increase from existing conditions in which an estimated 24 percent of commercial waste is collected as recyclables and 1 percent is collected as organics throughout the City.²⁴ This improved diversion is anticipated to come about due to the potential introduction of single-stream recycling, increased enforcement, and other policies and programs as discussed in Chapter 2, “Land Use, Zoning, and Public Policy,” including the potential additional designation of commercial businesses to begin source-separating organics for collection per LL146/2013.²⁵

Table 3-2

No Action Condition Change in Diversion Rate

	Paper Cardboard MGP	Organics	Total Diversion
Existing Condition	24%	1%	25%
No Action Condition	30%	4%	34%
Change in Diversion Rate	6%	3%	9%
Sources:			
SNY, 2018, Transfer Station and Recycling Processor Reports			
DSNY, 2018, Private Operator Disposal System (PODS) Database			

²³ Collection rate refers to the percentage of designated recyclables and organics in the system.

²⁴ Current waste stream capture rates are estimated through comparison of DSNY, 2018, Transfer Station and Recycling Processor Reports and DSNY, 2018, PODS Database with total waste streams based on a waste characterization model derived from Census industry employment in New York City and waste intensities from CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California. It is estimated that increased enforcement and other City policies between the current year and the 2024 Analysis Year can increase capture rates by 15 percent for each waste stream compared to current conditions. It is assumed that at maximum no waste stream will reach a capture rate over 95 percent. With organics, the only organics material considered in the analysis is the organic material from the category of businesses covered by LL146/2013. The overall impact along with of increased enforcement is a potential increase in diversion by 9 percent in the No Action condition from existing conditions.

²⁵ The City estimates that approximately 250,000 tons of organic material is generated by the businesses specified in LL146/2013 if all businesses were designated and it included front and back-of-the-house material. Currently, the City has designated a portion of the businesses specified in LL146/2013 and only back-of-the-house material, which amounts to a small amount of the organic material available in the waste stream. The No Action condition contemplates full designation of all businesses specified in LL146/2013 and includes both front and back-of-house material.

In order to reach the diversion rate anticipated in the No Action condition, carters would need to run an estimated 4 percent more collection routes and employ 4 percent more field employees to service the additional collection routes.²⁶ It is expected that in order to service the increased collection routes an estimated 39 additional trucks and approximately 72 additional employees would be required.

Further, additional operational expenses and administrative costs would increase the cost of operation associated with diversion in the No Action condition. As seen in **Table 3-3**, in total, it is anticipated that the increase in the rate of diversion in the No Action condition would cost approximately \$15 million across the industry in the Analysis Year including the \$1.2 million necessary to acquire the additional trucks required to complete the additional diversion routes in the No Action condition.

Table 3-3
Cost Associated with 9-Percent Increase in the Rate of Diversion
in the No Action Condition

Expense	Cost
Disposal Costs	\$- ¹
Operating Payroll	\$6,017,190
Sales, General & Administration Payroll	\$2,047,547
Total Payroll	\$8,064,737
Truck and Equipment	\$3,017,211 ²
Other Expenses	\$3,008,912
Total	\$15,256,894
Notes: ¹ It is assumed that the cost of disposing of commercial waste will remain constant as the total amount of waste collected remains constant in the No Action condition. ² The costs of trucks and equipment includes the expense associated with acquiring additional trucks to service expanded diversion routes in the No Action condition.	
Sources: Analysis of BIC, 2015, Private Carter Financial Statements BIC, 2018, Private Carter Dump Tickets Waste Characterization Model based on Census industry employment in New York City and waste intensities from CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California	

Local Law 145 of 2013

LL145/2013 requires commercial carters to modify all diesel waste collection truck engines older than Model Year 2007 to reduce their emissions. Non-compliant vehicles must have new engines installed or have engines retrofit with pre-approved BART emissions controls by 2020. While compliance with LL145/2013 is not fully reported, a majority of commercial carters have filed Compliance Plan Reports with BIC in 2017 providing insight into the industry's existing level of compliance and future plans for compliance by the 2020 deadline.²⁷

²⁶ An estimated four percent increase in routes is attributed to differences in load weights of putrescible, recyclables, and organics loads. Recyclable and organic routes carry less material per drop-off than putrescible routes based on BIC, 2018, Private Carter Dump Tickets. Thus, to service nine percent more material as recyclables or organics instead of putrescible, an estimated four percent additional collection routes are needed.

²⁷ BIC, 2017, LL145/2013 Compliance Plan Reports provided by carters at the request of BIC.

NYC Commercial Waste Zone Program

Approximately 64 carters that fall under the scope of the CWZ Program submitted compliance data in 2017. As of summer 2017, approximately one third of the trucks that were reported to BIC were in compliance with LL145/2013.²⁸

Based on reporting by commercial carters to BIC and the additional vehicles introduced as a result of increased diversion in the No Action condition discussed above, approximately 1,014 commercial carting trucks would be accounted for within New York City in the scope of this analysis. Based on carter reporting, as shown in **Table 3-4** under LL145/2013, the 975 existing trucks are expected to become compliant utilizing the following compliance methods at the following rates: approximately 35 percent (approximately 341 trucks) are already compliant with LL145/2013; 22 percent (approximately 215 trucks) are anticipated to be replaced with new compliant trucks; 21 percent (approximately 205 trucks) would be retrofitted with BART; 16 percent (approximately 156 trucks) would be retrofitted with new engines; and 6 percent (approximately 59 trucks) would be removed from service. For the 39 added trucks due to the increased rate of diversion, it is assumed that they would be purchased new and therefore would be compliant with LL145/2013 (see **Table 3-4**).

Table 3-4
LL145/2013 Reported Compliance and Anticipated Cost

Compliance Method	Unit Replacement Cost	Count of Fleet¹	Retrofit Rate^{2,3}	Total LL145/2013 Cost	Annual LL145/2013 Cost⁴
Compliant	\$-	341	35%	\$-	\$-
Replaced	\$297,036	215	22%	\$63,714,222	\$6,371,422
BART	\$13,500	205	21%	\$2,764,125	\$276,413
New Engines	\$4,075	156	16%	\$635,700	\$63,570
Removed from Service	\$(2,964) ⁵	59	6%	\$(173,394)	\$(173,394)
Additional Diversion Trucks	\$-	39	-	\$-	\$-
Total		1,014		\$66,940,653	\$6,538,011
Notes: ¹ Due to rounding the fleet count as presented above may not total 1,014. ² The retrofit rate is based on the LL145 of 2013 Carter Compliance Plan Reports and assesses the rate of LL145 of 2013 compliance of the existing truck fleet (975 trucks), and does not include trucks introduced as a result of increased diversion in the No Action condition. ³ Due to rounding, the retrofit rate may not total 100 percent. ⁴ Due to the high cost of acquiring additional equipment, it is assumed that these costs would be distributed over a period of 10 years. ⁵ Vehicles removed from service are assumed to be sold for scrap at the identified rate. Sources: BIC, 2017, LL145/2013 Carter Compliance Plan Reports BIC, 2018, LL145/2013 Carter Compliance Reports					

Based on the reported compliance methods anticipated to be used by commercial carters to retrofit or replace vehicles per LL145/2013, the total anticipated costs for full fleet compliance is approximately \$67 million or if equipment acquisition costs are distributed over the course of 10 years, approximately \$6.5 million per annum.²⁹

²⁸ BIC, 2017 LL145/2013 Compliance Plan Reports provided by carters by request of BIC.

²⁹ BIC, 2017, LL145/2013 Carter Compliance Plan Reports.

Local Law 56 of 2015

LL56/2015 requires commercial waste collection trucks to be equipped with side guards by 2020 in an effort to decrease the number of serious or fatal injuries that occur as a result of a result of pedestrians or cyclists being run over by the front or rear axles of carting trucks during a side impact collision. Unlike LL145/2013 where carters have provided information related to their intent to comply with the law, the number of vehicles already in compliance with LL56/2015 is unknown. Therefore, it is assumed that under the No Action condition, to be compliant with LL56/2015, the entire commercial carting fleet will have to be equipped with side guards. The purchase and installation of side guards is estimated at approximately \$3,000 per vehicle, and these costs are anticipated to be distributed over 8 years.³⁰ The total cost of bringing the commercial carting fleet into compliance with LL56/2013 would require the retrofitting of the entire 1,014 vehicle fleet at a cost of approximately \$3 million which totals approximately \$380,346 per annum over the course of 8 years.

No Action Incremental Costs

In total, in the No Action condition, the commercial carting industry is expected to increase operational costs as a result of increased diversion by 4 percent, retrofitting of trucks to comply with new emissions requirements, and installation of side guards on all commercial carter trucks. As seen in **Table 3-5** these expenses are expected to total approximately \$22 million per year assuming that costs associated with LL145/2013 are distributed over the course of 10 years and the costs associated with LL56/2015 over 8 years. Again, in addition to the costs associated with these policies in the No Action condition, carters are expected to acquire an additional 39 trucks, and employ approximately 72 additional staff to account for the increased routes as a result of the increased rate in diversion.³¹

Table 3-5
Additional Carter Expenses in the No Action Condition

No Action Policy	Annual Expense
LL145/2013	\$6,538,011 ¹
LL56/2015	\$380,346 ²
Diversion	\$15,256,894
Total Expense	\$22,175,250
Notes: ¹ The costs of LL145/2013 are anticipated to be distributed over the course of 10 years. This 10-year span is meant to account for the 3 years between the LL145/2013 Compliance Plan Report year (2017) and the final compliance date according to legislation (2020) plus an additional 7 years from the date of last truck purchase due to the normal depreciable life of a truck, which is 7 years. ² The costs of LL56/2015 are anticipated to be distributed over the course of 8 years. This 8-year span is meant to account for the duration between the initiation of the policy (2015) and the final compliance date according to legislation (2023). Sources: BIC, 2017, LL145 of 2013 Carter Compliance Plan Reports BIC, 2018, LL145 of 2013 Carter Compliance Reports	

³⁰ New York City Office of the Mayor, Feb. 9, 2015, “City Begins Installing Truck Sideguard to Protect Pedestrians and Cyclists”

³¹ Increased diversion of organic and recyclable material in the No Action condition is not anticipated to result in additional revenues to commercial carters.

NYC Commercial Waste Zone Program

In total, as seen in **Table 3-6**, as a result of the additional annual expenses commercial carters will incur in the No Action condition, the cost of providing commercial carting services in the No Action condition is anticipated to rise by approximately 4 percent (\$22 million), from approximately \$553 million to \$575 million.

Table 3-6
Commercial Carter Expenses in the No Action Condition

Expense Category	Total Expense		No Action Increment	
	Existing Condition ¹	No Action Condition	Cost	Percent Change
Disposal Costs	\$203,270,074	\$203,270,074	\$-	0%
Operating Payroll	\$149,450,238	\$155,467,428	\$6,017,190	4%
Sales, General & Administration Payroll	\$50,855,376	\$52,902,923	\$2,047,547	4%
Total Payroll	\$200,305,614	\$208,370,351	\$8,064,737	4%
Truck and Equipment	\$74,939,120	\$86,040,720	\$11,101,600	15%
Other Expenses	\$74,733,006	\$77,741,918	\$3,008,912	4%
Total	\$553,247,814	\$575,423,064	\$22,175,250	4%
Notes: ¹ Dollar values have been adjusted for inflation and are presented in 2018 dollars. Sources: BIC, 2015, Private Carter Financial Statements BIC, 2017, LL145 of 2013 Carter Compliance Plan Reports BIC, 2018, LL145 of 2013 Carter Compliance Reports				

The expenses associated with operation in the No Action condition as a result of compliance with existing Local Laws and increased diversion rates may be too large for some commercial carters to bear without increasing the price of waste collection services. However, if the costs are too great it is anticipated that some commercial carters would exit the market or cease operations in the No Action condition.

Secondary Employment Market

In the No Action condition, as seen in **Table 3-2**, it is anticipated that diversion would increase by approximately 9 percent over the existing rate of diversion. In response to this increased rate of diversion in the No Action condition, the secondary recycling market would require additional sorting capacity, and therefore is expected to require additional workers to manage and sort the additional diverted waste. The NYSDOL QCEW reports approximately 400 employees working in materials recovery facilities in New York City.³² ~~With a net increase in diversion rate of by 9 percent over the existing condition, it is anticipated that approximately could have the potential to generate approximately 139 additional jobs could be generated in the secondary market under the No Action condition.~~

COMMERCIAL WASTE CARTERS—FUTURE WITH PROPOSED ACTION

The Proposed Action condition evaluates the changes to socioeconomic conditions of commercial waste carters as a result of the implementation of the Proposed Action.

Under the Proposed Action, the City of New York would implement a zoned commercial waste collection system throughout the five boroughs. Under this system, each of the 20 zones would

³² DSNY, 2016, Private Carting Study

have three to five commercial carters collecting waste from commercial customers within the specific zone, with 14 zones having 3 commercial carters, 4 zones having 4 commercial carters and 2 zones having 5 commercial carters operating within each zone. In total, up to 68 contracts would be awarded for commercial waste collection within New York City. With multiple carters allowed to operate within a zone, there are opportunities for various sized carters to win zone contracts. Smaller carters may benefit from a strong local presence in a given zone and knowledge of a particular neighborhood in the evaluation of proposals. The CWZ Program also accounts for the current market structure and gives carters of all sizes the opportunity to compete in the new system. Additionally, the City would promote opportunities for an array of different carters by accepting proposals submitted by a consortium of carters or organized through a broker and by allowing subcontracting in certain circumstances in order to ensure commercial waste collection is done effectively and efficiently based on the criteria outlined in the Implementation Plan.

However even if, despite numerous opportunities for carters to engage in competitive bidding, carters are unable to submit competitive bids in response to the CWZ Request for Proposals (RFP), as the Proposed Action only affects the collection of certain commercial waste streams (i.e., putrescible, recyclable and organic waste), commercial carters that do not win bids to collect commercial waste under the Proposed Action may elect to collect other waste streams such as C&D.

In order to receive a zone to collect waste, in response to a RFP to be developed in coordination with carters and businesses, commercial carters would prepare and submit competitive proposals to DSNY for review. Proposals would be evaluated on criteria outlined in the RFP that would determine which carters provide the best overall value consistent with program goals and service requirements. Each proposal would be evaluated based on designated criteria to determine an overall weighted score of each proposal, with pricing accounting for at least 40 percent of the overall weighted score. In addition to price, the RFP is anticipated to include a number of requirements that carters would implement in order to demonstrate compliance with applicable policies. As complying with these additional policies would be required for commercial carters to receive a service contract under the CWZ Program, they are considered part of the Proposed Action and, therefore, must be analyzed for the purposes of environmental review.

Operational Expenses

Expenses under the Proposed Action include the installation of Global Positioning Systems (GPS) devices on all commercial carter trucks, an enhanced health and safety program, a City Administration fee, free waste assessments, and the establishment of a customer hotline and call center to respond to customer concerns. In addition to these additional costs associated with the Proposed Action, it is anticipated that the rate of commercial waste diversion would increase (due to increased recycling and organics collections) under the Proposed Action, adding to the costs associated with complying with the CWZ Program.

In addition to the additional costs associated with the Proposed Action, the Proposed Action is expected to provide expense savings as a result of zone route efficiencies (ZRE) which would reduce the overlapping of routes and time necessary to complete a route. These efficiencies are expected to reduce the total expense associated with truck operations, including the amount of gas purchased by carters, truck maintenance, and payroll associated with long and inefficient routing.

Under the Proposed Action, carters that win zone contracts would be obligated to meet certain contractual requirements aligned with the City's program goals and objectives. As stated in Chapter 1, "Project Description," the overall goal of the CWZ Program would be to reduce the existing overlap of commercial carting routes and reduce truck traffic and its emissions, and

NYC Commercial Waste Zone Program

enhance worker and pedestrian safety, transparency in contracting, and customer service. Meeting this goal would require operational changes for carters awarded service contracts, including additional costs associated with the effort to increase the amount of material that is to be diverted from the commercial waste stream, as well as savings associated with ZRE as a result of the Proposed Action.

Diversion

Similar to the No Action condition, under the Proposed Action commercial carters are anticipated to increase the rate of material diverted from the commercial waste stream destined for disposal. As shown in **Table 3-7** it is anticipated that as a result of the Proposed Action, the rate of material diverted would increase to 44 percent as a result of further policies to be incorporated into the solicitation process, including the requirement that all carters submit a zero waste plan, which would further incentivize diversion of commercial waste in the Proposed Action. In total these diversion policies would result in an increase in diversion by approximately 10 percent over the No Action condition.

Table 3-7
Proposed Action Anticipated Change in Diversion Rate

	Paper Cardboard MGP	Organics	Total Diversion¹
Existing Condition	24%	1%	25%
No Action Condition	30%	4%	34%
Proposed Action Diversion Rate	38%	6%	44%
Change in Diversion Rate between No Action condition and Proposed Action	8%	2%	10%
Notes: ¹ Due to rounding percentages may not equal 100 percent Sources: DSNY, 2018, Transfer Station and Recycling Processor Reports DSNY, 2018, PODS Database			

In order to meet this increased rate of diversion under the Proposed Action, commercial carters are expected to operate 5.7 percent more routes as compared to the No Action condition (9.7 percent more routes than in the existing condition) in order to collect the additional diverted material. As a result the carting industry is expected to hire additional employees and purchase additional vehicles to service the additional routes necessary to collect the additional diverted material. In total, increasing the rate of diversion by 5.710 percent over the No Action condition would require a 5.7 percent increase in routes. This increase in routes would require the carting industry the employment of to employ an additional 103 field workers, and ~~the purchase of~~ 56 additional trucks over the employment and equipment necessary to operate in the No Action condition. As seen in **Table 3-8**, the total costs anticipated with the increased rate of diversion are approximately \$34 million.

Table 3-8

**Cost Associated with a 10 Percent Increase in the Rate of Diversion
in as a result of the Proposed Action**

Expense	Cost
Disposal Costs ¹	\$- ¹
Operating Payroll	\$14,496,673
Sales, General & Administration	\$4,932,971
Total Payroll	\$19,429,645
Truck and Equipment	\$7,269,095
Other Expenses	\$7,249,102
Total	\$33,947,841
Notes: ¹ It is assumed that the cost of disposing of all commercial waste will remain constant as the total amount of waste collected (including putrescible, recyclable, and organic) remains constant in the Proposed Action; therefore the cost of disposal is not anticipated to increase as a result of the increased rate of diversion as a result of the proposed action.	
Sources: Analysis of: BIC, 2015, Private Carter Financial Statements BIC, 2018, Private Carter Dump Tickets Waste Characterization Model based on Census industry employment in New York City and waste intensities from CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California	

Zone Routing Efficiencies (ZRE)

As stated above, one of the goals of the Proposed Action is to increase the efficiency of the commercial carting industry by reducing the amount of overlapping routes and reducing the time necessary to collect the same amount of material. Private carter routing data from 2018 indicates that, in the existing condition, the average route takes just under 10 hours to complete, while, in the Proposed Action, due to the proximity of customers in the zoned system the average route is anticipated to take approximately 7 hours to complete.³³

On average, the ZREs introduced as part of the Proposed Action are anticipated to reduce the expenses associated with the operation of the commercial carting industry by approximately 31 percent. This includes reductions to the cost of gas, equipment, and maintenance. Further, it is anticipated that due to ZRE the expense associated with field worker payroll would be reduced by approximately 11 percent as fewer routes and employees would be necessary to collect commercial waste within New York City.³⁴ It is anticipated that the operational expenses associated with the commercial carting industry under the Proposed Action before ZREs are implemented total approximately \$594 million per year (see **Table 3-9**).³⁵

³³ Analysis of BIC, 2018, Private Carter Routing Data

³⁴ The projected decrease in employee payroll generated by route efficiencies does not necessarily equate to a reduction in workers' annual wages. There are numerous factors that would influence potential changes in workers' wages, including for example the nature of employment contracts, compensation for overtime, and accounting for the additional effort required for an individual worker to collect a similar amount of waste in a shorter amount of time.

³⁵ **Table 3-8** summarized the total cost of commercial carting operations in the Proposed Action condition before ZRE have been applied to the carter expenses. This is the sum of the operational costs presented in the existing condition plus the costs associated with compliance with LL145/2013, and LL56/2015 under

Table 3-9

**Operational Expense Reduction as a Result of Zone Routing Efficiencies
Introduced by the CWZ Program**

Expense	Pre-ZRE Expense	ZRE Reduction	Post-ZRE Expense
Disposal Costs	\$203,270,074	\$- ¹	\$203,270,074
Operating Payroll	\$163,946,911	\$(18,526,001)	\$145,420,910
Sales, General & Administration Payroll	\$55,788,347	\$-	\$55,788,347
Total Payroll	\$219,735,259	\$(18,526,001)	\$201,209,258
Truck and Equipment	\$89,126,571	\$(27,540,110)	\$61,586,461
Other Expenses	\$81,982,108	\$-	\$81,982,108
Total	\$594,114,011	\$(46,066,111)	\$548,047,900
Notes: ¹ It is assumed that the cost of disposing of all commercial waste will not be impacted by routing efficiencies as the total amount of waste collected remains constant. Sources: BIC, 2015, Private Carter Financial Statements BIC, 2018 Private Carter Routing Data			

As seen in **Table 3-9**, as a result of the CWZ Program and the application of ZREs, carter operating expenses are anticipated to be reduced to approximately \$548 million per year, a reduction of approximately \$46 million over pre-ZRE operations. Due to more efficient routing and loading as a result of ZRE, the commercial carting industry would require less payroll and fewer trucks as compared to the No Action condition. Under the Proposed Action, the commercial carting industry would require an estimated fleet of 739 trucks, and employ and estimated 1,751 field staff in order to collect commercial putrescible waste, recyclables, and organics within New York City.

Additional Proposed Action Expenses

In addition to the operational expenses associated with the Proposed Action identified above, the Proposed Action would include requirements for commercial carters to purchase additional equipment, such as GPS units, as well as provide additional services to commercial carting customers, including free waste assessments, and dedicated customer hotlines. These additional equipment purchases and the provision of additional services are anticipated to add additional expenses to the operation of the commercial carting industry, which would not be assessed on the industry in the No Action condition. In total these additional equipment expenses represent approximately 2 percent of total Proposed Action operating expenses.

GPS Units

Compliance with the CWZ Program would require the commercial carting industry to add GPS units to all trucks used to collect commercial waste. GPS units allows carters to better track vehicles and help improve route performance. For a conservative approach, since existing information on GPS unit utilization is unavailable, it is assumed that no trucks currently have these technologies and that GPS devices would need to be installed on all approximately 739 commercial carting vehicles in the Proposed Action. GPS devices range in cost from \$50 to \$400 depending on the device.³⁶ In addition to these costs, GPS data management costs approximately

the No Action condition, as well as the Proposed Action operational condition costs associated with a 9.7 percent increase in routes due to increased diversion over the existing condition.

³⁶ Review of GPS device costs in the market

\$240 per truck per year.³⁷ In order to calculate this cost the average price for adequate GPS equipment (\$225) was used to determine the added cost per vehicle in the industry.

As seen in **Table 3-10**, based on the unit price of \$225 per GPS unit, and the \$240 annual data management fee, the total cost of bringing 739 commercial carting vehicles into compliance with the requirements of the CWZ Program would cost approximately \$343,670 in the 2024 Analysis Year, with the \$177,378 GPS data service fee assessed every year after.

Table 3-10
Proposed Action Cost of GPS Units and GPS Data Service

Equipment	Unit Cost	Compliance Cost ¹
GPS Units	\$225	\$166,292
GPS Data Service	\$240	\$177,378
Total		\$343,670
Notes:		
¹ Assumes a commercial carting fleet size of approximately 739 vehicles.		
Sources:		
Assessment of multiple GPS service provider companies on the market.		

Enhanced Health and Safety Program

As described in Chapter 1, “Project Description,” one of the goals of the CWZ Program is to improve training and safety standards to make the industry safer for workers and the public. Under the Proposed Action, commercial carters would be required to implement an enhanced health and safety program, which would include the purchase of personal protective equipment (PPE), including cut-resistant gloves, safety vests, and safety glasses for all commercial waste field employees, and biannual safety training for all employees. For the purposes of this analysis, it is assumed that all carters are expected to purchase new PPE for all employees as a result of the Proposed Action and would provide safety training to all staff during the 2024 Analysis Year. It is anticipated that the annual impact of PPE and safety training in future years would be lower as compared to the 2024 Analysis Year.

Safety training includes the cost associated with paying to provide training for commercial carting staff, as well as the payroll expense associated with paying staff to participate in the training program. As outlined in the Implementation Plan, health and safety training is anticipated to take approximately 16 hours for workers to complete. Per employee, safety training costs are approximately \$300 (not including wages), with wage compensation for the safety course costing approximately \$466 per field staff.

Post-ZRE field employment under the Proposed Action would total approximately 1,751 workers. As seen in **Table 3-11**, the total cost of PPE as a result of the Proposed Action would be approximately \$1 million.³⁸ In addition, the cost of safety training for all field employees in the 2024 Analysis Year (including fees and wages) would be approximately \$1.3 million. In total, in the 2024 Analysis Year, the cost of an enhanced health and safety program in the Proposed Action would total approximately \$2.3 million.

³⁷ Review of GPS service costs in the market

³⁸ The unit cost for PPE of \$580 per employee is estimated based on purchase costs for cut-resistant gloves, latex/nitrile gloves, reflective jackets, puncture-proof work boots, safety glasses, and ear plugs for all field staff based on market price research.

Table 3-11
Proposed Action Cost of Health and Safety Program

Expense	Unit Cost	Compliance Cost ¹
Personal Protective Equipment	\$580	\$1,015,853
Safety Training (Fee) ²	\$300	\$525,441
Safety Training (Wages)	\$466	\$815,660
Total		\$2,356,953
Notes: ¹ Assumes approximately 1,751 field employees are employed by the commercial waste industry in the 2024 Analysis Year. ² Fee is the per-employee cost paid to a third-party to provide safety training. Sources: BIC, 2015, Private Carter Financial Statements NYSDOL, 2015–2017, Occupational Wages for New York City Region Market research on PPE equipment and safety training fees.		

City Administrative Fee

As part of the Proposed Action, DSNY would staff a new Division of Commercial Waste to administer the CWZ Program. In order to recover the costs associated with oversight of the CWZ Program, DSNY would levy an administrative fee on commercial carters operating under the CWZ Program. This administrative fee is anticipated to total no more than 1 percent of commercial carters gross operating revenues.

Free Waste Assessments for Customers

In an effort to increase the transparency of the commercial waste carting industry, as part of the Proposed Action, commercial carters would be required to provide free third-party waste assessments to customers. While free waste-assessments would occur in the transition period before full implementation of the CWZ Program, in the 2024 Analysis Year, the cost of providing waste assessments would be a cost directly incurred by carters as a result of the Proposed Action and is therefore included in this analysis. Based on the number of commercial carting customers in New York City (approximately 100,000) and the assumption that a quarter of those customers would request assessment services, within the transition period, approximately seven full-time staff would need to be hired in order to complete free waste assessments by the 2024 Analysis Year.³⁹ In total, based on the additional cost of employing these waste assessors, it is anticipated that third-party waste assessments would cost commercial carters approximately \$1.4 million by the 2024 Analysis Year.⁴⁰

Customer Hotline and Call Center

As stated in Chapter 1, “Project Description,” one of the goals of the CWZ Program is to strengthen customer service standards and establish accountability. As part of the implementation of the Proposed Action, commercial carters bidding on and subsequently operating within commercial carting zones would be required to establish a call center to assist customers to resolve issues such as missed pickups or late payments. It is anticipated that, in order to provide these hotline and call center services, all commercial carters would need to employ additional office staff to answer calls and assist customers, as the number of carters that include such service under the existing condition is not known. It is anticipated that, under the Proposed Action, hotline

³⁹ BIC, 2017 Q2–Q4, Private Carter Customer Register.

⁴⁰ Assumes employees can conduct, on average, seven assessments per day, work 8-hour shifts 5 days a week, and are paid \$100 per hour to conduct waste assessments.

employees would work regular 8-hour shifts, 6-days-a-week, at a rate of \$15 per hour. In total, in order for the carting industry to have a sufficient number of call center employees to adequately service all commercial carting customers within New York City (approximately 100,000), the commercial carting industry is expected to employ approximately 73 additional staff, a cost of approximately \$3.4 million per annum.

Anticipated Expenses as a Result of the CWZ Program

As shown in **Table 3-12**, the additional operating expenses associated with the implementation of the Proposed Action would total approximately \$13 million in the 2024 Analysis Year. After applying the efficiencies associated with the Proposed Action to the cost of operation and the additional costs associated with the Proposed Action, the total operating expenses of the commercial carting industry are anticipated to be approximately \$561 million in the 2024 Analysis Year.

Table 3-12
Total Anticipated Expenses to Commercial Carting Operations
as a Result of the CWZ Program

Expense Category	Existing Condition	No Action Condition	Proposed Action Post-ZRE Operational Expense	Additional Proposed Action Expenses	Total Proposed Action Expenses
Disposal Costs	\$203,270,074	\$203,270,074	\$203,270,074	\$ ⁻¹	\$203,270,074
Operating Payroll	\$149,450,238	\$155,467,428	\$145,420,910	\$815,660	\$146,236,570
Sales, General & Administration (SGA) Payroll	\$50,855,376	\$52,902,923	\$55,788,347	\$4,855,050	\$60,643,397
Total Payroll	\$200,305,614	\$208,370,351	\$201,209,258	\$5,670,710	\$206,879,967
Truck and Equipment	\$74,939,120	\$86,040,720	\$61,586,461	\$1,182,145	\$62,768,606
Other Expenses	\$74,733,006	\$77,741,918	\$81,982,108	\$6,366,506	\$88,348,613
Total	\$553,247,814	\$575,423,064	\$548,047,900	\$13,219,360	\$561,267,260
Notes: ¹ It is assumed that the cost of disposing of all commercial waste will remain constant as the total amount of waste collected (including putrescible, recyclable and organic) remains constant in the Proposed Action; therefore the cost of disposal is not anticipated to increase as a result of the increased rate of diversion as a result of the proposed action.					
Sources: BIC, 2015, Private Carter Financial Statements Previous Analyses as Indicated in this Chapter.					

Compared to the operational expenses found in the No Action condition (\$575 million), operational expenses for the commercial carting industry are anticipated to decrease as a result of the ZRE introduced as part of the CWZ Program as less resources are needed to service customers as a result of more efficient routes across the industry. As seen in **Table 3-13**, the total operational costs associated with commercial waste carting in the Proposed Action would total approximately \$561 million in the 2024 Analysis Year. As compared to the No Action condition, the Proposed Action would reduce total carter operational expenses by approximately 2 percent, including a reduction in the total expense associated with trucks and equipment of approximately 27 percent, a reduction in operational payroll by approximately 3 percent, an increase in SGA payroll by approximately 5 percent, and an increase in other expenses by approximately 14 percent.

Table 3-13
Change in Commercial Carter Operational Expenses
as a Result of the CWZ Program

Expense Category	Existing Condition	No Action Condition	Proposed Action	Change Between Existing Condition and Proposed Action		Change Between No Action Condition and Proposed Action	
				Count	Percent	Count	Percent
Disposal Costs	\$203,270,074	\$203,270,074	\$203,270,074	\$-	0%	\$-	0%
Operating Payroll	\$149,450,238	\$155,467,428	\$151,091,620	\$(3,213,668)	-2%	\$(9,230,858)	-6%
Sales, General & Administration Payroll	\$50,855,376	\$52,902,923	\$55,788,347	\$9,788,021	19%	\$7,740,474	15%
Total Payroll	\$200,305,614	\$208,370,351	\$206,879,967	\$6,574,353	3%	\$(1,490,384)	-1%
Truck and Equipment	\$74,939,120	\$86,040,720	\$62,768,606	\$(12,170,514)	-16%	\$(23,272,115)	-27%
Other Expenses	\$74,733,006	\$77,741,918	\$88,348,613	\$13,615,607	18%	\$10,606,695	14%
Total	\$553,247,814	\$575,423,064	\$561,267,260	\$8,019,446	1%	\$(14,155,804)	-2%
Sources: BIC, 2015, Private Carter Financial Statements Previous Analyses as Indicated in this Chapter.							

As seen in **Table 3-13**, compared to the No Action condition, the Proposed Action expenses associated with trucks and equipment would be reduced by approximately 27 percent, and payroll expenses would decrease by 1 percent. Despite the requirements to purchase additional GPS and personal safety equipment in the Proposed Action, commercial carters are expected to have lower expenses as a result of zoning efficiencies and the reduction in trucks necessary to collect commercial waste in New York City. As seen in **Table 3-14**, in the Proposed Action, it is anticipated that approximately 739 trucks would be required to effectively and efficiently collect commercial waste within New York City, a reduction of approximately 275 vehicles compared to the No Action condition (in which it is anticipated a total of 1,014 vehicles would be required to collect a similar amount of waste).

Table 3-14
Changes to Trucks as a Result of the CWZ Program¹

Unit	Existing Condition	No Action Condition	Proposed Action	Change Between Existing Condition and Proposed Action		Change Between No Action and Proposed Action	
				Count	Percent	Count	Percent
Trucks	975 ¹	1,014	739	(236)	-24%	(275)	-27%
Notes: ¹ Based on 74 reporting carting companies, representing 95% <u>percent</u> of the commercial waste carting market in terms of customers. Sources: BIC, 2015, Private Carter Financial Statements NYSDOL, 2015–2017, Occupational Wages for New York City Region Previous Analyses as Indicated in this Chapter.							

The reduction in operational expenditures in the Proposed Action is primarily the result of operational efficiencies associated with the consolidated and efficient routing of commercial carters under the CWZ Program. As seen in **Table 3-13**, compared to the No Action condition, the Proposed Action has an approximately 1 percent reduction in payroll expenses as a result of the CWZ Program. This reduction is the result of the lower level of employment necessary to efficiently service commercial businesses in the Proposed Action. As seen in **Table 3-15**, in the Proposed Action, it is anticipated that approximately 2,631 workers would be employed by the commercial carting industry, approximately 41 fewer total employees than would be required in the No Action condition (2,672).

Table 3-15
Changes to Employment as a Result of the Proposed Action¹

Unit	Existing Condition	No Action Condition	Proposed Action	Change Between Existing Condition and Proposed Action		Change Between No Action and Proposed Action	
				Count	Percent	Count	Percent
Field Employees	1,800	1,872	1,751	(49)	-3%	(121)	-6%
Office Employees	800	800	880	80	10%	80	10%
Total Employment	2,600	2,672	2,631	31	1%	(41)	-2%
Notes: ¹ Employment calculations are based on carter-reported employment from BIC 2015, Private Carter Financial Statements, with 74 carters responding. Exact employment may differ and this could change the total employment count, however as adjustments made in the No Action condition and Proposed Action are proportional adjustments the rates of change between the existing, No Action condition and Proposed Action would remain constant.							
Sources: BIC, 2015, Private Carter Financial Statements NYSDOL, 2015–2017, Occupational Wages for New York City Region Previous Analyses as Indicated in this Chapter.							

Proposed Action Secondary Employment Market

As a result of the Proposed Action, the commercial carting industry serving New York City would require approximately 121 fewer field employees to collect commercial waste than in the No Action condition. While these jobs would no longer be in the traditional commercial carting industry, it is likely that, as a result of the CWZ Program, additional secondary employment opportunities would open up to workers with previous experience in commercial waste management. The rate of diverted material is anticipated to increase by 19 percent under the Proposed Action from the existing condition; therefore, it is anticipated that the secondary sorting market would require a requisite increase in employment in order to sort and process the additional divertible waste collected. The NYSDOL QCEW reports approximately 400 employees working in materials recovery facilities in New York City. With a net increase in diversion rate of 19 percent over the existing condition, it is anticipated that approximately 304 additional jobs could be generated in the secondary market under the Proposed Action, an increase of approximately 165 jobs over the potential employment from the secondary market in the No Action condition.

EFFECTS OF THE PROPOSED ACTION ON COMMERCIAL WASTE CUSTOMERS

The Proposed Action would change the operational characteristics of the commercial carting industry with the intent of creating a more efficient and transparent carting industry, which is organized more efficiently and provides a higher level of service to commercial carting customers (commercial businesses). Changes to the commercial waste system, therefore, have the potential

to affect businesses that utilize commercial waste carting services. The changes to commercial carting services as a result of the Proposed Action are analyzed in this section to determine whether the cost of service associated with commercial waste collection would increase to a level where the service would be unaffordable to specific categories of commercial waste generators, or waste generators within specific neighborhoods. Commercial waste generators include all private businesses within the City, such as restaurants, commercial offices, manufacturing businesses, hotels and retail stores. Waste from institutional uses, such as museums, and schools, as well as households and public facilities, is collected by DSNY and would not be affected by the Proposed Action. Further, as described earlier in this Chapter, the CWZ Program excludes other waste streams including C&D, hazardous or radioactive waste, medical waste, electronic waste, textiles, yard waste (collected by landscapers), junk carter waste or one-time bulk waste services, grease, and paper that is collected for the purposes of shredding or destruction.

COMMERCIAL WASTE CUSTOMERS—EXISTING CONDITION

In the existing condition, private businesses contract with commercial carters to remove waste on a regular schedule with fixed-rate pricing based on the weight or volume of waste collected. While individual businesses negotiate the price with carters, removal costs cannot exceed a price cap imposed by BIC. This cap can be adjusted every two years to reflect external influences on the carting industry, and to adjust for inflation. Most recently, the price cap was adjusted in August 2018, and the current price cap for waste removal is \$13.62 per 100 lbs. of waste and \$20.76 per cubic yard (cu. yd.) of waste. BIC Carter Customer Register data and discussions with carters and commercial businesses suggest that most businesses in New York City pay a rate lower than the ceiling rate. Based on BIC, 2017 Q2–Q4, Private Carter Customer Register data this analysis models commercial carting costs using the median rate of \$10.00 per 100 lbs. of commercial waste.⁴¹

As different industries produce varying amounts of waste, waste generation and cost models based on reported employment were developed to determine (1) the amount of waste produced within a specific geographic area and (2) the total and average cost of waste removal services for businesses.⁴² Data collected from the Longitudinal Employer-Household Dynamics (LEHD) database (a product of the United States Census Bureau) and supplemented with data provided by Esri Business Analyst was used for the basis of the waste generation model. For the purpose of the analysis, employment reported for a range of North American Industry Classification System (NAICS) categories were combined to form a set of specific use categories. For example, businesses and employment counts reported for the Information (NAICS 51); Finance and Insurance (NAICS 52); Real Estate and Leasing (NAICS 53); Professional, Scientific, and Technical Services (NAICS 54); Management of Companies and Enterprises (NAICS 55); Administration and Support (NAICS 56); and Health Care and Social Assistance (NAICS 62) sectors were assumed to be the primary occupants of office space and are, therefore, assumed to compose the office industry sector. Overall, the analysis included manufacturing, office, non-food retail, food retail, food services, and hotel uses distinguished by the following NAICS codes:

- Manufacturing (NAICS codes 21, 22, 31, 32, 33, 48, 49);

⁴¹ BIC, 2017 Q2–Q4, Private Carter Customer Register

⁴² The employee-based revenue model utilized assumes single stream waste production and does not break waste production down into specific waste streams (i.e., putrescible, recyclable, and organic).

- Office⁴³ (NAICS codes 51, 52, 53, 54, 55, 56 and 62,);
- Non-food retail⁴⁴ (NAICS codes 42, 441, 442, 443, 444, 446, 447, 448, 451, 452, 453);
- Food-retail (NAICS code 445);
- Food Services: Restaurants and Bar (NAICS code 722); and
- Hotel (NAICS code 721).

Use-specific waste generation ratios, reported on a per-employee basis were then applied to estimate the amount of waste generated by the specific industry sectors. Commercial waste generation rates from the State of California “CalRecycle” program were utilized to model waste generation in New York City.⁴⁵ Waste generation ratios from the CalRecycle program were developed in 2014 and are based on a comprehensive review of waste generation and waste composition of commercial waste producers in California.⁴⁶ Waste generation ratios are expressed in pounds per employee and provide additional detail on waste composition.⁴⁷ **Table 3-16** shows the employee-based waste generation rates utilized in the analysis.

Table 3-16
Employment-based Waste Generation Rates

Industry Sector	Generation Rate ¹	
	Lbs. per Employee per Year	Tons per Employee per Year
Manufacturing ²	3,540	1.77
Office ³	2,747	1.37
Non-Food Retail	4,820	2.41
Food Retail	13,280	6.64
Food Services	5,820	2.91
Hotel	4,260	2.13
Notes:		
¹ Waste generation rates assume that all waste is collected as a single stream and that diversion of waste would not result in a net decrease in waste produced, just a change to the compositional ratio of waste produced.		
² The manufacturing rate used for analysis is calculated by averaging the waste generation rates of electronic, food, and all other manufacturing generation rates found in the CalRecycle model.		
³ The office rate used for analysis is calculating the average waste generation rate of management, professional, and health services found in the CalRecycle Model.		
Sources:		
CalRecycle, Sept 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California.		

⁴³ Health care and social assistance were considered to be office waste streams as medical waste is collected by specialty carters, and the remaining waste produced is likely to be more similar to large offices than other industry categories.

⁴⁴ Wholesale businesses are included within non-food retail, as within New York City, these businesses are more similar in character to retail stores as opposed to larger industrial wholesalers found in other regions.

⁴⁵ *CEQR Technical Manual* Waste Generation Rates were not utilized in this analysis as they do not reflect updated waste composition and generation for New York City. In addition these rates do not accurately reflect the industry sectors analyzed for the purposes of the CWZ Program.

⁴⁶ CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California

⁴⁷ Multiple alternative waste generation rate models were considered for analysis. The CalRecycle model was determined to be the most suitable for the purposes of this analysis.

NYC Commercial Waste Zone Program

In order to adjust the CalRecycle employment-based waste generation ratios for New York City, the total tonnage of waste produced within New York City, (approximately 3.3 million tons per year) was multiplied by the proportional composition of waste generation by industry sector modeled utilizing the unadjusted CalRecycle rates seen above. As shown in **Table 3-17**, New York City generates an estimated 3.3 million tons of commercial waste annually (including putrescible, recyclable, and organic waste). Approximately 51 percent of this waste (an estimated 1.7 million tons per year) is generated by office businesses, which employ approximately 67 percent of New York City's private sector employees. An estimated 16 percent is produced by food services (an estimated 522,781 tons per year), which employ approximately 10 percent of New York City's private sector employees. Approximately 15 percent of commercial waste (an estimated 488,383 tons per year) is produced by non-food retail, employing approximately 21 percent of New York City's private sector employment.

Table 3-17
New York City Commercial Waste Generation

Industry Sector	Businesses		Employment		Waste Generation	
	Count	Percent	Count	Percent	Tons per Year ¹	Percent of Total Waste Generated
Manufacturing	12,874	6%	210,608	8%	254,810	8%
Office	110,288	55%	1,806,201	67%	1,695,757	51%
Non-Food Retail	42,761	21%	296,466	11%	488,383	15%
Food Retail	7,122	4%	51,969	2%	235,873	7%
Food Services	25,629	13%	262,819	10%	522,781	16%
Hotel	1,389	1%	75,091	3%	109,330	3%
Total	200,063²	100%	2,703,154	100%	3,306,934	100%
Note: ¹ New York City waste generation by industry sector was normalized to reflect the known waste production rate within New York City. The CalRecycle waste generation by industry sector was calculated and then applied proportionally to the New York City waste generation total. ² The approximately 200,000 total businesses includes all unique commercial businesses within the six identified NAICS industry sector codes (as reported by Esri Business Analyst). Note that the 100,000 unique customers listed in the BIC customer registry can include multiple commercial businesses. Sources: U.S. Census Bureau, 2018, LEHD Origin-Destination Employment Statistics (2002–2015) Esri Business Analyst Infogroup, 2018 CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California DSNY, 2015–2017, Transfer Station and Recycling Processor Reports DSNY, 2016, Private Carter Surveys						

As shown in **Table 3-18**, utilizing the modeled waste generation estimates for New York City from **Table 3-17** and applying the median reported rate of \$10.00 per 100 lbs. of commercial waste results in a total maximum cost for commercial carting services across New York City of approximately \$661 million per year.

Table 3-18
New York City Annual Carting Costs

Industry Sector	Tons per Year ¹	Annual Carting Cost ^{2,3}
Manufacturing	254,810	\$50,962,074
Office	1,695,757	\$339,151,472
Non-Food Retail	488,383	\$97,676,534
Food Retail	235,873	\$47,174,643
Food Services	522,781	\$104,556,128
Hotel	109,330	\$21,865,936
Total	3,306,934	\$661,386,787
Notes: ¹ New York City waste generation by industry sector was normalized to reflect the known waste production rate within New York City. The CalRecycle waste generation by industry sector was calculated and then applied proportionally to the New York City waste generation total. ² For the purposes of this analysis, it is assumed that all commercial businesses pay the median reported rate of \$10.00 per 100 lbs. of waste. ³ For the purposes of consistent analysis, it is assumed that all waste is collected and measured by weight and not by the cubic yard.		
Sources: U.S. Census Bureau, 2018, LEHD Origin-Destination Employment Statistics (2002–2015) Esri Business Analyst Infogroup, 2018 CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California DSNY, 2015–2017, Transfer Station and Recycling Processor Reports DSNY, 2016, Private Carter Surveys		

As detailed in **Tables 3-17 and 3-18**, in total, New York City is home to approximately 200,000 unique commercial businesses within the six identified industry sectors, which combined incur an estimated \$661 million in annual commercial carting expenses. Based on the total waste generation cost estimates, on average, each commercial business pays approximately \$3,300 in annual carting costs, irrespective of size or industry sector.⁴⁸

However, as businesses within similar industry sectors can vary greatly by size, commercial carting costs per pound per square foot (psf) were calculated in order to normalize the cost of commercial waste collection across the City and provide a measurement of carting costs that could be easily compared to other business costs such as rent.

In order to calculate the psf cost of carting services, the total area of commercial development by industry sector was modeled by multiplying the industry sector employment numbers provided in **Table 3-17** by commonly used CEQR employment density multipliers, as shown in **Table 3-19**.

⁴⁸ The approximately 200,000 total businesses identified includes all unique businesses within the studied NAICS industry sectors, which would have waste collected under the Proposed Action. Other industries likely unaffected by the Proposed Action, such as institutions are not accounted for in this total. Esri Business Analyst, Infogroup, Inc. 2018. Note that the 100,000 unique customers listed in the BIC customer registry can include multiple commercial businesses.

Table 3-19

Modeled New York City Square Footage by Industry Sector

Industry Sector	Square footage per employee ¹
Manufacturing	1,000
Office	250
Non-Food Retail	400
Food Retail	400
Food Services	250
Hotel	650
Notes: ¹ Estimates of square footage per employee are based on industry employment density ratios commonly used for CEQR analysis (including the East Harlem Rezoning FEIS). Sources: East Harlem Rezoning FEIS	

As shown in **Table 3-20**, industry sectors analyzed comprise an estimated 916 million square feet (sf) across all of New York City. This includes approximately 452 million sf of office development (49 percent of total development), 210 million sf of manufacturing development (23 percent of total), and 119 million sf of non-food retail (13 percent of total development). Based on the calculations, the average cost of waste services by business and average cost psf was calculated by industry sector for all of New York City.

Table 3-20

Area of Commercial Development Within New York City

Industry Sector	Study Area Employment	Square Feet per Employee	Total Estimated Square Footage ¹	Percent by Industry
Manufacturing	210,608	1000	210,608,000	23%
Office	1,806,201	250	451,550,250	49%
Non-Food Retail	296,466	400	118,586,220	13%
Food Retail	51,969	400	20,787,467	2%
Food Services	262,819	250	65,704,868	7%
Hotel	75,091	650	48,809,331	5%
Total	2,703,154		916,046,136	100%
Notes: ¹ Sector totals may not add up to the real totals in NYC as the generation rates are general and do not perfectly reflect the size of total businesses within New York City. Further, as industry categories utilized are an amalgamation of various industry sectors, this should only be used to understand the approximate total square feet of development by industry sector. Sources: U.S. Census Bureau, 2018, LEHD Origin-Destination Employment Statistics (2002–2015) Esri Business Analyst Infogroup, 2018 CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California DSNY, 2015–2017, Transfer Station and Recycling Processor Reports DSNY, 2016, Private Carter Surveys				

As shown in **Table 3-21**, the average cost of carting services depends on the employment density and the waste generation rates of the industry sectors studied. Industries that are employee-dense and produce a higher amount of waste have higher carting costs than businesses that are not employee dense or have low generation rates. While on a square-foot basis, both hotels and manufacturing businesses are, on average, larger than businesses of other industry sectors (35,140 sf and 16,359 sf respectively). Both have lower employment density (650 sf per employee and

1,000 sf per employee respectively) and lower waste generation rates (4,260 lbs. per employee per year and 3,540 lbs. per employee per year respectively) as compared to other industry sectors, resulting in low average waste collection costs psf (\$0.45 and \$0.24 psf annually). Food services businesses, such as restaurants, which on average have the smallest businesses of studied industry sectors (an average of 2,564 sf), have high employment density and waste generation rates (250 sf per employee and 5,820 lbs. per employee per year) resulting in a higher average annual cost for commercial waste services (\$1.59 psf annually). Food retail, which also has a smaller average footprint (2,919 sf) and higher employment density and waste generation rates (400 sf per employee, and 13,280 lbs. per employee per year), has the highest average psf cost for waste collection services (\$2.27 psf annually).

Table 3-21
Average Cost for Commercial Carting Services in New York City PSF

Industry Sector	Businesses (Count)	Total Estimated Square Footage	Total Annual Carting Costs	Annual Average Cost PSF
Manufacturing	12,874	210,608,000	50,962,074	\$0.24
Office	110,288	451,550,250	339,151,472	\$0.75
Non-Food Retail	42,761	118,586,220	97,676,534	\$0.82
Food Retail	7,122	20,787,467	47,174,643	\$2.27
Food Services	25,629	65,704,868	104,556,128	\$1.59
Hotel	1,389	48,809,331	21,865,936	\$0.45
Total	200,063	916,046,136	661,386,787	\$0.72¹
Notes:				
¹ Annual average cost is presented as a weighted average based on the proportional total estimated square footage by industry sector.				
Sources:				
U.S. Census Bureau, 2018, LEHD Origin-Destination Employment Statistics (2002–2015)				
Esri Business Analyst Infogroup, 2018				
CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California				
DSNY, 2015–2017, Transfer Station and Recycling Processor Reports				
DSNY, 2016, Private Carter Surveys				

Case Study Analysis

Midtown Manhattan CBD Study Area

The Midtown Manhattan CBD study area is the primary business and entertainment district of New York City. As seen in **Figure 3-1**, the study area covers a geography of approximately 0.7 square miles, roughly equivalent to the area bound by 54th Street to the north, Fifth Avenue to the east, 30th Street to the south and Eighth Avenue to the west. This area includes a wide variety of businesses and uses, including large office buildings, active retail corridors, such as 34th Street and Herald Square, and a number of entertainment venues, including Madison Square Garden and the Theater District. The study area also includes the wholesale district, an area of stores devoted to the bulk sale of merchandise, often imported into the United States. In the existing condition, an estimated 38 commercial carters service the Midtown Manhattan CBD study area, bringing, on average, an estimated 167 daily commercial waste trucks through the Midtown Manhattan CBD study area, servicing approximately 17,000 businesses.⁴⁹

⁴⁹ BIC, 2018, Private Carter Routing Data

NYC Commercial Waste Zone Program

As shown in **Table 3-22**, the Midtown Manhattan study area generates an estimated 218,907 tons of commercial waste per year (including putrescible, recyclable, and organic waste). Approximately 57 percent of the waste (an estimated 124,819 tons) is produced by the office industry sector, employing approximately 70 percent of study area employees (314,434 persons). Non-food retail is the second largest waste generator within the study area, producing approximately 24 percent of study area waste (an estimated 53,366 tons) and employs approximately 17 percent of study area employees (76,717 persons). Food services are the third largest commercial waste generator within the study area, producing approximately 10 percent of commercial waste (an estimated 22,210 tons) and employs 6 percent of study area employees (26,408 persons).

Table 3-22
Midtown Manhattan Waste Generation

Industry Sector	Businesses		Employment		Waste Generation ¹	
	Count	Percent	Count	Percent	Tons per Year	Percent of Total Waste Generated
Manufacturing	1,930	11%	13,723	3%	7,020	3%
Office	8,508	50%	314,434	70%	124,819	57%
Non-Food Retail	5,286	31%	76,617	17%	53,366	24%
Food Retail	87	1%	558	0%	1,071	0%
Food Services	1,102	6%	26,408	6%	22,210	10%
Hotel	182	1%	16,926	4%	10,420	5%
Total	17,095	100%	448,666	100%	218,907	100%

Notes:
¹ The Midtown Manhattan waste generation rate was normalized against tonnage data collected at transfer stations and recycling facilities, as well as supplemental data from private carter surveys in order to better align with real-world waste generation for the study area. One Midtown Manhattan ton equals 0.3 CalRecycle tons.

Sources:
 U.S. Census Bureau, 2018, LEHD Origin-Destination Employment Statistics (2002–2015)
 Esri Business Analyst Infogroup, 2018
 CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California
 DSNY, 2015–2017, Transfer Station and Recycling Processor Reports
 DSNY, 2016, Private Carter Surveys

As shown in **Table 3-23**, utilizing the waste generation rates modeled for the Midtown Manhattan CBD study area, and applying the median rate charged by commercial carters within the case study area as reported by BIC Customer Register of \$8.90 per 100 lbs of commercial waste, produces an estimated total annual waste removal cost of approximately \$34 million for commercial businesses within the Midtown Manhattan CBD study area.⁵⁰

⁵⁰ BIC, 2017 Q2–Q4, BIC Customer Register

Table 3-23
Midtown Manhattan Annual Carting Costs

Industry Sector	Tons per Year ¹	Annual Carting Cost ^{2,3}
Manufacturing	7,020.15	\$1,249,586
Office	124,819.39	\$22,217,852
Non-Food Retail	53,366.11	\$9,499,167
Food Retail	1,071.03	\$190,643
Food Services	22,209.98	\$3,953,376
Hotel	10,419.92	\$1,854,746
Total	218,906.58	\$38,965,371

Notes:

¹ The Midtown Manhattan waste generation rate was normalized based on tonnages recorded at waste transfer stations and recycling facilities, supplemented by private carter surveys and routing data, in order to better align with real-world waste generation for the study area. 1 Midtown Manhattan ton equals 0.3 CalRecycle tons

² For the purposes of analysis, it is assumed that all commercial businesses pay the median rate of \$8.90 per 100 lbs.

³ For the purposes of consistent analysis, it is assumed that all waste is collected and measured by weight and not by the cubic yard.

Sources:

U.S. Census Bureau, 2018, LEHD Origin-Destination Employment Statistics (2002–2015)

Esri Business Analyst Infogroup, 2018

CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California

DSNY, 2015–2017, Transfer Station and Recycling Processor Reports

DSNY, 2016, Private Carter Surveys

As detailed in **Tables 3-22 and 3-23**, in total, the Midtown Manhattan CBD study area is the location of approximately 17,000 commercial businesses, which combined incur an estimated \$40 million in annual waste removal costs. Based on the total waste generation and cost estimates commercial businesses within the Midtown Manhattan CBD study area spend an average of \$2,280 per year on waste removal costs irrespective of industry.

Commercial carting costs psf were then calculated in order to normalize the cost of commercial waste collection within the study area and provide a contextual measurement of the cost that could be calculated by commercial business owners and the public seeking to estimate the cost of waste collection.

In order to calculate the psf cost of carting services, the total square footage per industry sector was modeled using the study area employment provided in **Table 3-22** and the employment multipliers presented in **Table 3-16**.

As shown in **Table 3-24**, the industry sectors analyzed comprise an estimated 141 million sf of commercial space within the Midtown Manhattan CBD study area. This includes approximately 79 million sf of office development (approximately 56 percent of total commercial development), 31 million sf of non-food retail (approximately 22 percent of total commercial development), and 14 million sf of manufacturing development (approximately 10 percent of total commercial development). Based on these calculations, the average cost of waste collection psf was calculated by industry sector for the Midtown Manhattan CBD study area.

Table 3-24

Area of Commercial Development within Midtown Manhattan

Industry Sector	Study Area Employment	Square Feet per Employee	Total Estimated Square Footage ¹	Percent by Industry
Manufacturing	13,723	1000	13,723,000	10%
Office	314,434	250	78,608,500	56%
Non-Food Retail	76,617	400	30,646,762	22%
Food Retail	558	400	223,238	0%
Food Services	26,408	250	6,601,935	5%
Hotel	16,926	650	11,002,069	8%
Total	448,666		140,805,504	100%
Notes: ¹ Sector totals may not add up to the real totals in New York City as the generation rates are general and do not perfectly reflect the size of total businesses within New York City. Further, as industry categories utilized are an amalgamation of various industry sectors this should only be used to understand the approximate total square feet of development by industry sector. Sources: U.S. Census Bureau, 2018, LEHD Origin-Destination Employment Statistics (2002–2015) Esri Business Analyst Infogroup, 2018 CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California DSNY, 2015–2017, Transfer Station and Recycling Processor Reports DSNY, 2016, Private Carter Surveys				

As shown in **Table 3-25**, the average cost of carting services depends on the employment density and waste generation rates of industry sectors within Midtown Manhattan. Within the Midtown Manhattan CBD study area, businesses within the food retail sector pay \$0.85 psf in annual carting costs, while food services pay an estimated \$0.60 psf in annual carting costs. Manufacturing businesses within the study area pay an estimated \$0.09 psf in annual carting costs, and the office industry sector pays an estimated \$0.28 psf in annual carting costs. Weighted for proportional size of industry sector, within the Midtown Manhattan CBD study area, across all sectors businesses pay \$0.28 psf on average in annual carting costs.

Table 3-25

**Average Cost for Commercial Carting Services
in Midtown Manhattan PSF**

Industry Sector	Businesses (Count)	Total Estimated Square Footage	Total Annual Carting Costs	Annual Average Cost PSF
Manufacturing	1,930	13,723,000	1,249,586	\$0.09
Office	8,508	78,608,500	22,217,852	\$0.28
Non-Food Retail	5,286	30,646,762	9,499,167	\$0.31
Food Retail	87	223,238	190,643	\$0.85
Food Services	1,102	6,601,935	3,953,376	\$0.60
Hotel	182	11,002,069	1,854,746	\$0.17
Total	17,095	140,805,504	38,965,371	\$0.28¹
Notes: ¹ Annual average cost is presented as a weighted average based on the proportional total estimated square footage by industry sector. Sources: U.S. Census Bureau, 2018, LEHD Origin-Destination Employment Statistics (2002–2015) Esri Business Analyst Infogroup, 2018 CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California DSNY, 2015–2017, Transfer Station and Recycling Processor Reports DSNY, 2016, Private Carter Surveys				

Flatbush Nostrand Junction Study Area

The Flatbush Nostrand Junction study area is a major commercial and retail hub located in central Brooklyn, at the intersection of Flatbush and Nostrand Avenues. As shown in **Figure 3-2**, the study area covers a 0.3 square mile geography roughly equivalent to the area bounded by Foster and Farragut Avenues to the north, New York and Albany Avenues to the east, Avenue I to the south, and Ocean Avenue to the west. This area includes a wide variety of businesses, including commercial retail, restaurants, and some small offices. The study area also includes the Flatbush Nostrand Junction shopping center, a medium-sized shopping mall. In the existing condition, an estimated 17 commercial carters service the Flatbush Nostrand Junction study area, creating on average an estimated 45 daily trucks through the case study area, servicing approximately 368 businesses.⁵¹

As shown in **Table 3-26**, the Flatbush Nostrand Junction case study area generates an estimated 3,382 tons of commercial waste per year. The non-food retail sector produces approximately 44 percent of study area commercial waste (an estimated 1,485 tons per year) and employs approximately 39 percent of all study area employees (1,029 workers). The office industry sector is the second largest producer of commercial waste within the study area, annually producing approximately 27 percent of study area waste (an estimated 905 tons per year) and employs approximately 41 percent of study area workers (1,100 employees). Food services produce approximately 21 percent of commercial waste (an estimated 710 tons per year) and employs approximately 15 percent of study area employees (408 workers). Both manufacturing and hotel industry sectors produce approximately 1 percent of study area commercial waste (an estimated 48 and 27 tons respectively per year) and together employ approximately 3 percent of study area employees (66 workers).

Table 3-26
Flatbush Nostrand Junction Waste Generation

Industry Sector	Businesses		Employment		Waste Generation ¹	
	Count	Percent	Count	Percent	Tons per Year	Percent of Total Waste Generated
Manufacturing	23	6%	45	2%	48	1%
Office	172	47%	1,100	41%	905	27%
Non-Food Retail	94	26%	1,029	39%	1,485	44%
Food Retail	20	5%	52	2%	208	6%
Food Services	55	15%	408	15%	710	21%
Hotel	4	1%	21	1%	27	1%
Total	368	100%	2,655	100%	3,382	100%
Notes:						
¹ The Flatbush Nostrand waste generation rate was normalized based on tonnages recorded at waste transfer stations and recycling facilities, supplemented by private carter surveys and routing data, in order to better align with real-world waste generation for the study area. One Flatbush Nostrand Junction ton equals 0.6 CalRecycle tons.						
Sources:						
U.S. Census Bureau, 2018, LEHD Origin-Destination Employment Statistics (2002–2015)						
Esri Business Analyst Infogroup, 2018						
CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California						
DSNY, 2015–2017, Transfer Station and Recycling Processor Reports						
DSNY, 2016, Private Carter Surveys						

⁵¹ BIC, 2018, Private Carter Routing Data

NYC Commercial Waste Zone Program

Based on the estimated waste generated within the Flatbush Nostrand Junction study area, utilizing the median price for commercial waste services within the case study area of \$11.30 per 100 lbs. of commercial waste, the total estimated cost of commercial waste carting services within the study area was modeled. As shown in **Table 3-27**, the Flatbush Nostrand Junction study area generates an estimated \$764,389 in total annual commercial waste carting costs.

Table 3-27
Flatbush Nostrand Junction Annual Carting Costs

Industry Sector	Tons per Year ¹	Annual Carting Cost ^{2,3}
Manufacturing	47.69	\$10,779
Office	904.70	\$204,462
Non-Food Retail	1,484.63	\$335,527
Food Retail	207.66	\$46,932
Food Services	710.31	\$160,530
Hotel	27.25	\$6,158
Total	3,382.25	\$764,389
Notes: ¹ The Flatbush Nostrand Junction waste generation rate was normalized based on tonnages recorded at waste transfer stations and recycling facilities, supplemented by private carter surveys and routing data, in order to better align with real-world waste generation for the study area. One Flatbush Nostrand Junction ton equals 0.6 CalRecycle tons. ² For the purposes of conservative analysis, it is assumed that all commercial businesses pay the median rate of \$11.30 per 100 lbs. ³ For the purposes of consistent analysis, it is assumed that all waste is collected and measured by weight and not by the cubic yard. Sources: U.S. Census Bureau, 2018, LEHD Origin-Destination Employment Statistics (2002–2015) Esri Business Analyst Infogroup, 2018 CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California DSNY, 2015–2017, Transfer Station and Recycling Processor Reports DSNY, 2016, Private Carter Surveys		

As detailed in **Table 3-26 and 3-27**, in total, the Flatbush Nostrand Junction study area includes approximately 368 private businesses, which together generate an estimated \$764,389 in annual carting costs. The average annual commercial carting cost incurred by a business within the Flatbush Nostrand Junction case study area is estimated to be \$2,077 regardless of industry.

Commercial carting costs psf were then calculated in order to normalize the cost of commercial waste collection within the study area and provide a contextual measurement of cost, which could be calculated by commercial business owners and the public seeking to estimate the cost of waste collection.

In order to calculate the psf cost of carting services, the total square footage per industry sector was modeled using the study area employment provided in **Table 3-26** by the employment multipliers presented in **Table 3-19**.

As shown in **Table 3-28**, the industry sectors analyzed comprise an estimated 868,196 sf of commercial space within the Flatbush Nostrand Junction study area. This includes approximately 411,508 sf of non-food retail development (approximately 47 percent of total commercial development), 275,000 sf of office development (approximately 32 percent of total commercial development), and 101,909 sf of food services development (approximately 12 percent of total

commercial development). Based on these calculations, the average cost of waste collection psf was calculated by industry sector for all of the Flatbush Nostrand Junction study area.

Table 3-28
Area of Commercial Development within the Flatbush Nostrand Junction

Industry Sector	Study Area Employment	Square Feet per Employee	Total Estimated Square Footage ¹	Percent by Industry
Manufacturing	45	1,000	45,000	5%
Office	1,100	250	275,000	32%
Non-Food Retail	1,029	400	411,508	47%
Food Retail	52	400	20,892	2%
Food Services	408	250	101,909	12%
Hotel	21	650	13,887	2%
Total	2,655		868,196	100%

Notes:

¹ Sector totals may not add up to the real totals in NYC New York City as the generation rates are general and do not perfectly reflect the size of total businesses within New York City. Further, as industry categories utilized are an amalgamation of various industry sectors this should only be used to understand the approximate total square feet of development by industry sector.

Sources:

U.S. Census Bureau, 2018, LEHD Origin-Destination Employment Statistics (2002–2015)

Esri Business Analyst Infogroup, 2018

CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California

DSNY, 2015–2017, Transfer Station and Recycling Processor Reports

DSNY, 2016, Private Carter Surveys

As shown in **Table 3-29**, the average cost of carting services depends on the employment density and waste generation rates of industry sectors within the case study area. Industries that are employee dense, and produce a higher amount of waste have higher carting costs than businesses that are not employee dense or have low generation rates. Within the Flatbush Nostrand Junction study area, businesses in the food retail sector pay \$2.25 psf in annual carting costs, while food services pay on average \$1.58 psf in annual commercial carting costs. The office industry sector pays on average \$0.74 psf in annual commercial carting costs, and manufacturing businesses within the study areas pay on average \$0.27 psf in annual commercial carting costs. Weighted for the proportional size of industry sector, within the Flatbush Nostrand Junction study area businesses, regardless of industry sector, pay \$0.88 psf on average in annual carting costs.

Table 3-29
Average Cost for Commercial Carting Services
in the Flatbush Nostrand Junction PSF

Industry Sector	Businesses (Count)	Total Estimated Square Footage	Total Annual Carting Costs	Annual Average Cost PSF
Manufacturing	23	45,000	10,779	\$0.24
Office	172	275,000	204,462	\$0.74
Non-Food Retail	94	411,508	335,527	\$0.82
Food Retail	20	20,892	46,932	\$2.25
Food Services	55	101,909	160,530	\$1.58
Hotel	4	13,887	6,158	\$0.44
Total	368	868,196	764,389	\$0.88¹
Notes: ¹ Annual average cost is presented as a weighted average based on the proportional total estimated square footage by industry sector. Sources: U.S. Census Bureau, 2018, LEHD Origin-Destination Employment Statistics (2002–2015) Esri Business Analyst Infogroup, 2018 CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California DSNY, 2015–2017, Transfer Station and Recycling Processor Reports DSNY, 2016, Private Carter Surveys				

College Point Study Area

The College Point study area encompasses an area of eastern Queens that includes a diverse range of commercial activity, as well as a low-density residential community. As seen in **Figure 3-3**, the study area is approximately 4.5 square miles, roughly equivalent to the area bound by the East River to the north, the Whitestone Expressway to the east, Flushing Creek to the south (with the exception of the Census Tract 383.01, which is just to the south of Flushing Creek bounded by Flushing Bay to the north, Flushing Creek to the east, Roosevelt Avenue to the south and 126th Street to the west), and Flushing Bay to the west. College Point includes the College Point Corporate Park, which includes a number of large office buildings, as well as manufacturing buildings such as the *New York Times* printing works. The area also includes neighborhood retail along College Point Boulevard, and larger big-box style commercial retailers along 20th Avenue.

In the existing condition, an estimated 23 commercial carters service the College Point study area, bringing on average an estimated 83 trucks daily through the case study area, servicing approximately 697 businesses.⁵² In addition, the College Point case study area includes the Tully Environmental waste transfer station on Willets Point, which receives waste collected throughout the City for consolidation and shipment to disposal facilities.

As shown in **Table 3-30**, the College Point study area generates 19,335 tons per year. Approximately 37 percent of this waste (an estimated 7,117 tons per year) is generated by the non-food retail industry sector, employing approximately 27 percent (4,252 employees) of all study area employees (15,365 total employees). The second largest waste generator within the College Point study area is the office industry sector, which produces approximately 36 percent (an estimated 7,023 tons per year) of study area waste and employs an approximately 48 percent of study area employees (7,363 employees). Manufacturing businesses account for an estimated 20 percent of waste generated within the study area (an estimated 3,952 tons per year) and employ approximately 20 percent of case study area employees (3,215 employees). Food Service

⁵² BIC, 2018, Private Carter Routing Data

businesses account for approximately 4 percent of study area waste generation (an estimated 763 tons per year) and employ approximately 2 percent of case study area workers.

Based on the estimated waste generated within the College Point study area, utilizing the median rate reported for commercial waste carting services in BIC Customer Register of \$10.80 per 100 lbs., the total potential cost of commercial waste carting services within the study area was generated. As shown in **Table 3-31**, the College Point study area generates an estimated \$4.2 million in annual commercial waste carting costs.

As detailed in **Tables 3-30 and 3-31**, in total, the College Point study area includes approximately 697 private businesses, which together generate approximately 4.2 million in annual carting costs. Based on this, the average annual commercial carting cost incurred by a business within the College Point case study area is estimated to be approximately \$6,000 per year regardless of industry.

Table 3-30
College Point Waste Generation

Industry Sector	Businesses		Employment		Waste Generation ¹	
	Count	Percent	Count	Percent	Tons per Year	Percent of Total Waste Generated
Manufacturing	96	14%	3,215	21%	3,952	20%
Office	266	38%	7,363	48%	7,023	36%
Non-Food Retail	245	35%	4,252	28%	7,117	37%
Food Retail	19	3%	80	1%	368	2%
Food Services	68	10%	378	2%	763	4%
Hotel	3	0%	76	0%	113	1%
Total	697	100%	15,364	100%	19,335	100%
Notes:						
¹ The College Point waste generation rate was normalized based on tonnages recorded at waste transfer stations and recycling facilities, supplemented by private carter surveys and routing data, in order to better align with real-world waste generation for the study area. One College Point ton equals 0.7 CalRecycle tons.						
Sources:						
U.S. Census Bureau, 2018, LEHD Origin-Destination Employment Statistics (2002–2015)						
Esri Business Analyst Infogroup, 2018						
CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California						
DSNY, 2015–2017, Transfer Station and Recycling Processor Reports						
DSNY, 2016, Private Carter Surveys						

Table 3-31
College Point Annual Carting Costs

Industry Sector	Tons per Year ¹	Annual Carting Cost ^{2,3}
Manufacturing	3,951.77	\$853,583
Office	7,022.97	\$1,516,962
Non-Food Retail	7,116.56	\$1,537,177
Food Retail	367.88	\$79,462
Food Services	762.96	\$164,799
Hotel	113.09	\$24,427
Total	19,335.23	\$4,176,410
Notes: ¹ The College Point waste generation rate was normalized based on tonnages recorded at waste transfer stations and recycling facilities, supplemented by private carter surveys and routing data, in order to better align with real-world waste generation for the study area. One College Point ton equals approximately 0.7 CalRecycle tons. ² For the purposes of conservative analysis, it is assumed that all commercial businesses pay the median reported rate of 10.80 per 100 lbs. ³ For the purposes of consistent analysis, it is assumed that all waste is collected and measured by weight and not by the cubic yard. Sources: U.S. Census Bureau, 2018, LEHD Origin-Destination Employment Statistics (2002–2015) Esri Business Analyst Infogroup, 2018 CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California DSNY, 2015–2017, Transfer Station and Recycling Processor Reports DSNY, 2016, Private Carter Surveys		

Commercial carting costs psf were then calculated in order to normalize the cost of commercial waste collection within the study area and provide a contextual measurement of cost which could be calculated easily by commercial business owners seeking to estimate the cost of waste collection, and in order to compare the cost of commercial carting to the overall monthly cost for rent, which is also expressed on a psf basis.

In order to calculate the psf cost of carting services, the total square footage per industry sector was modeled using the study area employment provided in **Table 3-30** by the employment multipliers presented in **Table 3-19**.

As shown in **Table 3-32**, the industry sectors analyzed comprise an estimated 6.9 million sf of commercial space within the College Point study area. This includes approximately 3.2 million sf of manufacturing development (approximately 46 percent of total development), 1.8 million sf of office development (approximately 27 percent of total development), and 1.7 million sf of non-food retail development (approximately 25 percent of total development). In addition, hotel, food services, and food retail account for approximately 4 percent of total study area development. Based on these calculations, the average cost of waste collection psf was calculated by industry sector for all of the College Point study area.

Table 3-32

Area of Commercial Development within College Point

Industry Sector	Study Area Employment	Square Feet per Employee	Total Estimated Square Footage¹	Percent by Industry
Manufacturing	3,215	1,000	3,215,000	46%
Office	7,363	250	1,840,750	27%
Non-Food Retail	4,252	400	1,700,888	25%
Food Retail	80	400	31,912	0%
Food Services	378	250	94,387	1%
Hotel	76	650	49,695	1%
Total	15,364		6,932,631	100%

Notes:

¹ Sector totals may not add up to the real totals in New York City as the generation rates are general and do not perfectly reflect the size of total businesses within New York City. Further, as industry categories utilized are an amalgamation of various industry sectors this should only be used to understand the approximate total square feet of development by industry sector.

Sources:

U.S. Census Bureau, 2018, LEHD Origin-Destination Employment Statistics (2002–2015)

Esri Business Analyst Infogroup, 2018

CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California

DSNY, 2015–2017, Transfer Station and Recycling Processor Reports

DSNY, 2016, Private Carter Surveys

As shown in **Table 3-33**, the average cost of carting services depends on the employment density and waste generation rates of industry sectors within the study area. Industries that are employee dense, and produce a higher amount of waste have higher carting costs than businesses that are not employee dense or have low generation rates. Within the College Point study area, businesses within the food retail sector pay \$2.49 psf in annual carting costs, while food services pay on average \$1.75 psf in annual commercial carting costs. The office industry sector pays on average \$0.82 psf in annual commercial carting costs, and manufacturing businesses within the case study areas pay \$0.27 psf in annual commercial carting costs. Weighted based on the proportional size of industry sector within the College Point study area businesses, regardless of industry sector, pay \$0.60 psf on average in annual carting costs.

Table 3-33

Average Cost for Commercial Carting Services in College Point PSF

Industry Sector	Businesses (Count)	Total Estimated Square Footage	Total Annual Carting Costs	Annual Average Cost PSF
Manufacturing	96	3,215,000	853,583	\$0.27
Office	266	1,840,750	1,516,962	\$0.82
Non-Food Retail	245	1,700,888	1,537,177	\$0.90
Food Retail	19	31,912	79,462	\$2.49
Food Services	68	94,387	164,799	\$1.75
Hotel	3	49,695	24,427	\$0.49
Total	697	6,932,631	4,176,410	\$0.60
Notes: ¹ Annual average cost is presented as a weighted average based on the proportional total estimated square footage by industry sector. Sources: U.S. Census Bureau, 2018, LEHD Origin-Destination Employment Statistics (2002–2015) Esri Business Analyst Infogroup, 2018 CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California DSNY, 2015–2017, Transfer Station and Recycling Processor Reports DSNY, 2016, Private Carter Surveys				

COMMERCIAL WASTE CUSTOMERS—FUTURE WITHOUT PROPOSED ACTION

The No Action condition includes the current commercial waste industry and any regulatory changes to the industry expected by the Analysis Year of 2024, as described in Chapter 1, “Project Description.”

In the No Action condition, it is anticipated that, overall, the cost of waste collection services would increase as a result of the additional costs associated with the policies to be implemented by the 2024 Analysis Year.⁵³ As seen in **Table 3-7**, the expenses associated with commercial waste collection services in the No Action condition would likely increase by approximately 4 percent over the existing condition. This approximately \$22 million increase in operating expenses in the No Action condition would require commercial carters to increase the cost of commercial carting services in order to recoup the expenses associated with policies to be implemented in the No Action condition.

However, in the No Action condition, a carter’s ability to recoup the full cost of commercial carting services is limited, as the price for commercial waste collection services within New York City is capped by BIC and increases to the rate cap are adjusted approximately every two years. It is anticipated that between 2018 and the 2024 Analysis Year BIC rate cap assessed per 100 lbs. of commercial waste collected would increase by approximately 5.25 percent every 2-year cycle. As seen in **Table 3-34**, it is anticipated that BIC rate cap would increase by approximately 17 percent by the Analysis Year, from the current rate of \$13.62 per 100 lbs. in the existing condition to the rate of \$15.88 per 100 lbs. in the No Action condition.⁵⁴ Further as BIC Rate Cap would increase

⁵³ Due to external market forces outside of the control of carters, or the recycling industry that services New York City, recycling does not return a profit for commercial carters. Due to these market conditions if recyclables collection results in a business loss, carters may dispose recyclable waste as putrescible waste in landfills. However, if recyclables are able to return a profit for commercial carters it is anticipated that carters could reduce the expense associated with disposal of this waste stream and potentially pass on these savings to customers.

⁵⁴ Based on assumptions provided by DSNY/BIC.

by 5.25 percent in the 2024 Analysis Year, it is assumed that the median rate for commercial carting services within New York City would also increase at this rate.

Table 3-34
No Action Anticipated BIC Rate Cap

Study Area	Existing Condition (per 100 lbs.)	No Action ¹ (per 100 lbs.)
New York City BIC Rate Cap	\$13.62	\$15.88
New York City Median Rate	\$10.00	\$11.66
Midtown Manhattan CBD Median Rate	\$8.90	\$10.38
Flatbush Nostrand Junction Median Rate	\$11.30	\$13.17
College Point Median Rate	\$10.80	\$12.59

Notes:

¹ The No Action rate cap is anticipated to increase by 5.25 percent every 2 years between 2018 and 2024. In total, this amounts to a 17 percent increase in the rate cap between the existing condition and No Action condition.

Sources:

NYC Rules, 2018, Adopted Rules-<http://rules.cityofnewyork.us/tags/trade-waste-0>
BIC, 2017 Q2–Q4, Private Carter Customer Register

As a result of the approximately 17 percent increase in the median rate charge for commercial carting services between the existing condition and the No Action condition, it is anticipated that, for private businesses, the total cost of commercial waste collection in the No Action condition will increase. As outlined in **Table 3-35**, conservatively assuming all commercial waste carting customers pay the No Action median rate of \$11.66 per 100 lbs. commercial carting costs would total \$771 million per annum. On average, this would increase the average annual per business waste collection costs from \$3,300 per year to \$3,450 per year. On a psf basis weighted based on the proportional size of industry sector, this would result in an increase in the average psf costs from \$0.72 psf annually to \$0.84 psf in annual waste collection costs across all industry sectors studied.

Table 3-35
No Action New York City Carting Costs

Industry Sector	Existing Condition Total Annual Carting Cost	Existing Condition Average Annual Carting Cost (per business)	Existing Condition Average Annual Carting Cost (psf)	No Action Total Annual Carting Cost	No Action Average Annual Carting Cost (per business)	No Action Average Annual Commercial Waste Cost (psf)
Manufacturing	\$50,962,074	\$3,959	\$0.24	\$59,417,368	\$4,615	\$0.28
Office	\$339,151,472	\$3,075	\$0.75	\$395,421,264	\$3,585	\$0.88
Non-Food Retail	\$97,676,534	\$2,284	\$0.82	\$113,882,385	\$2,663	\$0.96
Food Retail	\$47,174,643	\$6,624	\$2.27	\$55,001,551	\$7,723	\$2.65
Food Services	\$104,556,128	\$4,080	\$1.59	\$121,903,397	\$4,756	\$1.86
Hotel	\$21,865,936	\$15,742	\$0.45	\$25,493,788	\$18,354	\$0.52
Total/Average	\$661,386,787	\$3,306	\$4.33	\$771,119,752	\$3,854	\$0.84¹

Notes:

¹ Annual average cost is presented as a weighted average based on the proportional total estimated square footage by industry sector.

Sources:

U.S. Census Bureau, 2018, LEHD Origin-Destination Employment Statistics (2002–2015)
Esri Business Analyst Infogroup, 2018
CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California
DSNY, 2015–2017, Transfer Station and Recycling Processor Reports
DSNY, 2016, Private Carter Surveys

NYC Commercial Waste Zone Program

Case Study Areas

Assuming the average rate for commercial waste collection services within the identified case study areas increases at the same rate as BIC rate cap increases in the No Action condition within each of the identified case study areas, it is anticipated that the cost for commercial waste collection services will also increase by 5.25 percent every 2 years, or approximately 17 percent, by the 2024 Analysis Year.

Midtown Manhattan CBD Study Area

As presented in **Table 3-34**, the average rate for waste collection services within the Midtown Manhattan CBD study area would increase from \$8.90 per 100 lbs. to \$10.86 per lbs. This increase in the rate charged by commercial carters will result in an increase in the total cost for commercial carting services within the study area, as well as the average price for carting services by business and psf. As detailed in **Table 3-36**, the annual cost for commercial waste services within the Midtown Manhattan CBD study area would increase from approximately \$39 million to approximately \$45 million. Per business, this results in an increase in the commercial carting cost from \$2,279 to \$2,658 per year. On a psf basis, weighted based on the proportional size of industry sector, this would result in an increase in the average psf costs from \$0.28 psf annually to \$0.32 psf in annual waste collection costs across all industries sectors.

Table 3-36
No Action Midtown Manhattan Carting Costs

Industry Sector	Existing Condition Total Annual Carting Cost	Existing Condition Average Annual Carting Cost (per business)	Existing Condition Average Annual Carting Cost (psf)	No Action Total Annual Carting Cost	No Action Average Annual Carting Cost (per business)	No Action Average Annual Commercial Waste Cost (psf)
Manufacturing	\$1,249,586	\$647	\$0.09	\$1,456,909	\$755	\$0.11
Office	\$22,217,852	\$2,611	\$0.28	\$25,904,092	\$3,045	\$0.33
Non-Food Retail	\$9,499,167	\$1,797	\$0.31	\$11,075,207	\$2,095	\$0.36
Food Retail	\$190,643	\$2,191	\$0.85	\$222,273	\$2,555	\$1.00
Food Services	\$3,953,376	\$3,587	\$0.60	\$4,609,294	\$4,183	\$0.70
Hotel	\$1,854,746	\$10,191	\$0.17	\$2,162,474	\$11,882	\$0.20
Total/Average	\$38,965,371	\$2,279	\$1.66	\$45,430,250	\$2,658	\$0.32¹
Notes: ¹ Annual average cost is presented as a weighted average based on the proportional total estimated square footage by industry sector. Sources: U.S. Census Bureau, 2018, LEHD Origin-Destination Employment Statistics (2002–2015) Esri Business Analyst Infogroup, 2018 CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California DSNY, 2015–2017, Transfer Station and Recycling Processor Reports DSNY, 2016, Private Carter Surveys						

Flatbush Nostrand Junction Study Area

As shown in **Table 3-34**, the average rate for waste collection services within the Flatbush Nostrand Junction study area would increase from \$11.30 per 100 lbs. to \$13.17 per 100 lbs. This increase in the rate charged by commercial carters would result in an increase in the total cost for commercial carting services within the study area, as well as the individual price for carting services by business and psf. As detailed in **Table 3-37**, the annual cost for commercial waste

services within the Flatbush Nostrand Junction study area would increase from approximately \$764,389 to approximately 891,212. Per business, this results in an increase in the annual cost of commercial carting services from \$2,077 to \$2,422. On a psf basis, weighted based on the proportional size of industry sector, this would result in an increase in the average psf costs from \$0.88 psf annually to \$1.03 psf in annual waste collection costs across all industry sectors.

Table 3-37
No Action Flatbush Nostrand Junction Carting Costs

Industry Sector	Existing Condition Total Annual Carting Cost	Existing Condition Average Annual Carting Cost (per business)	Existing Condition Average Annual Carting Cost (psf)	No Action Total Annual Carting Cost	No Action Average Annual Carting Cost (per business)	No Action Average Annual Commercial Waste Cost (psf)
Manufacturing	\$10,779	\$469	\$0.24	\$12,567	\$546	\$0.28
Office	\$204,462	\$1,189	\$0.74	\$238,385	\$1,386	\$0.87
Non-Food Retail	\$335,527	\$3,569	\$0.82	\$391,196	\$4,162	\$0.95
Food Retail	\$46,932	\$2,347	\$2.25	\$54,719	\$2,736	\$2.62
Food Services	\$160,530	\$2,919	\$1.58	\$187,165	\$3,403	\$1.84
Hotel	\$6,158	\$1,540	\$0.44	\$7,180	\$1,795	\$0.52
Total/Average	\$764,389	\$2,077	\$5.28	\$891,212	\$2,422	\$1.03
Notes: ¹ Annual average cost is presented as a weighted average based on the proportional total estimated square footage by industry sector. Sources: U.S. Census Bureau, 2018, LEHD Origin-Destination Employment Statistics (2002–2015) Esri Business Analyst Infogroup, 2018 CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California DSNY, 2015–2017, Transfer Station and Recycling Processor Reports DSNY, 2016, Private Carter Surveys						

College Point Study Area

As shown in **Table 3-34**, the average rate for waste collection services within the College Point study area would increase from \$10.80 per 100 lbs. to \$12.59 per 100 lbs. This increase in the rate charged by commercial carters would result in an increase in the total cost for commercial carting services within the study area, as well as the average price for carting services by business and psf. As detailed in **Table 3-38**, the annual cost for commercial waste services within the College Point study area would increase from approximately \$4.2 million to approximately \$4.9 million. Per business, this results in an annual increase in the cost of commercial carting services from \$5,992 to \$6,986. On a psf basis, weighted based on the proportional size of industry sector, this would result in an increase in the average psf costs from \$0.60 psf annually to \$0.70 psf in annual waste collection costs across all industry sectors

Table 3-38
No Action College Point Carting Costs

Industry Sector	Existing Condition Total Annual Carting Cost	Existing Condition Average Annual Carting Cost (per business)	Existing Condition Average Annual Carting Cost (psf)	No Action Total Annual Carting Cost	No Action Average Annual Carting Cost (per business)	No Action Average Annual Commercial Waste Cost (psf)
Manufacturing	\$853,583	\$8,891	\$0.27	\$995,203	\$10,367	\$0.31
Office	\$1,516,962	\$5,703	\$0.82	\$1,768,646	\$6,649	\$0.96
Non-Food Retail	\$1,537,177	\$6,274	\$0.90	\$1,792,216	\$7,315	\$1.05
Food Retail	\$79,462	\$4,182	\$2.49	\$92,646	\$4,876	\$2.90
Food Services	\$164,799	\$2,424	\$1.75	\$192,141	\$2,826	\$2.04
Hotel	\$24,427	\$8,142	\$0.49	\$28,480	\$9,493	\$0.57
Total/Average	\$4,176,410	\$5,992	\$3.61	\$4,869,332	\$6,986	\$0.70¹
Notes: ¹ Annual average cost is presented as a weighted average based on the proportional total estimated square footage by industry sector. Sources: U.S. Census Bureau, 2018, LEHD Origin-Destination Employment Statistics (2002–2015) Esri Business Analyst Infogroup, 2018 CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California DSNY, 2015–2017, Transfer Station and Recycling Processor Reports DSNY, 2016, Private Carter Surveys						

Analysis

In New York City under the No Action condition, the cost of contracting commercial waste carting services is anticipated to increase by approximately \$100 million (17 percent) from \$661 million per year under existing conditions to \$771 million per year (conservatively assuming all commercial waste carting customers pay the median rate of \$11.66 per 100 lbs. in 2024). Based on the modeled cost to commercial businesses, the commercial carting industry would still be able to collect sufficient revenues from businesses customers to offset the approximately \$575 million in expenses necessary to operate in the No Action condition.

COMMERCIAL WASTE CUSTOMERS—FUTURE WITH PROPOSED ACTION

The Proposed Action condition evaluates the changes to commercial customers as a result of the implementation of the CWZ Program.

In the Proposed Action, it is anticipated that commercial carting companies would be able to set their own rates ~~cap~~ within zones. As documented above, a specified evaluation team comprised of City employees from DSNY and BIC would evaluate each proposal based on designated criteria to determine an overall weighted score for each proposal where pricing would account for at least 40 percent of the overall weighted score. In order to be awarded a contract to service a zone, and be competitive with other operators within that zone, carters would need to set a competitive cap rate. Since the Proposed Action rate cap would no longer be set by BIC, the analysis utilizes the total expense associated with commercial carter operations in the Proposed Action as a price floor that the rates ~~cap~~ would need to be above in order for the commercial carting industry to remain viable.

As shown in **Table 3-39**, in the Proposed Action, in order for commercial carters to recoup the costs associated with providing commercial waste carting services throughout New York City, the minimum viable rate for commercial waste carting services would need to total \$8.49 per 100 lbs., which is less than the median rate charged to commercial businesses in both the existing condition and No Action condition. If all businesses were to be charged at this minimum rate, commercial carters would be able to recoup the expenses associated with commercial carting and the industry would remain operationally viable. It is anticipated that carters would charge a rate higher than the minimum viable rate in order to generate operational profits.

Table 3-39
Proposed Action Minimally Viable Rate for Commercial Carting

Proposed Action Total Operational Cost of Commercial Waste Collection	Total Waste Produced in NYC (100 lbs.)	Minimum Viable Price for Commercial Carting Services (per 100 lbs.)
\$561,267,260	66,138,679	\$8.49
Sources: BIC, 2015, Private Carter Financial Statements Previous Analyses as Indicated in this Chapter.		

As carters would be able to set their own rates ~~caps~~ under the Proposed Action, exact rates at which waste would be collected are currently unknown and would be determined during the solicitation process. However, based on the analysis presented above, the price for collection services is not anticipated to increase substantially, or reach a point where the price of waste collection becomes burdensome on businesses. The non-exclusive, competitive nature of the solicitation process—which would include evaluative criteria whereby 40 percent of the weighted score used to evaluate a carter’s proposal would be based on their proposed pricing—is anticipated to limit the rate charged to customers. As a result, in the Proposed Action, the costs associated with commercial carting services are unlikely to negatively impact the operations of commercial businesses.

CONCLUSION

Based on the analysis presented above, the Proposed Action is not anticipated to result in significant adverse effects on the commercial waste carting industry, or the operation of private businesses that require commercial waste collection services. As the total number of potential contracts awarded is less than the total number of existing commercial carters, and fewer total collection routes are needed to provide commercial waste services, some carters are expected to cease operating in New York City with the CWZ Program. While the CWZ Program has the potential to reduce the total number of commercial carters operating within the City of New York, many carters may ~~transition~~ instead undertake the collection of CWZ Program excluded waste streams such as C&D, engage in other agreements to support contracted carters and/or consolidate companies, pursue carting opportunities in the metropolitan area outside New York City, or remove themselves from the industry. Even if, despite these various opportunities for carters to engage in the competitive bidding process, the remaining commercial carters continuing to operate in the Proposed Action are anticipated to continue providing competitive, effective commercial waste collection services across the City.

Further, in the Proposed Action, the expenses associated with the operation of the commercial carting industry are anticipated to decrease by approximately 2 percent as compared to the No Action condition. In total, as a result of the efficiencies associated with zoned routing, including

NYC Commercial Waste Zone Program

the reduction in routes necessary to collect an equal amount of waste, the total operational expenses to be incurred by the carting industry are anticipated to reduce by an estimated \$14 million over the No Action condition, despite additional equipment and administrative costs associated with the Proposed Action.

Expenses associated with commercial carting are anticipated to decrease in the Proposed Action as a result of efficiencies in the daily operation of the commercial carting industry. These efficiencies, ~~however,~~ include ~~the some~~ reduction in total industry staffing necessary to collect commercial waste in the Proposed Action. Based on the reported baseline employment estimates provided by BIC 2015 Private Carter Financial Statements the CWZ Program would reduce employment by an estimated 41 employees (an approximately 2 percent loss in staffing) compared to the No Action condition. However, ~~as discussed above, it is anticipated that as a result of the Proposed Action~~ as a result of the increase in diversion from disposal under the CWZ Program, additional employment within secondary markets such as the recyclable sorting and processing industry is expected to increase. ~~Businesses customers of that pay for commercial carting services would likely benefit from the Proposed Action, as The Proposed Action~~ CWZ Program would not result in a substantial increase to the expenses associated with the commercial waste collection. Customers, regardless of industry sector or location, would likely receive improved services, including free waste assessments, and access to a dedicated call center, at a competitive rate and with increased transparency as a result of the Proposed Action.

Based on the analysis presented above, the CWZ Program is not anticipated to result in significant adverse environmental impacts on the socioeconomic conditions of New York City, as the Proposed Action would not substantially limit or impair businesses within the City of New York. Efficiencies introduced by the CWZ Program would make carting more efficient, decreasing the expenses associated with the operation of the commercial carting industry compared to the No Action condition, which is not anticipated to ~~reduce~~ substantially increase the cost of waste collection services for businesses within the City. *

A. INTRODUCTION

In accordance with the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, a solid waste assessment determines whether a project has the potential to cause a substantial increase in solid waste production that may overburden available waste management capacity or otherwise be inconsistent with the City’s Solid Waste Management Plan (SWMP) or with State policy related to the City’s integrated solid waste management system. According to the *CEQR Technical Manual*, a solid waste assessment is appropriate if a project involves a regulatory change to public or private waste collection, processing, recycling, or disposal.

As described in Chapter 1, “Project Description,” the City of New York is proposing to establish and implement a Commercial Waste Zone (CWZ) Program across the five boroughs of the City to improve the carting of refuse, recyclables, and organic waste from commercial businesses (the “CWZ Program” or “Proposed Action”).

Specifically, the Proposed Action would create 20 geographic zones in each of which a limited number of carters would be authorized to operate while adhering to certain parameters intended to improve transparency, safety, and customer service, among other objectives. The implementation of the Proposed Action is intended to create a safe and more efficient collection system that provides high-quality, reasonably ~~cost~~cost-~~priced~~ service while advancing the City’s sustainability and recycling goals. Fourteen zones would each have three authorized carters, four zones would each have four carters, and two zones would each have five carters, for a potential total of up to 68 zone contracts. No carting company could have more than 15 zone contracts. Consortiums of larger and smaller carting companies could be awarded one or more zone contracts.

While the Proposed Action would not result in an increase in solid waste generation, an assessment of the Proposed Action’s potential effects on the solid waste management system is warranted as well as a review of the Proposed Action’s consistency with the SWMP because the Proposed Action would change the system of commercial waste collection.

The CWZ Program would not directly affect any facility used for the transfer or disposal of solid waste generated within New York City, any recyclables handling and recovery facility that accepts recyclables, or any facility that processes organic waste originating within New York City. Likewise, the CWZ Program would not affect the carting of residential waste, or commercial carting of medical waste, mixed construction and demolition debris, materials such as dirt, rock, concrete and masonry that is processed into clean fill material. Therefore, the Solid Waste analysis focuses on the Proposed Action’s impact upon the available commercial carting capacity within the City to collect and mixed municipal solid waste (MSW) (putrescible waste), designated recyclables (metal, glass, and plastic [MGP], paper, cardboard), and organics such as food preparation waste from the commercial sector.

B. EXISTING CONDITIONS

This section describes the current conditions of the commercial waste carting industry, including applicable laws and regulations and management plans.

As described in Chapter 1, “Project Description,” each year more than 100,000 New York City office buildings, retailers, restaurants, manufacturers, and other commercial establishments generate more than 3 million tons of waste (i.e., refuse, recyclables, and organics).¹ A current network of approximately 95 private carters from the City and region collect waste from these businesses, utilizing a total of approximately 1,100 licensed carting trucks.² According to the Business Integrity Commissions’ (BIC) 2017 Q2–Q4³ customer register, approximately 62 percent of customers are served by large carters,⁴ 22 percent served by medium carters, and 16 percent served by small carters. In recent years, the commercial waste industry has begun to see market consolidation through acquisitions on the part of some of the larger operating carters.

Carters take the commercial refuse they collect within New York City to waste transfer stations in the City or region, where it is transferred to long-haul trucks or rail cars and sent to disposal facilities such as landfills and waste-to-energy plants. Some commercial refuse is carted directly to waste-to-energy plants in the metropolitan area outside New York City without passing through a transfer station. Carters take designated MGP recyclables to recyclable processing and recovery facilities in the City and region. Sorted recyclables are then sent to other manufacturing facilities to be made into new products, while the residue is disposed of. Carters take designated waste paper and cardboard to paper recycling sorting or processing facilities, including the Visy Paper Mill in Staten Island, which uses it to make grades of cardboard. Carters take organics either to transfer stations or to organic processing facilities in the region.

¹ BIC 2017 Q2–Q4 Customer Registry. This dataset includes customer information reported by individual carters on a regular basis to BIC.

² BIC, 2015, Private Carter Financial Statements
BIC, 2015, Private Carter Customer Register
BIC, 2017 Q2–Q4, Private Carter Customer Register
BIC, 2017, LL145/2013 Compliance Plan Reports
BIC, 2018, LL145/2013 Compliance Reports

³ This dataset includes customer information reported by individual carters on a regular basis to BIC for the 2017 Q2–Q4 Customer Register. The number of customers is not linked to the number of commercial businesses serviced by carters since in large office buildings carters may collect waste from multiple businesses but may only report the single building management company as a customer. 2017 Q2–Q4 Carter Customer Register counts: 117,384 rows reported (some customers are listed in 1 row with multiple waste streams; others are listed in multiple rows for multiple waste streams); 100,302 unique customers (unique by name and location); 172,503 by customer and waste stream (all customers are split up into 1 entry per waste stream serviced).

⁴ For the purposes of this analysis, a “Small” carter captures less than 1 percent of the market share (defined by the number of customers). A “Medium” carter captures between 1 and 3 percent of the market share. A “Large” carter captures more than 3 percent of the market share.

NEW YORK CITY LAWS AND REGULATIONS

As discussed in Chapter 2, “Land Use, Zoning, and Public Policy,” the current commercial waste industry is regulated largely by Titles 16 and 16A of the New York City Administrative Code, and Titles 16 and 17 of the Rules of the City of New York.

Title 16 (“Sanitation”) of the New York City Administrative Code requires commercial businesses to acquire a Trade Waste Removal License and indicate the name of the carter they employ, and sets forth waste and recyclables source-separation requirements per the City’s Recycling Law.

Title 16A, Chapter 1 (“Commercial Waste Removal”) of the New York City Administrative Code authorizes BIC to license, register, and regulate businesses that remove, collect, or dispose of trade waste. It authorizes BIC to investigate the background and make determinations of fitness concerning the employees of licensed carters; determine the maximum and minimum rates for collection; removal and disposal of trade waste; conduct studies or investigations; establish and regulate appropriate safety and service standards; hire BIC staff; and provide educational programs to inform both carters and customers about their rights and responsibilities.

Title 16 of the Rules of the City of New York provides requirements specific for commercial waste carters. The rules broadly (a) allow commercial establishments generating less than a defined amount of waste per week to share a disposal location with another commercial establishment; (b) define designated recyclable materials for commercial waste; (c) provide source-separation, set-out, and collection requirements and responsibilities; (d) allow the Commissioner of the New York City Department of Sanitation (DSNY) to request inspections; and (e) define commercial waste-carting vehicle requirements and specifications.

Title 17 Chapter 1 of the Rules of the City of New York sets forth BIC’s regulations for commercial waste carters. Title 17 establishes rate caps (e.g., maximum costs) for waste collection, outlines licensing requirements for carters and brokers, sets license application requirements, provides terms for license application rejection, and specifies certain procedures for investigation, license revocation or suspension, penalties, liabilities, enforcement, hearings, and other steps related to addressing improper carter and broker conduct.

In addition, commercial carters are required to comply with a number of Local Laws (LLs) that will take effect over the next few years. LL145 of 2013 (LL145/2013) requires heavy-duty diesel waste-carting truck engines older than Model Year 2007 to be upgraded to reduce their exhaust emissions either by installing a newer engine from 2007 or later, or to retrofit the engine with pre-approved Best Available Retrofit Technology (BART) emission controls, such as diesel particulate traps, by January 1, 2020.

LL56 of 2015 (LL56/2015) requires all trade waste-carting vehicles to be equipped with side guards by January 1, 2024. Sideguards help prevent pedestrians and bicyclists from falling into the exposed space between the front axle and rear axle of the carting truck.

LL152 of 2018 (LL152/2018) requires cuts in the permitted capacity of putrescible and non-putrescible solid waste transfer stations in four community districts in New York City that are overburdened with disproportionately higher amounts of waste transfer station capacity.

2006 SOLID WASTE MANAGEMENT PLAN

The current SWMP, adopted in July 2006 and approved by New York State in October 2006, is a five-borough plan that addresses New York City’s waste management needs. It projects quantities of refuse and recyclables that need management; identifies local waste transfer stations, recyclables

NYC Commercial Waste Zone Program

processing and recovery facilities, and composting facilities; and discusses disposal plans for refuse via export from the City to landfills and waste-to-energy facilities. The City is required to adopt a SWMP for at least a 10-year period under New York State Environmental Conservation Law. The current plan is in effect through 2025, at which point a new plan will be evaluated and initiated.

The SWMP emphasizes three broad categories of goals: (1) the improvement of conditions around transfer stations upon which both public and private carters currently rely; (2) the transition from a system reliant on long-haul truck transport to disposal facilities to one that takes advantage of barge and rail transportation and related transfer station and recyclables processing infrastructure development, to reduce local truck traffic; and (3) reductions in the concentrations of transfer station capacity so that low-income and minority communities are not disproportionately burdened. In addition, the SWMP sets ambitious goals for recycling within the City, which will ultimately reduce the exportation and disposal of waste. The SWMP does not discuss commercial carting arrangements or specify facilities outside the City for management or disposal of commercial refuse or recyclables.

RECYCLING AND ORGANICS REQUIREMENTS

The City launched a progressive recycling program in 1989 (LL19 of 1989, and amended New York City Administrative Code §16-306), which mandated recycling requirements for City residents, businesses, and institutions. The Citywide Recycling Program requires separation from refuse of designated recyclable materials for collection, including paper, cardboard, MGP as well as other materials such as textiles. On February 5, 2016, DSNY adopted new rules to allow for single stream collection and recycling of commercial waste (whereby all designated recyclable MGP and paper are placed in the same bags or bins by a business) and for co-collection of recyclables (whereby all designated recyclable MGP is source separated from designated paper by the business, but a private carter places the source-separated materials into the same compartment of a waste-carting truck with no refuse). The intent of the new rule is to help make commercial recycling easier to manage and increase diversion of recyclables from landfills.

In 2013, the City Council passed LL146 of 2013 (codified as New York City Administrative Code §16-306.1) which requires DSNY to assess, at least annually, the available regional capacity to process organic waste and to designate certain categories of businesses that must separate this material for composting or aerobic or anaerobic digestion to make useful products such as soil amendments and/or biogas. To date, DSNY has identified the following categories of businesses that are required to source-separate organic waste for such beneficial use:

- Food service establishments with a floor area of at least 15,000 square feet (sf), targeting food preparation organic waste, not post-consumer food waste
- Food service establishments that are part of a chain of 100 or more locations in the City of New York
- Retail food stores with a floor area of at least 25,000 sf
- Food service establishments in hotels with 150 or more rooms
- Arenas and stadiums with a seating capacity of at least 15,000 people
- Food manufacturers with a floor area of at least 25,000 sf
- Food wholesalers with a floor area of at least 20,000 sf

NEIGHBORHOOD CASE STUDY AREAS

To provide a baseline of the for each of the three commercial density typology case study areas defined in Chapter 1, “Project Description,” the current conditions of the commercial waste system in each study area were characterized, including the estimated number of customers, the total waste generated, the major waste streams, and the number of carters.

As individual businesses and different industries produce varying amounts of waste, a waste generation and cost model was developed based on reported employment to estimate (1) the amount of waste produced within a specific geographic area and (2) the total and average costs of waste removal services for businesses. As described in detail in Chapter 3, “Socioeconomic Conditions,” use-specific waste generation ratios, reported on a per-employee basis were applied to estimate the amount of waste generated by the specific industry sectors that are typically collected by commercial carters. Commercial waste generation rates from the State of California “CalRecycle” program were utilized to model waste generation in New York City.^{5,6} **Table 4-1** shows the employee-based waste generation rates utilized for this analysis.

Table 4-1
Employment-based Waste Generation Rates

Industry Sector	Generation Rate (tons/employee/yr) ¹
Manufacturing ²	1.77
Office ³	1.37
Non-Food Retail	2.41
Food Retail	6.64
Food Services	2.91
Hotel	2.13
Notes:	
¹ Waste generation rates includes all waste streams (refuse, recyclables, and organics) and assumes that diversion of waste would not result in a net decrease in waste produced, just a change to the compositional ratio of waste produced.	
² The manufacturing rate used for analysis was calculated by averaging the waste generation rates of electronic, food, and all other manufacturing generation rates found in the CalRecycle model.	
³ The office rate used for analysis was calculated with the average waste generation rate from management, professional, and health services.	
Sources:	
CalRecycle, Sept 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California.	

In order to adjust the CalRecycle employment-based waste generation ratios for New York City, the total tonnage of waste produced within New York City, (approximately 3.3 million tons per year) was multiplied by the proportional composition of waste generation by industry sector

⁵ CEQR Technical Manual Waste Generation Rates were not utilized in this analysis as the industry analysis required more refined waste generation rate estimates that align with the identified New York State Department of Labor (NYSDOL) Quarterly Census of Employment and Wages (QCEW) employment data and the North American Industry Classification System (NAICS) codes used to analyze the industry sectors affected by the CWZ Program. they do not reflect updated waste composition and generation for New York City. In addition these rates do not accurately reflect the industry sectors analyzed for the purposes of the CWZ Program.

⁶ CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California

NYC Commercial Waste Zone Program

modeled utilizing the unadjusted CalRecycle rates seen above. As shown in **Table 4-2**, New York City generates an estimated 3.3 million tons of commercial waste annually (including putrescible, recyclable, and organic waste). Approximately 51 percent of this waste is generated by office businesses, approximately 16 percent is produced by food services and approximately 15 percent of commercial waste is produced by non-food retail.

Table 4-2
New York City Commercial Waste Generation

Industry Sector	Approximate Employment		Approximate Waste Generation	
	Approximate Count	Percent ¹	Tons per Year ²	Percent of Total Waste Generated ¹
Manufacturing	210,608	8%	254,810	8%
Office	1,806,201	67%	1,695,757	51%
Non-Food Retail	296,466	11%	488,383	15%
Food Retail	51,969	2%	235,873	7%
Food Services	262,819	10%	522,781	16%
Hotel	75,091	3%	109,330	3%
Total	2,703,154	100%	3,306,934	100%
Note: ¹ Due to rounding, totals may not equal 100 percent. ² New York City waste generation by industry sector was normalized to reflect the known waste production rate within New York City. The CalRecycle waste generation by industry sector was calculated and then applied proportionally to the New York City waste generation total. Sources: U.S. Census Bureau, 2018, LEHD Origin-Destination Employment Statistics (2002–2015) ESRI Business Analyst Infogroup, 2018 CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California DSNY, 2015–2017, Transfer Station and Recycling Processor Reports DSNY, 2016, Private Carter Surveys				

MIDTOWN MANHATTAN CBD

Following the waste generation model described above, the waste generation was modeled for the Midtown Manhattan Central Business District (CBD) case study area. As indicated in **Table 4-3**, based on the U.S. Census Bureau 2018 data, the majority of employees within the Midtown Manhattan CBD high commercial density case study area fall within the office industry sector (approximately 70 percent), followed by non-food retail⁷ (approximately 17 percent), and food service (approximately 6 percent).

The Midtown Manhattan CBD case study area produces an average of 218,907 tons of commercial waste per year (including putrescible, recyclable, and organic waste) (see **Table 4-3**). The office industry sector generates the greatest amount of commercial waste (approximately 57 percent), followed by non-food retail (approximately 24 percent) and food services (approximately 10 percent).

⁷ Non-food retail includes motor vehicle and parts dealers, furniture and home furnishings stores, electronics and appliance stores, building material and garden equipment and supplies dealers, health and personal care stores, gasoline stations, clothing and clothing accessories stores, sporting goods, hobby, musical instrument, and book stores, general merchandise stores, miscellaneous store retailers, and non-store retailers.

Table 4-3

Waste Generation in Midtown Manhattan Case Study Area

Industry Sector	Employees		Approximate Waste Generation	
	Approximate Count	Percent ¹	Tons/Year ²	Percent of Waste Generated ¹
Manufacturing	13,723	3%	7,020	3%
Office	314,434	70%	124,819	57%
Non-Food Retail	76,617	17%	53,366	24%
Food Retail	558	0%	1,071	1%
Food Services	26,408	6%	22,210	10%
Hotel	16,926	4%	10,420	5%
Total	448,666	100%	218,907	100%
Notes: ¹ Due to rounding, totals may not equal 100 percent. ² The Midtown Manhattan waste generation rate was normalized against tonnage data collected at transfer stations and recycling facilities, as well as supplemental data from private carter surveys in order to better align with real-world waste generation for the study area. <u>One</u> Midtown Manhattan ton equals 0.3 CalRecycle tons. Sources: U.S. Census Bureau, 2018, LEHD Origin-Destination Employment Statistics (2002–2015) ESRI Business Analyst Infogroup, 2018 CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California DSNY, 2015–2017, Transfer Station and Recycling Processor Reports DSNY, 2016, Private Carter Surveys				

There are 38 carters that currently serve the Midtown Manhattan CBD, with 7 large carters servicing the area, 11 medium carters servicing the area, and 20 small carters servicing the area (see **Table 4-4**).

Table 4-4

Carters Servicing the Midtown Manhattan Case Study Area

	Small Carters ¹	Medium Carters ²	Large Carters ³	Total
No. of Carters Servicing the Area	20	11	7	38
% Customers Served in the Area	6	32	62	100
Notes: ¹ Small carter—has 1 percent or less of the total market share ² Medium carter—has 1 to 3 percent of the total market share ³ Large carter—has greater than 3 percent of the total market share Source: BIC 2017 Q2–Q4 Customer Register				

FLATBUSH NOSTRAND JUNCTION NEIGHBORHOOD RETAIL CORRIDOR

Following the waste generation model described above, the waste generation was modeled for the Flatbush Nostrand Junction case study area. As indicated in **Table 4-5**, based on the U.S. Census Bureau 2018 data, employees within the Flatbush Nostrand Junction medium commercial density case study area mainly fall within the office industry sector (approximately 41 percent), non-food retail (approximately 39 percent), and food services (approximately 15 percent).

The Flatbush Nostrand Junction case study area produces an average of 3,382 tons of commercial waste per year (including putrescible, recyclable, and organic waste) (see **Table 4-5**). The non-food retail industry sector generates the greatest amount of commercial waste (approximately 44

NYC Commercial Waste Zone Program

percent), followed by the office industry sector (approximately 27 percent), and food services (approximately 21 percent).

Table 4-5
Waste Generation in the Flatbush Nostrand Junction Case Study Area

Industry Sector	Employment		Waste Generation	
	Count	Percent ¹	Tons/Year ²	Percent of Waste Generate ¹
Manufacturing	45	2%	48	1%
Office	1,100	41%	905	27%
Non-Food Retail	1,029	39%	1,485	44%
Food Retail	52	2%	208	6%
Food Services	408	15%	710	21%
Hotel	21	1%	27	0%
Total	2,655	100%	3,382	100%
Notes: ¹ Due to rounding, totals may not equal 100 percent. ² The Flatbush Nostrand waste generation rate was normalized based on tonnages recorded at waste transfer stations and recycling facilities, supplemented by private carter surveys and routing data, in order to better align with real-world waste generation for the study area. <u>One</u> Flatbush Nostrand Junction ton equals 0.6 CalRecycle tons. Sources: U.S. Census Bureau, 2018, LEHD Origin-Destination Employment Statistics (2002–2015) ESRI Business Analyst Infogroup, 2018 CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California DSNY, 2015–2017, Transfer Station and Recycling Processor Reports DSNY, 2016, Private Carter Surveys				

There are 17 carters that currently serve the Flatbush Nostrand Junction case study area, with 6 large carters servicing the area, 4 medium carters servicing the area, and 7 small carters servicing the area (see **Table 4-6**).

Table 4-6
Carters Servicing the Flatbush Nostrand Junction Case Study Area

	Small Carters ¹	Medium Carters ²	Large Carters ³	Total
No. of Carters Servicing the Area	7	4	6	17
% Customers Served in the Area	4	3	93	100
Notes: ¹ Small carter—has 1 percent or less of the total market share ² Medium carter—has 1 to 3 percent of the total market share ³ Large carter—has greater than 3 percent of the total market share Source: BIC 2017 Q2–Q4 Customer Register.				

COLLEGE POINT, QUEENS LOWER DENSITY AREA

Following the waste generation model described above, the waste generation was modeled for the College Point case study area. As indicated in **Table 4-7**, based on the U.S. Census Bureau 2018 data, the majority of employees within the College Point lower commercial density case study

area fall within the office industry sector (approximately 48 percent), followed by non-food retail⁸ (approximately 28 percent), and manufacturing (approximately 21 percent).

Table 4-7
Waste Generation in the College Point Case Study Area

Industry Sector	Employees		Waste Generation	
	Count	Percent ¹	Tons/Year ²	Percent of Waste Generated ¹
Manufacturing	3,215	21%	3,952	20%
Office	7,363	48%	7,023	36%
Non-Food Retail	4,252	28%	7,117	37%
Food Retail	80	1%	368	2%
Food Services	378	2%	763	0%
Hotel	76	0%	113	1%
Total	15,364	100%	19,335	100%
Notes: ¹ Due to rounding, totals may not equal 100 percent. ² The College Point waste generation rate was normalized based on tonnages recorded at waste transfer stations and recycling facilities, supplemented by private carter surveys and routing data, in order to better align with real-world waste generation for the study area. College Point ton equals 0.7 CalRecycle tons.				
Sources: U.S. Census Bureau, 2018, LEHD Origin-Destination Employment Statistics (2002–2015) ESRI Business Analyst Infogroup, 2018 CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California DSNY, 2015–2017, Transfer Station and Recycling Processor Reports DSNY, 2016, Private Carter Surveys				

The College Point case study area produces an average of 19,335 tons of commercial waste per year (including putrescible, recyclable, and organic waste) (see **Table 4-7**). The non-food retail industry sector generates the greatest amount of commercial waste (approximately 37 percent), followed by the office industry sector (approximately 36 percent) and manufacturing industry sector (approximately 20 percent).

There are 23 carters that currently serve the College Point case study area, with 6 large carters servicing the area, 6 medium carters servicing the area, and 11 small carters servicing the area (see **Table 4-8**).

Table 4-8
Carters Servicing the College Point Case Study Area

	Small Carters ¹	Medium Carters ²	Large Carters ³	Total
No. of Carters Servicing the Area	11	6	6	23
% Customers Served in the Area	25	29	46	100
Notes: ¹ Small carter—has 1 percent or less of the total market share ² Medium carter—has 1 to 3 percent of the total market share ³ Large carter—has greater than 3 percent of the total market share				
Source: BIC 2017 Q2–Q4 Customer Register.				

⁸ See footnote 3, above.

C. FUTURE WITHOUT THE PROPOSED ACTION

The Future without the Proposed Action (the “No Action” condition) includes the current commercial waste industry and any regulatory changes to the industry expected by the Analysis Year of 2024.

Under the No Action condition, the local laws concerning commercial waste discussed above under “Existing Conditions” are assumed to be implemented and the 2006–2025 SWMP would continue to guide solid waste policy for the City. The City would continue to expand recycling and organics diversion, and under the No Action condition all commercial businesses designated in LL146/2013 would be required to separate organics for composting or digestion.

Continued implementation of the SWMP would occur under the No Action condition. The goals of the SWMP are being achieved through the reconstruction of marine transfer stations and the reduction of solid waste processed in certain overburdened districts of Brooklyn, the Bronx, and Queens. As indicated in “Existing Conditions,” LL152/2018 will reduce the permitted capacity at putrescible and non-putrescible solid waste transfer stations in four overburdened community districts would be implemented in the No Action condition.

In regards to recycling and organics, it is estimated that 30 percent of commercial waste would be collected as recyclables (i.e., cardboard, paper, and MGP) and 3 percent of commercial waste would be collected as organics throughout the City under the No Action condition.⁹ This reflects a slight increase from existing conditions in which an estimated 24 percent of commercial waste is collected as recyclables and 1 percent is collected as organics throughout the City.¹⁰ This improved diversion is anticipated to come about due to the potential introduction of single-stream recycling, increased enforcement, and other policies and programs as discussed in Chapter 2, “Land Use, Zoning, and Public Policy,” including the additional designation of commercial businesses to begin source-separating organics for collection per LL146/2013.¹¹

Under the No Action condition, there would be no changes to the volume of commercial waste generated within each of the three case study areas.

⁹ Collection rate is the percentage of designated recyclables or organic material collected in the system.

¹⁰ Current waste stream capture rates are estimated through comparison of DSNY, 2018, Transfer Station and Recycling Processor Reports and DSNY, 2018, PODS Database with total waste streams based on a waste characterization model derived from Census industry employment in New York City and waste intensities from CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California. It is estimated that increased enforcement and other City policies between the current year and the 2024 Analysis Year can increase capture rates by 15 percent for each waste stream compared to current conditions. It is assumed that at maximum no waste stream will reach a capture rate over 95 percent. With organics, the only organics material considered in the analysis is the organic material from the category of businesses covered by LL146/2013. The overall impact along with increased enforcement is a potential increase in diversion by 9 percent in the No Action condition from existing conditions.

¹¹ The City estimates that approximately 250,000 tons of organic material is generated by the businesses specified in LL146/2013 if all businesses were designated and it included front and back-of-the-house material. Currently, the City has designated a portion of the businesses specified in LL146/2013 and only back-of-the-house material, which amounts to a small amount of the organic material available in the waste stream. The No Action condition contemplates full designation of all businesses specified in LL146/2013 and includes both front and back-of-house material.

D. FUTURE WITH THE PROPOSED ACTION

The Future with the Proposed Action (the “With Action” condition) evaluates changes to the solid waste management system that would exist in the Analysis Year of 2024 as a result of the implementation of the Proposed Action, to determine their effect on the system’s capacity to manage commercial refuse and recyclables and for consistency with the SWMP.

As described in Chapter 1, “Project Description,” one of the goals of the CWZ Program would be to increase recycling and organics diversion. To help achieve this goal, those carters awarded contracts for the right to collect waste in a zone would be required to provide recycling and organics collection as standard services in addition to refuse collection. As indicated above, carters would be allowed to form consortiums or subcontract with other carters for these services.

In addition, under the Proposed Action, both carters and customers would be required by their contracts to comply with existing laws regarding recycling and organics separation of commercial waste, and they will be required by contract to comply with any new or revised laws or regulations enacted during the contract term. As part of their response to the City’s Request for Proposals (RFP), the Proposed Action would require carters to develop “zero waste” plans and identify innovative practices to support waste reduction, reuse, and recycling. The RFP and resulting contracts would provide for additional oversight and reporting requirements to ensure that these practices are implemented. With more recycling and organic materials being separated under the Proposed Action, less waste would be sent to landfills, saving resources and energy, consistent with the City’s sustainability and recycling goals. Customers would be responsible for ensuring that they follow the laws regarding recycling, including signage, education, separation, and set-out requirements.

As such, the Proposed Action would not be expected to increase the volume of waste being produced or collected but would result in a redistribution of what waste would be collected and by which carter it would be collected. Under the Proposed Action, there would be an expected shift in the waste streams collected, with due to an increased emphasis on in diversion and increased enforcement of diversion, from an estimated 30 percent collection rate of recyclables and 3 percent of organics in the No Action condition to 38 percent collection rate of recyclables and 6 percent of organics with the Proposed Action. Recycling and organic waste collection trucks carry fewer tons due to lower waste density than similar putrescible waste collection trucks. Thus a net increase in the total number of collection trucks for these commodities would be expected as a result of the increased diversion to recycling and organics. However, as detailed in Chapter 5, “Transportation,” the Proposed Action would limit the number of carters within geographic zones, which would result in increased efficiency in waste collection routes, such that, the total number of commercial carter trucks would be reduced as a result of the implementation of the Proposed Action. As detailed in Chapter 3, “Socioeconomic Conditions,” it is anticipated that as a result of more efficient routing and more efficient truck loading (e.g., filling to capacity), the commercial carting industry would require 275 fewer trucks under the Proposed Action as compared to the No Action condition and 236 fewer trucks compared to existing conditions. Under the Proposed Action, the commercial carting industry would require an estimated fleet of 739 trucks, which would provide sufficient capacity in order to collect the commercial waste generated within New York City.

NEIGHBORHOOD CASE STUDY AREAS

To determine potential changes to the commercial waste system under the Proposed Action, an assessment was performed for each neighborhood case study area that analyzed anticipated

NYC Commercial Waste Zone Program

changes to the respective quantities of refuse, recyclables, and organics set out for collection and waste collection capacity.

MIDTOWN MANHATTAN CBD

As described in Chapter 1, “Project Description,” under the Proposed Action, the Midtown Manhattan CBD high commercial density case study area would fall within CWZ Zones MN-3 and MN-4. Under the Proposed Action, there would be a maximum of 5 carters that serve each of these zones, a reduction from 38 carters that currently serve this Midtown Manhattan CBD case study area (see **Table 4-9**).

Table 4-9
Carters Servicing the Case Study Areas with Proposed Action

	Midtown Manhattan CBD		Flatbush Nostrand Junction			College Point
Total No. of Carters Currently Servicing the Area	38		17			23
Associated CWZ Zone	MN-3	MN-4	BK-3	BK-4	BK-6	QN-3
Total No. Carters Servicing under Proposed Action	5	5	3	3	3	3
Source: BIC 2017 Q2–Q4 Customer Register.						

The Proposed Action is not expected to result in changes in the total quantity of waste generated by customers within the study area. However, as a goal of the Proposed Action would be to increase recycling and organic diversion, and carters awarded contracts would be required to collect all three waste streams, there would be a change in the respective volumes of waste types picked up: a decrease in the mixed MSW (i.e., refuse) and an increase in recyclables and source-separated organics.

FLATBUSH NOSTRAND JUNCTION NEIGHBORHOOD RETAIL CORRIDOR

As described in Chapter 1, “Project Description,” under the Proposed Action, the Flatbush Nostrand Junction case study area would fall within CWZ Zones BK-3, BK-4, and BK-6. Under the CWZ Program, a maximum of 3 carters would serve each of these zones, a reduction from the 17 carters that currently serve the Flatbush Nostrand Junction case study area (see **Table 4-9**).

As with the Midtown Manhattan CBD case study, the Proposed Action is not expected to result in changes in the total quantity of waste generated by customers within the Flatbush Nostrand Junction study area. However, as a goal of the Proposed Action would be to increase recycling and organic diversion, and carters awarded contracts would be required to collect all three waste streams, there would be a change in the respective volumes of waste types picked up—a decrease in mixed MSW (i.e., refuse) and an increase in recyclables and organics.

COLLEGE POINT, QUEENS LOWER DENSITY AREA

As described in Chapter 1, “Project Description,” under the Proposed Action, the College Point case study area would fall within CWZ Zone QN-3. Under the CWZ Program, there would be a maximum of 3 carters that would serve this zone, a reduction from the 23 carters that currently serve the College Point case study area (see **Table 4-9**).

As with the other two case study areas, the Proposed Action is not expected to result in changes in the total quantity of waste generated by customers within the College Point case study area. However, as a goal of the Proposed Action would be to increase recycling and organic diversion,

and carters awarded contracts would be required to collect all three waste streams, there would be a change in the respective volumes of waste types picked up—a decrease in mixed MSW (i.e., refuse) and an increase in recyclables and organics.

CONSISTENCY WITH SWMP

As noted above, the SWMP establishes certain policy goals to manage the various components of residential and commercial waste generated in the City and identifies procedures and facilities that may be required to meet those goals.

The CWZ Program would not directly affect any facility identified in the SWMP for the transfer, sorting or disposal of refuse, organics or recyclables, or change New York City’s plan to rely on remote disposal capacity such as landfills and waste-to-energy plants for refuse. Further, existing recycling and organic processing facilities within New York City and the ~~surrounding region~~ area are anticipated to have adequate capacity to accommodate the increase in diversion as a result of the CWZ Program.

As described earlier, one of the goals of the Proposed Action would be to increase the diversion capture rate of designated recyclables, and thus reduce the amount of refuse that must be disposed of. The carters who are awarded contracts under the Proposed Action in each zone would be required to collect all three waste types, including refuse, recycling, and organics. If a carter would not be able to provide this service on its own, it would be allowed to create a consortium or to contract with other carters who would be able to pick up recyclable and/or organics. This goal of the Proposed Action would support the goals of the SWMP.

In addition, another goal of the Proposed Action is to reduce truck ~~trips~~ traffic related to the commercial waste industry. As described in Chapter 5, “Transportation,” in creating zones and limiting the number of carters servicing those zones, there is expected to be more efficient routing and more efficient truck loading (e.g., filling to capacity), reducing the overall waste carting truck traffic. This would support the SWMP truck traffic reduction goals and thereby reduce truck traffic-related impacts to communities, including pedestrian safety, noise and air emissions. In total up to 68 contracts would be awarded for commercial waste collection within New York City. With multiple carters allowed to operate within a zone, there are opportunities for various sized carters to win zone contracts. Small carters may benefit from a strong local presence in a given zone and knowledge of a particular neighborhood in the evaluation of proposals. The CWZ Program also accounts for the current market structure and gives carters of all sizes the opportunity to compete in the new system. Additionally, the City would promote opportunities for an array of different carters by accepting proposals submitted by a consortium of carters or organized through a broker and by allowing subcontracting in certain circumstances in order to ensure commercial waste collection is done effectively and efficiently based on the criteria outlined in the Implementation Plan.

Therefore, the Proposed Action would be consistent with the SWMP in the Analysis Year.

E. CONCLUSION

In view of the foregoing, it can be concluded that the CWZ Program would not cause a significant adverse impact to solid waste ~~management~~ or sanitation services. *

A. INTRODUCTION

In accordance with the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, this chapter examines the potential effects of a project on the City’s transportation systems.

As described in Chapter 1, “Project Description,” the City of New York is proposing to establish and implement a Commercial Waste Zone (CWZ) Program across the five boroughs in the City to improve the carting of refuse, recyclables, and organic waste from commercial businesses (the “CWZ Program” or “Proposed Action”).

In order to examine the potential effects of the Proposed Action, a regional traffic assessment was conducted. In addition, a screening level analysis of the number of trucks within the three representative neighborhood case study areas, as described in Chapter 1, “Project Description,” was performed. This screening assessment was conducted pursuant to the methodologies outlined in the *CEQR Technical Manual*. As this is a Generic Environmental Impact Statement (GEIS), should individual zones result in an increment of 50 or more passenger car equivalents (PCE) once all the contracts have been awarded, additional analyses may be needed.

B. TRANSPORTATION CONDITIONS

EXISTING CONDITION

Current commercial carter practices need to be considered to understand how the number of trucks would likely be affected by the Proposed Action. Typically, commercial waste is collected by a private carter pursuant to an agreement with a private establishment (i.e., customer). The type of commercial waste generated by customers and collected by these carters is diverse. In addition to refuse, carters may pick up source-separated waste paper, cardboard, and metal, glass, and plastic (MGP) as well as organics. As discussed in Chapter 1, “Project Description,” a network of approximately 95 private carters with approximately 1,100 trucks collect refuse, recyclables and organics from these businesses.¹ Carters in New York City typically use rear-loading diesel packer trucks and roll-on roll-off container trucks. The frequency of pickups (daily or less regularly) varies, depending on the arrangement the customer makes with the carter, and customers indicated that they value carters that can provide service at a specific time of day that they prefer. Carters

¹ BIC, 2015, Private Carter Financial Statements
BIC, 2015, Private Carter Customer Register
BIC, 2017 Q2–Q4, Private Carter Customer Register
BIC, 2017, LL145/2013 Compliance Plan Reports
BIC, 2018, LL145/2013 Compliance Reports.

typically operate up to six days per week and can work hours around the clock for pickups and disposal of commercial waste.

Most waste pickups occur overnight between the hours of 8:00 PM and 6:00 AM. Daytime pickups are between 6:00 AM and 8:00 PM. Typically, approximately 23 percent of all pickups occur in the daytime and 77 percent occur at night. Of the nighttime pick-ups, approximately 15 percent occurs in the early nighttime hours between 8:00 PM and 10:00 PM, 35 percent around midnight, between 10:00 PM and 2:00 AM, and 27 percent in the overnight to early morning hours from 2:00 AM and 6:00 AM.² These pick-up patterns occur across all business types, with no significant difference between industry sectors.

On a given street or in a local community, numerous carters collect solid waste from these customers. As discussed in Chapter 1, “Project Description,” in some parts of the City, more than 50 private commercial carters service a single neighborhood, resulting in up to dozens of private commercial carter trucks per individual commercial block on a single night. Carters’ collection activities are often dispersed and overlap throughout New York City. When not on local streets for collections, commercial carter trucks travel along New York City Department of Transportation (NYCDOT)-designated truck routes. They remain on the designated truck routes for as long as possible at both the regional and neighborhood levels, until reaching their destination. These collection trucks arrive at the pickup location, afterwards traveling through neighborhoods for other pickups, and ultimately, to NYCDOT-designated truck routes and transfer stations in or outside of the City. The NYCDOT-designated truck routes located within each case study area are shown in **Figures 5-1 through 5-3**.

Under existing conditions, the number of commercial carter trucks over the course of 24-hour period is approximately 167, 45, and 83, within the Midtown Manhattan Central Business District (CBD), the Flatbush Nostrand Junction, and the College Point case study areas, respectively.³

Commercial carter truck Vehicle Miles Traveled (VMT) includes the estimated number of miles that all commercial carter trucks serving New York City businesses drive to pick up and drop off waste each day, beginning at a truck’s starting point, continuing to each customer for waste collection, then to the transfer station for waste disposal/removal, and ending back at its origination point. Existing inefficiencies in waste collection routes lead to an elevated VMT, within New York City and region-wide for travel to transfer stations and garages in New Jersey, Long Island, and nearby upstate New York counties.

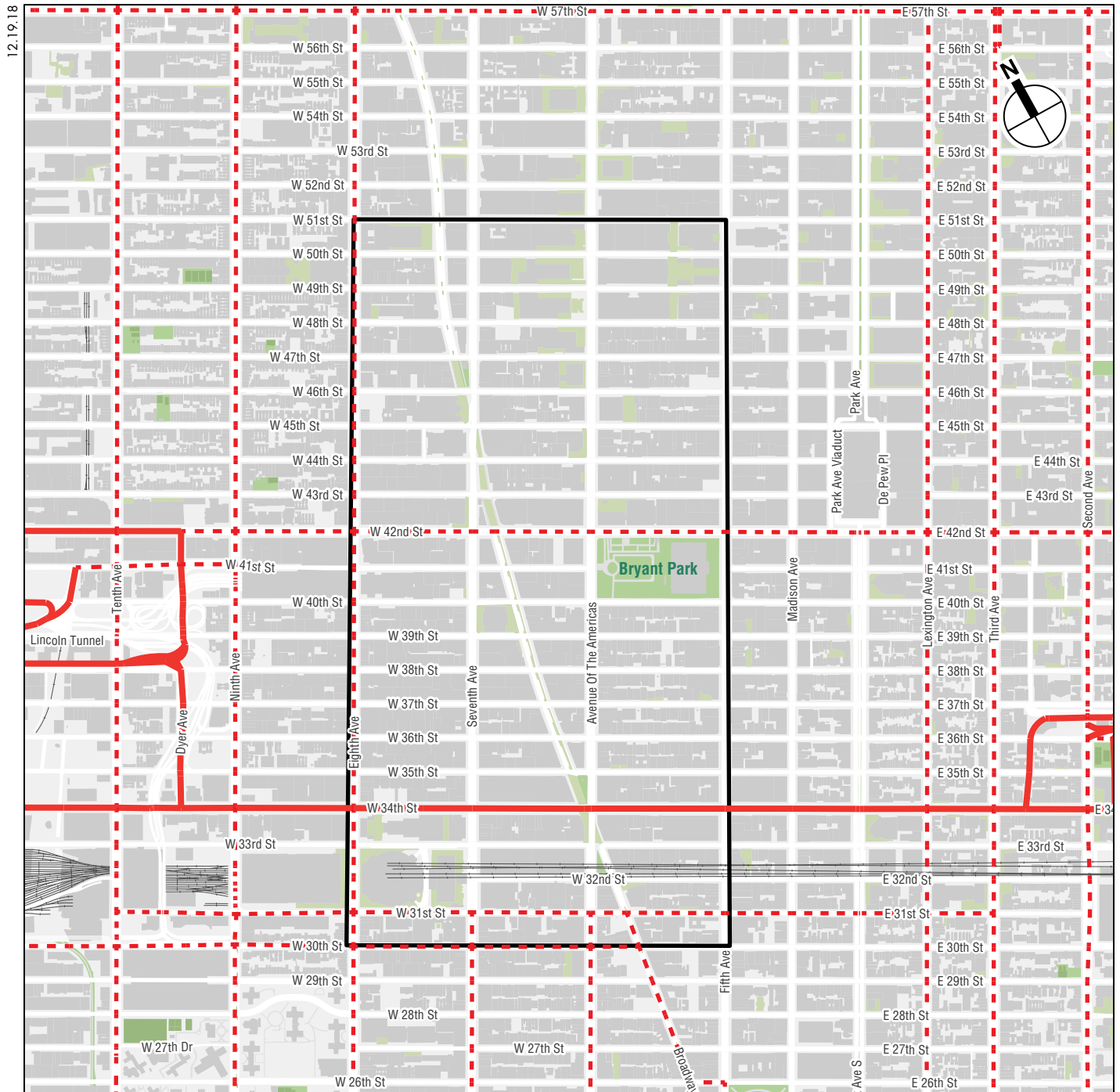
FUTURE WITHOUT THE PROPOSED ACTION

The Future without the Proposed Action (the “No Action” condition) includes the commercial waste industry and any changes to the industry expected by the Analysis Year of 2024.

Under the No Action condition, carters would continue to operate as they do under the existing condition—the routes, frequency, durations, and pick-up times would remain essentially the same.

² ~~2018 Routing Data collected between March 4, 2018 and March 17, BIC, 2018, Private Carter Routing Data collected for one week between March 4 to March 10, 2018 and supplemental days between March 11 to March 17, 2018 to replace the data collection on days impacted by snow. This 2018 route data collection was done, and was collected to provide carters the opportunity to provide more up-to-date routing data from the 2014–2015 data.~~

³ 2018 Routing Data including Diversion Program Impact



0 1,000 FEET

Case Study Area

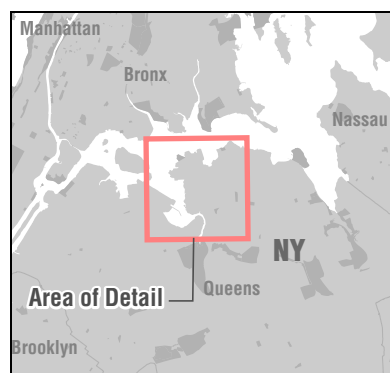
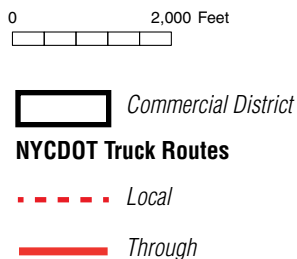
NYCDOT Truck Routes

Local
Through



Midtown Manhattan CBD
NYCDOT-Designated Truck Routes





College Point Lower Density Retail
NYCDOT-Designated Truck Routes

As described in Chapter 2, “Land Use, Zoning, and Public Policy,” existing regulations require commercial businesses to separately manage recyclables from refuse to facilitate diversion from landfills. Under the No Action condition, the City would continue to expand recycling and organics diversions, including requiring all commercial businesses designated in Local Law (LL) 146 of 2013 (LL146/2013) to separate organics for beneficial use, such as composting or anaerobic digestion to produce biogas. Recycling and organic waste collection trucks have lower waste density per volume than similar-sized putrescible waste collection trucks, and so an increase in the total number of commercial carter trucks would be expected as a result of the increased diversion to recycling and organics. As described in Chapter 3, “Socioeconomic Conditions,” in order to reach the diversion rate anticipated in the No Action condition, carters would need to run an estimated 4 percent more collection routes with an estimated 39 additional trucks to service such routes.⁴ This would result in a minor increase to VMT within New York City and region-wide for travel to transfer stations and garages in New Jersey, Long Island, and nearby upstate New York counties with the No Action condition.

FUTURE WITH THE PROPOSED ACTION

The Future with the Proposed Action (the “With Action” condition) evaluates the changes to conditions that would exist in the Analysis Year of 2024 with the implementation of the Proposed Action.

Under the Proposed Action, the number and type of customers and the pick-up times and frequency of pick-ups would be expected to remain the same as under the No Action condition.

Similarly, under the Proposed Action, on a regional level, commercial carter trucks would follow the NYCDOT-designated truck routes but overall the industry would have fewer trucks on the road, and thus drive fewer miles, with the efficiencies in routes and the limited number of carters.

As discussed in Chapter 4, “Solid Waste Management and Sanitation Services,” one of the goals of the Proposed Action is to increase recycling and organics diversion. To help achieve this goal, carters would be required to provide recycling and organics collection in addition to refuse collection as standard services at a potentially lower cost. To do this, carters would be able to form consortiums or subcontract with other carters for these services. Recycling and organic waste collection trucks carry fewer tons due to lower waste density than similar-sized putrescible waste collection trucks. Thus a net increase in the total number of collection trucks for these commodities would be expected as a result of the increased diversion to recycling and organics. As described in Chapter 3, “Socioeconomic Conditions,” a 10 percent increase in the rate of diversion over the No Action condition would require a 5.7 increase in routes and 56 additional trucks in order to meet the anticipated increased rate of diversion under the Proposed Action.

However, the Proposed Action would limit the number of carters within geographic zones, which would result in increased efficiency in waste collection routes, such that associated VMT and overall truck traffic would decrease. As discussed above, customers indicated that they value carters that can provide service at a specific time of day that they prefer. As part of the Proposed Action VMT methodology (see Appendix C), customers were divided into daytime and nighttime

⁴ An estimated 4 percent increase in routes is attributed to differences in load weights of putrescible, recyclables, and organics loads. Recyclable and organic routes carry less material per drop-off than putrescible routes based on BIC, 2018, Private Carter Dump Tickets. Thus, to service 9 percent more material as recyclables or organics instead of putrescible, an estimated 4 percent additional collection routes are needed.

NYC Commercial Waste Zone Program

pickups based on the pickup time that they provided under existing conditions. Customers were then grouped into clusters separately for daytime and nighttime pickups based on their location. In order to further incorporate the impact of requested pickup times by customers, customers across each cluster were randomly divided into daytime, early night, midnight, and early morning service timeframes, rather than divided by efficiency.

~~As discussed in Chapter 1, “Project Description,”~~ The increased efficiency coupled with the increased diversion to recycling and organics would result in an overall decrease of overlapping truck routes along road segments, which would result in decreased VMT within New York City and region-wide for travel to transfer stations and garages in New Jersey, Long Island, and nearby upstate New York counties with the Proposed Action (see **Figures 5-4 and 5-5**). Using 2018 Private Carter Routing Data,⁵ the Proposed Action is anticipated to reduce citywide VMT by 50 percent from the No Action condition. This is comparable to the 63 percent VMT reduction presented in the CWZ Implementation Plan, which was based on 2014–2015 Private Carter Routing Data and compared to baseline conditions.⁶ The 2018 data was collected to provide carters the opportunity to provide more up-to-date routing data. Carters were notified ahead of time that the data would be collected, and improved submission processes allowed carters to provide better quality data, accounting for this downward trend in VMT reduction. In addition, for this analysis, additional VMT necessary to service the expected diversion rates in the No Action condition and Proposed Action for recycling and organics were included, adding more truck routes in both the No Action and Proposed Action conditions, compared to the baseline existing condition.⁷ With respect to the case study areas, the Proposed Action’s reductions in VMT from the No Action condition range from approximately 47 to 60 percent (see **Table 5-1**).

Table 5-1
No Action and Proposed Action VMT (miles/day) per Case Study Area

Case Study Area	No Action VMT¹	Proposed Action VMT¹	Percent Reduction
Midtown Manhattan CBD	810	355	56%
Flatbush Nostrand Junction, Brooklyn	49	26	47%
College Point, Queens	499	200	60%
Notes: ¹ Simulation based on 2018 Routing Data collected between March 4, 2018 and March 17, 2018. Source: 2018 Routing Data simulated to reflect No Action and With Action conditions, including Diversion Program Impact.			

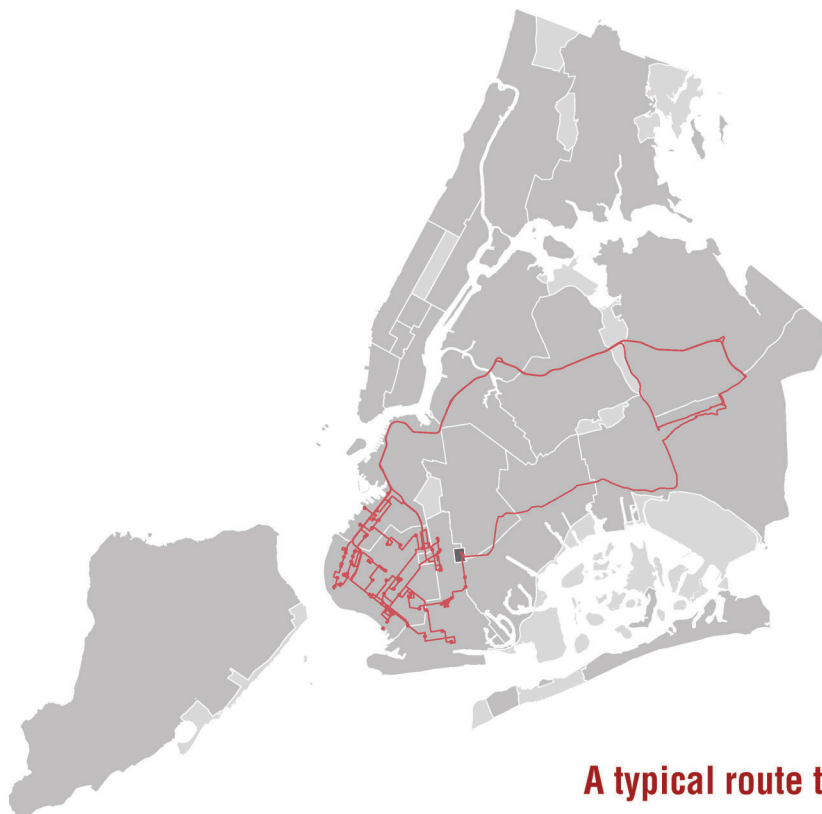
⁵ BIC, 2018, Private Carter Routing Data collected for one week between March 4 to March 10, 2018 and supplemental days between March 11 to March 17, 2018 to replace the data collection on days impacted by snow. This 2018 route data collection was done, ~~and was collected~~ to provide carters the opportunity to provide more up-to-date routing data from the 2014–2015 data.

⁶ The CWZ Implementation Plan used BIC, 2014–2015, Private Carter Routing Data for a 14-day period between July 6–12, 2014 and September 7–13, 2014.

⁷ As a result ~~of~~ the increased recycling and organic diversion under the No Action and Proposed Action conditions, there would be an increase in VMT that would partly offset the decrease in VMT from the CWZ Program overall. It is estimated there would be 4 percent more routes and ~~9.7~~ 10 percent more routes under the No Action condition and Proposed Action, respectively, but overall VMT will decline dramatically by 50 percent, as noted.

These maps show a single refuse collection route. Today, a typical route traveled by one truck that services the Flatbush Nostrand Junction case study area may be 153 miles long.

Under the Proposed Action, a route containing the same number of customers but located within the CWZ zones is only 45 miles long.



A typical route today

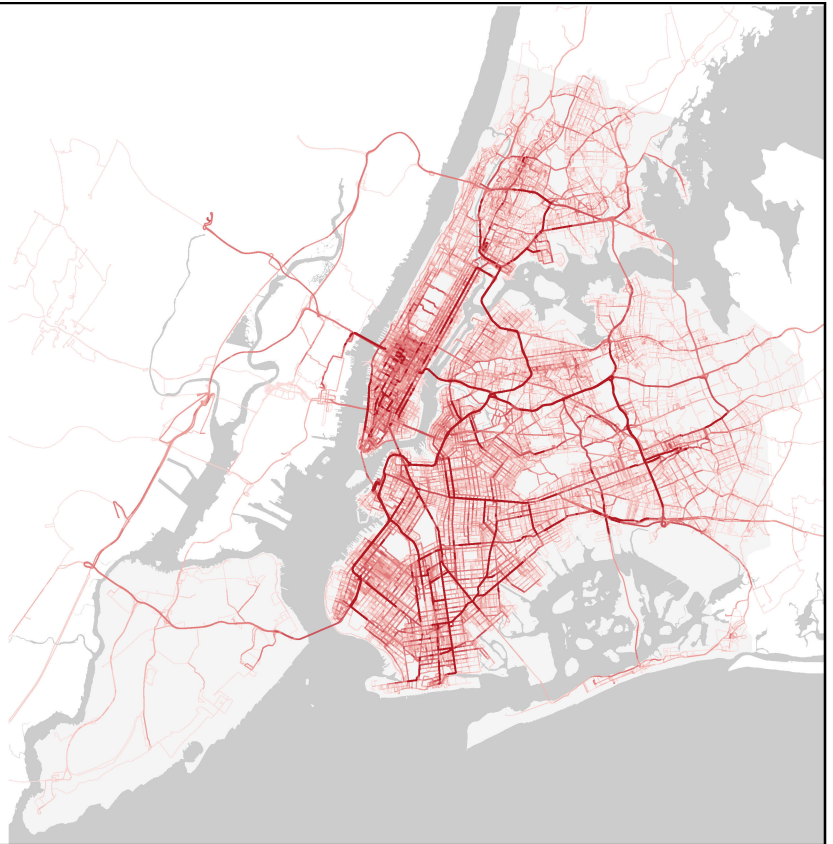
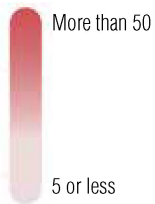


Route under Proposed Action

Efficiencies Gained from Existing Condition to
Proposed Action in the Flatbush Nostrand
Junction Case Study Area

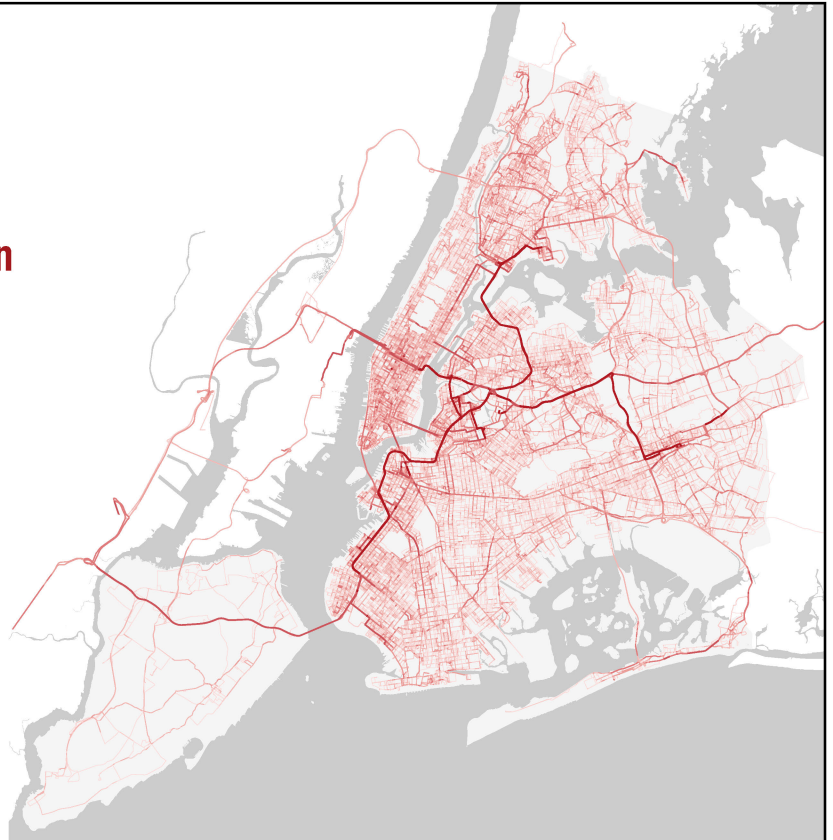
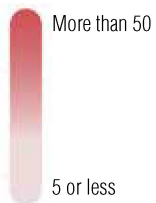
Traffic today

Number of garbage trucks passing through each block daily



Traffic under proposed action

Number of garbage trucks passing through each block daily



Truck Traffic Associated with Just One
Day of Operation in the City's Private
Waste Collection Industry

C. SCREENING ANALYSIS

The Proposed Action is not anticipated to generate an increase in pedestrian or transit trips; therefore, the focus of the screening assessment is to determine if an intersection would experience an increase in 50 or more PCE in a peak hour. Under the *CEQR Technical Manual*, a commercial carter truck is the equivalent of 1.5 PCEs.

The *CEQR Technical Manual* recommends a two-tier screening procedure to determine if further transportation analyses are warranted. This methodology begins with the preparation of a trip generation analysis (Level 1 screening) to estimate the volume of trucks attributable to the Proposed Action. If the Proposed Action is expected to result in fewer than 50 incremental peak hour PCEs, further quantified analyses are not warranted. When this threshold is predicted to be exceeded, detailed truck assignments (Level 2 screening) are performed to estimate the incremental truck and to identify potential locations for further analyses. If the truck assignments show that the Proposed Action would generate 50 or more peak hour PCEs through an intersection, further quantified analyses may be warranted to evaluate the potential for significant adverse traffic impacts.

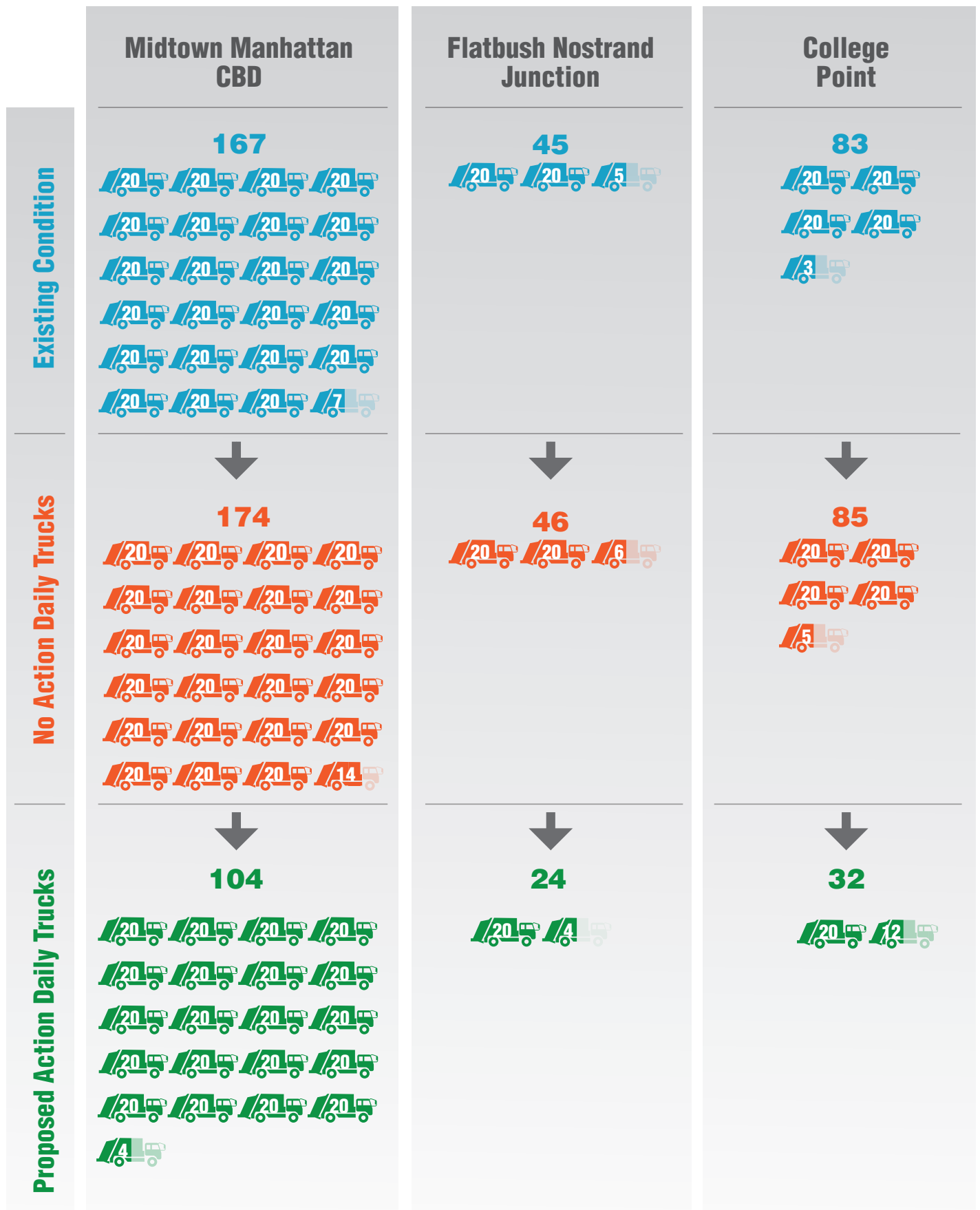
Within each of the neighborhood case study areas, the anticipated number of trucks generated by the Proposed Action were calculated and compared with the specified *CEQR Technical Manual* thresholds to determine whether additional screening and/or quantified analyses are warranted.

Table 5-2 provides the daily commercial carter truck numbers per case study area for the No Action and Proposed Action conditions. As shown, the number of daily commercial carter trucks under the No Action condition is approximately 174, 46, and 85, within the Midtown Manhattan CBD, the Flatbush Nostrand Junction, and the College Point case study areas, respectively. In order to provide a conservative estimate, 35 percent of the trucks between the peak period of 10:00 PM and 2:00 AM (or 14 percent of the total daily trucks) were assumed in and out at the same intersection in one overnight hour. Therefore, the predicted maximum number of trucks at an intersection in the peak hour under the No Action condition would be approximately 24, 6, and 12 within the Midtown Manhattan CBD, the Flatbush Nostrand Junction, and the College Point case study areas, respectively.

Table 5-2
No Action and Proposed Action Daily Carting Trucks per Case Study Area

Case Study Area	No Action Daily Trucks ¹	Proposed Action Daily Trucks	Percent Reduction
Midtown Manhattan CBD	174	104	40%
Flatbush Nostrand Junction, Brooklyn	46	24	48%
College Point, Queens	85	32	62%
Notes: ¹ Simulation based on 2018 Routing Data collected between March 4, 2018 and March 17, 2018. Source: 2018 Routing Data simulated to reflect No Action and With Action conditions, including Diversion Program Impact.			

By minimizing carter route overlaps, the Proposed Action is predicted to decrease the number of trucks in the future by approximately 40 percent to 62 percent per case study area (refer to **Table 5-2**). **Figure 5-6** depicts the changes in the daily truck numbers within each case study area between the existing condition, the No Action condition accounting for the increases in diversion and the Proposed Action accounting for the route efficiencies under the CWZ Program.



Daily Changes in the Amount of Trucks in
Case Study Areas

NYC Commercial Waste Zone Program

There would be no predicted exceedance of the *CEQR Technical Manual* Level 1 traffic screening threshold to warrant further analysis. Additionally, the collection times, duration of collections, collection dates, and frequency of collections would not significantly change with the Proposed Action. Therefore, detailed traffic analyses are not warranted and the Proposed Action is not anticipated to result in any significant adverse transportation impacts.

D. CONCLUSION

In view of the foregoing, it can be concluded that the CWZ Program would not cause a significant adverse transportation impacts. *

A. INTRODUCTION

In accordance with the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, this chapter assesses the potential for air quality impacts associated with the Proposed Action.

As described in Chapter 1, “Project Description,” the City of New York is proposing to establish and implement a Commercial Waste Zone (CWZ) Program across the five boroughs of the City to improve the carting of refuse, recyclables, and organic waste from commercial businesses (the “CWZ Program” or “Proposed Action”).

In order to examine the potential effects of the Proposed Action, a qualitative air quality assessment was conducted for the New York City region as well as at local intersections within the three representative neighborhood case study areas as described in Chapter 1, “Project Description.” This screening assessment was conducted consistent with the methodologies outlined in the *CEQR Technical Manual*.

B. AIR QUALITY CONDITIONS**EXISTING CONDITION**

As discussed in Chapter 1, “Project Description,” a network of approximately 95 private carters with approximately 1,100 trucks collect waste from commercial waste customers within New York City¹. Carters’ collection activities are often dispersed and overlap throughout New York City. In some parts of the City, more than 50 private waste carters service a single neighborhood, resulting in up to dozens of private waste commercial collection carter trucks per individual commercial block on a single night. Existing inefficiencies from overlapping waste collection routes lead to an elevated amount of truck Vehicle Miles Traveled (VMT) both within New York City and region-wide for commercial carter trucks driving to and from transfer stations and garages in Long Island, upstate New York, and New Jersey.

Carters in New York City commonly use rear-loading diesel packer trucks and roll-on roll-off container trucks. In 2013, the City enacted Local Law (LL) 145 of 2013 (LL145/2013) that requires every commercial carter truck that is owned or operated by an entity licensed or registered by the Business Integrity Commission (BIC) and operating in New York City to be equipped with either a U.S. Environmental Protection Agency (EPA)-certified 2007 (or later) engine or utilize

¹ BIC, 2015, Private Carter Financial Statements
BIC, 2015, Private Carter Customer Register
BIC, 2017 Q2-Q4, Private Carter Customer Register
BIC, 2017, LL145/2013 Compliance Plan Reports
BIC, 2018, LL145/2013 Compliance Reports.

NYC Commercial Waste Zone Program

Best Available Retrofit Technology (BART), as defined by the New York City Department of Environmental Protection (DEP) by January 1, 2020. Trucks would reduce particulate matter (PM) emissions by up to 85 percent after implementation of complying technology and would limit engine emissions to 0.01 grams diesel PM per brake horsepower-hour.

As part of LL145/2013, the type of pollution control technology utilized on commercial carter trucks must be identified by either the truck owner or operator and documentation must be submitted to DEP. As of summer 2017, approximately one tenth of carters were fully compliant with the requirements of LL145/2013 and approximately one third of carters had fleets that were at least halfway compliant. The total number of compliant commercial carter trucks in the industry represented at least one third of the total applicable commercial waste trucks operating in the New York City region.²

NATIONAL AMBIENT AIR QUALITY STANDARD ATTAINMENT STATUS

As required by the Clean Air Act (CAA), primary and secondary National Ambient Air Quality Standards (NAAQS) have been established³ for six major air pollutants: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone, respirable PM (both PM_{2.5} and PM₁₀), sulfur dioxide (SO₂), and lead. The CAA, as amended in 1990, defines non-attainment areas (NAA) as geographic regions that have been designated as not meeting one or more of the NAAQS.

Recent concentrations of all criteria pollutants at New York State Department of Environmental Conservation (NYSDEC) air quality monitoring stations within the New York City region show there were no monitored violations of the NAAQS for the pollutants at these sites in 2017 with the exception of ozone. Effective December 2015, EPA reduced the 2008 ozone NAAQS, lowering the primary and secondary NAAQS from 0.075 parts per million (ppm) to 0.070 ppm. EPA issued final area designations for the revised standard on April 30, 2018. Monitored ozone concentrations at two of three air quality monitoring stations (the Susan Wagner High School monitoring station in Staten Island, and the Queens College monitoring station in Queens) reported concentrations of ozone that would exceed the revised standard.

FUTURE WITHOUT THE PROPOSED ACTION

The Future without the Proposed Action (the “No Action” condition) includes the commercial waste industry and any changes to the industry expected by the Analysis Year of 2024.

Under the No Action condition, carters would continue to operate as they do under the existing condition—the routes, frequency, durations and pick-up times would remain essentially the same.

However, as described in Chapter 2, “Land Use, Zoning, and Public Policy,” existing regulations require commercial businesses to separately manage recyclables from refuse to facilitate diversion from landfills. Under the No Action condition, the City would continue to expand recycling and organics diversions, including requiring all commercial businesses designated in LL146 of 2013 (LL146/2013) to separate organics for beneficial use, such as composting or anaerobic digestion to produce biogas. Recycling and organic waste collection trucks have lower waste density per volume than standard putrescible waste collection trucks, and so an increase in the total number of commercial carter trucks would be expected as a result of the increased diversion to recycling

² BIC, 2017, LL145/2013 Compliance Plan Reports provided by carters at the request of BIC.

³ EPA. National Ambient Air Quality Standards. 40 CFR part 50.

and organics. This would result in a minor increase to VMT and pollutant emissions within New York City and region-wide for travel to transfer stations and garages in New Jersey, Long Island, and nearby upstate New York counties with the No Action condition.

Furthermore, under the No Action condition, all operating carters are expected to be fully compliant with LL145/2013 by the 2024 Analysis. Therefore, although fleet-wide emissions associated with commercial carter trucks are anticipated to be reduced from existing levels, there may be a minor increase to pollutant emissions in the No Action condition due to the increased VMT associated with the expanded recycling and organic diversions.

FUTURE WITH THE PROPOSED ACTION

The Future with the Proposed Action (the “With Action” condition) evaluates the conditions that would exist in the Analysis Year of 2024 with the implementation of the Proposed Action.

Under the Proposed Action, the number and type of customers, pick-up times, and frequency of pick-ups would be expected to remain the same as under the No Action condition.

Similarly, as discussed in Chapter 5, “Transportation,” under the Proposed Action, on a regional level, private carter waste collection trucks would follow New York City Department of Transportation (NYCDOT)-designated truck routes but overall would have fewer trucks due to the efficiencies in routes and the limited number of carters.

As discussed in Chapter 4, “Solid Waste ~~Management and Sanitation Services~~,” and Chapter 5, “Transportation,” as a result of one of the goals of the Proposed Action—increase recycling and organics diversion—an increase in the total number of waste collection trucks would be expected as a result of the increased diversion to recycling and organics as a result of recycling and organic waste collection trucks carrying fewer tons due to lower waste density than similar putrescible waste collection trucks. However, the Proposed Action would limit the number of carters within geographic zones, which would result in increased efficiency in waste collection routes, such that truck VMT and overall truck traffic would decrease. The increased efficiency coupled with the increased diversion to recycling and organics would result in an overall decrease of trucks, which would result in decreased VMTs within New York City and region-wide for truck routes to and from transfer stations and garages in Long Island, upstate New York, and New Jersey and would reduce emission levels from commercial carter trucks.

Under the Proposed Action, all carters operating within the program would continue to be expected to be fully compliant with LL145/2013. With the expected 50 percent reductions in VMTs from the CWZ Program, the fleet-wide emissions associated with commercial carter trucks would be reduced from levels in both the existing condition and No Action condition.

C. SCREENING-LEVEL ASSESSMENT

REGIONAL ASSESSMENT (MESOSCALE)

As discussed in Chapter 5, “Transportation,” the Proposed Action would result in an overall decrease of overlapping commercial carter truck routes, which decrease VMTs within New York City and region-wide for trucks driving to and from transfer stations and garages in Long Island, upstate New York, and New Jersey. Furthermore, the reduction in annual commercial carter trucks would result in reductions to VMTs on low speed roadways within New York City. Therefore, the decreased VMT is anticipated to result in reductions to emissions within the New York City region.

NYC Commercial Waste Zone Program

Additionally, the projected total VMT would generally be concentrated on designated truck routes between the pickup location and one of the City's transfer stations and primarily during the late night period between 10:00 PM and 2:00 AM, when background traffic is generally low. Therefore, the Proposed Action is not anticipated to significantly alter regional levels of congestion. Furthermore, potential air emissions reductions associated with improvements to regional traffic due to the decreased VMTs would likely be a direct consequence of the Proposed Action.

LOCAL ASSESSMENT (MICROSCALE)

The *CEQR Technical Manual* defines screening thresholds of maximum hourly incremental traffic generated by a proposed action. A screening threshold between 140 to 170 incremental peak hour vehicles at an individual intersection (dependent on the location of the study area within New York City) is used to assess the potential for air quality impacts from CO. Additionally, a PM emission screening threshold between 12 and 23 incremental peak hour commercial carter trucks or their equivalent (dependent on the roadway type) at an individual intersection is used to assess the potential for air quality impacts from PM as discussed in Chapter 17, Sections 210 and 311, of the *CEQR Technical Manual*.

As discussed in Chapter 1, "Project Description," three neighborhood case study areas were selected as representative areas for the Proposed Action. An assessment of the traffic conditions within these case study areas (see Chapter 5, "Transportation") determined that the maximum number of trucks at an individual intersection would decrease in the future by approximately 40 percent to 62 percent (dependent on the case study area). Additionally, the collection times, duration of collections, collection dates, and frequency of collections would not significantly change under the Proposed Action. As a result, the Proposed Action would not result in an exceedance of the screening levels for incremental peak hour trucks at intersections within any of the three case study areas; therefore, it can be concluded that there would be no potential for mobile source air impacts from the Proposed Action.

D. CONCLUSION

In view of the foregoing, it can be concluded that the CWZ Program would not cause a significant adverse air quality impacts. *

A. INTRODUCTION

This chapter evaluates the greenhouse gas (GHG) emissions that would be associated with the Proposed Action.

As described in Chapter 1, “Project Description,” the City of New York is proposing to establish and implement a Commercial Waste Zone (CWZ) Program across the five boroughs of the City to improve the carting of refuse, recyclables, and organic waste from commercial businesses (the “CWZ Program” or “Proposed Action”).

As discussed in the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, climate change is projected to have wide-ranging effects on the environment, including rising sea levels, increases in temperature, and changes in precipitation levels. Although this is occurring on a global scale, the environmental effects of climate change are also likely to be experienced at the local level. New York City’s sustainable development policy, starting with *PlaNYC: A Greener, Greater New York (PlaNYC)*, and continued and enhanced in ~~*One New York: The Plan for a Strong and Just City*~~ *OneNYC2050: Building a Strong and Fair City (OneNYC)*, established sustainability initiatives and goals for greatly reducing GHG emissions and for adapting to climate change in the City.

Per the *CEQR Technical Manual*, the citywide GHG reduction goal is currently the most appropriate standard by which to analyze a project under CEQR. The *CEQR Technical Manual* recommends that a GHG consistency assessment be undertaken for any action that fundamentally changes the City’s solid waste management system by changing solid waste transport mode, distances, or disposal technologies. One of the goals of the CWZ Program is to reduce local commercial carting trucks-travel by improving the efficiency of the carting system and reducing the amount of overlapping truck collection routes. The CWZ Program would not change the mode of transport of commercial waste (for example from truck to rail or barge). Nor would the Proposed Action result in increased distances traveled by commercial waste from waste transfer stations to disposal facilities, such as landfills or waste-to-energy plants. Likewise, the CWZ Program would not require a change in the disposal technology for such waste. Therefore, the CWZ Program would ~~result in a potential reduction to the distance~~ reduce commercial carter trucks VMT travel within the New York City region and projected to reduce GHG emissions from mobile sources. A GHG consistency assessment is provided below.

B. GREENHOUSE GAS EMISSIONS

POLLUTANTS OF CONCERN

GHGs are those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wavelengths within the spectrum of infrared radiation emitted by the earth’s surface, atmosphere, and clouds. The general warming of the earth’s atmosphere

caused by this phenomenon is known as the “greenhouse effect.” Water vapor, carbon dioxide (CO₂), nitrous oxide (N₂O), methane, and ozone are the primary GHGs in the earth’s atmosphere.

There are also a number of entirely anthropogenic GHGs in the atmosphere, such as halocarbons and other chlorine- and bromine-containing substances, which also damage the stratospheric ozone layer (and contribute to the “ozone hole”). Since these compounds are being replaced and phased out due to the 1987 Montreal Protocol, there is no need to address them in GHG assessments for most projects. Although ozone itself is also a major GHG, it does not need to be assessed as such at the project level since it is a rapidly reacting chemical and efforts are ongoing to reduce ozone concentrations as a criteria pollutant (see Chapter 6, “Air Quality”). Similarly, water vapor is of great importance to global climate change but is not directly of concern as an emitted pollutant since the negligible quantities emitted from anthropogenic sources are inconsequential.

CO₂ is the primary pollutant of concern from anthropogenic sources. Although not the GHG with the strongest effect per molecule, CO₂ is by far the most abundant and, therefore, the most influential GHG. CO₂ is emitted from any combustion process (both natural and anthropogenic); from some industrial processes such as the manufacture of cement, mineral production, metal production, and the use of petroleum-based products; from volcanic eruptions; and from the decay of organic matter. CO₂ is removed (“sequestered”) from the lower atmosphere by natural processes such as photosynthesis and uptake by the oceans. CO₂ is included in any analysis of GHG emissions.

Methane and N₂O also play an important role since the removal processes for these compounds are limited and because they have a relatively high impact on global climate change as compared with an equal quantity of CO₂. Emissions of these compounds, therefore, are included in GHG emissions analyses when the potential for substantial emission of these gases exists.

The *CEQR Technical Manual* lists six GHGs that could potentially be included in the scope of a GHG analysis: CO₂, N₂O, methane, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). CO₂, N₂O, and methane are the primary pollutants of concern from heavy-duty carting vehicles. There are no significant direct or indirect sources of HFCs, PFCs, or SF₆ associated with the CWZ Program.

To present a complete inventory of all GHGs, component emissions are added together and presented as CO₂e emissions—a unit representing the quantity of each GHG weighted by its effectiveness using CO₂ as a reference. This is achieved by multiplying the quantity of each GHG emitted by a factor called global warming potential (GWP). GWPs account for the lifetime and the radiative forcing¹ of each chemical over a period of 100 years (e.g., CO₂ has a much shorter atmospheric lifetime than SF₆, and, therefore, has a much lower GWP). The GWPs for the main GHGs discussed here are presented in **Table 7-1**.

¹ *Radiative forcing* is a measure of the influence a gas has in altering the balance of incoming and outgoing energy in the Earth-atmosphere system and is an index of the importance of the gas as a GHG.

Table 7-1
Global Warming Potential for Major GHG

Greenhouse Gas	100-year Horizon GWP
Carbon Dioxide (CO ₂)	1
Methane (CH ₄)	21
Nitrous Oxide (N ₂ O)	310
Hydrofluorocarbons (HFCs)	140 to 11,700
Perfluorocarbons (PFCs)	6,500 to 9,200
Sulfur Hexafluoride (SF ₆)	23,900

Note:

The GWPs presented above are based on the Intergovernmental Panel on Climate Change's (IPCC) Second Assessment Report (SAR) to maintain consistency in GHG reporting. The IPCC has since published updated GWP values that reflect new information on atmospheric lifetimes of GHGs and an improved calculation of the radiative forcing of CO₂. In some instances, if combined emission factors were used from updated modeling tools, some slightly different GWP may have been used for this study. Since the emissions of GHGs other than CO₂ represent a very minor component of the emissions, these differences are negligible.

Source:

CEQR Technical Manual

POLICY, REGULATIONS, STANDARDS, AND BENCHMARKS FOR REDUCING GHG EMISSIONS

Because of the growing consensus that GHG emissions resulting from human activity have the potential to profoundly impact the earth's climate, countries around the world have undertaken efforts to reduce emissions by implementing both global and local measures addressing energy consumption and production, land use, and other sectors. Although the United States has not ratified the international agreements that set emissions targets for GHGs, in December 2015, the United States signed the international Paris Agreement² that pledges deep cuts in emissions, with a stated goal of reducing annual emissions to a level that would be between 26 and 28 percent lower than 2005 emissions by 2025.³ On June 1, 2017, President Trump announced that "the United States will withdraw from the Paris Climate Accord."⁴

Regardless of the Paris Agreement, the United States Environmental Protection Agency (EPA) is required to regulate GHGs under the Clean Air Act and has begun preparing and implementing regulations. In coordination with the National Highway Traffic Safety Administration (NHTSA), EPA currently regulates GHG emissions from newly manufactured on-road vehicles. In addition, EPA regulates transportation fuels via the Renewable Fuel Standard program, which will phase in a requirement for the inclusion of renewable fuels increasing annually up to 36.0 billion gallons in 2022. In 2015, EPA also finalized rules to address GHG emissions from both new and existing power plants that would, for the first time, set national limits on the amount of carbon pollution

² Conference of the Parties, 21st Session. *Adoption of The Paris Agreement, decision -/CP.21*. Paris, December 12, 2015.

³ United States of America. *Intended Nationally Determined Contributions (INDCs)* as submitted. March 31, 2015.

⁴ Under the Agreement, countries are allowed to withdraw four years from the date the agreement entered into force—meaning the United States can officially withdraw on November 4, 2020. However, given the voluntary nature of the agreement, any action in the United States may or may not occur regardless of this status.

that power plants can emit. The Clean Power Plan sets carbon pollution emission guidelines and performance standards for existing, new, and modified and reconstructed electric utility generating units. On February 9, 2016, the Supreme Court stayed implementation of the Clean Power Plan pending judicial review. President Trump subsequently signed an executive order that calls for a review of the Clean Power Plan.

The EPA issued a Notice of Proposed Rulemaking (NPRM) on October 16, 2017, proposing to repeal the Clean Power Plan. Subsequently on August 21, 2018, the EPA proposed the Affordable Clean Energy (ACE) rule. The proposed ACE rule would remove emission reduction targets and define the best system for emissions reduction to be facility efficiency improvements. Under the proposed rule, EPA would defer to state agencies to establish standards of performance for electric generating units. The regulatory impact analysis performed by the EPA found that the proposed ACE rule would result in increased emissions when compared to the implementation of the Clean Power Plan. However, the EPA projects that the ACE rule would result in decreased GHG emissions from an alternative baselines without implementation of the Clean Power Plan.

There are also regional and local efforts to reduce GHG emissions. In 2009, Governor David Paterson issued Executive Order No. 24, establishing a goal of reducing GHG emissions in New York State by 80 percent, compared with 1990 levels, by 2050, and creating a Climate Action Council tasked with preparing a climate action plan outlining the policies required to attain the GHG reduction goal; an interim draft plan was published in 2010.⁵ In 2019, Governor Andrew Cuomo included the Green New Deal agenda in the 2019 Executive Budget, which mandates New York State's power be 100 percent clean and zero-carbon emissions by 2040. New York State is ~~now~~ also seeking to achieve some of the emission reduction goals via local and regional planning and projects through its Cleaner Greener Communities and Climate Smart Communities programs. New York State has also adopted the State of California's GHG vehicle standards (which are at least as strict as the federal standards).

The New York State Energy Plan outlines the State's energy goals and provides strategies and recommendations for meeting those goals. The latest version of the plan was published in June 2015. The latest plan outlines a vision for transforming the State's energy sector that would result in increased energy efficiency (both demand and supply), increased carbon-free power production, and cleaner transportation, in addition to achieving other goals not related to GHG emissions. The 2015 plan also establishes new targets: (1) reducing GHG emissions in New York State by 40 percent, compared with 1990 levels, by 2030; (2) providing 50 percent of electricity generation in New York State from renewable sources by 2030; and (3) increasing building energy efficiency gains by 600 trillion British thermal units (Btu) by 2030.

New York State has also developed regulations to cap and reduce CO₂ emissions from power plants to meet its commitment to the Regional Greenhouse Gas Initiative (RGGI). Under the RGGI agreement, the governors of nine northeastern and Mid-Atlantic States have committed to regulate the amount of CO₂ that power plants are allowed to emit, gradually reducing annual emissions to halve the 2009 levels by 2020. The RGGI states and Pennsylvania have also announced plans to reduce GHG emissions from transportation, through the use of biofuel, alternative fuel, and efficient vehicles.

Many local governments worldwide, including New York City, are participating in the Cities for Climate Protection™ campaign and have committed to adopting policies and implementing

⁵ New York State Climate Action Council. New York State Climate Action Plan Interim Report. November 2010.

quantifiable measures to reduce local GHG emissions, improve air quality, and enhance urban livability and sustainability. New York City's long-term comprehensive plan for a sustainable and resilient New York City, which began as *PlaNYC 2030* in 2007, and continues to evolve today as *OneNYC*, includes GHG emissions reduction goals, many specific initiatives that can result in emission reductions, and initiatives aimed at adapting to future climate change impacts. The City's goal to reduce citywide GHG emissions to 30 percent below 2005 levels by 2030 ("30 by 30") was codified by Local Law (LL) 22 of 2008, known as the New York City Climate Protection Act (the "GHG reduction goal").⁶ The City has also announced a longer-term goal of reducing emissions to 80 percent below 2005 levels by 2050 ("80 by 50"), which was codified by LL66 of 2014, and has published a study evaluating the potential for achieving that goal.⁷ The City set new performance-based energy code standards and requirements for annual energy efficiency assessments, which was codified by LL32 of 2018 (LL32/2018) and LL33 of 2018 (LL33/2018), respectively.

On April 18, 2019, the City Council approved the Climate Mobilization Act that would establish building energy and emissions performance policies for existing buildings, new construction, and major renovations to further the short-term and long-term emissions reduction goals.

More recently in 2019, as part of *OneNYC*,⁸ the City has announced a more aggressive goal ~~for reducing emissions from building energy use down to 30 percent below 2005 levels by 2025~~ of achieving net-zero citywide GHG emissions by 2050 through substantial emissions reductions, offsetting any residual emissions, and ensuring 100 percent clean electricity. This would supersede the previous 80 by 50 goal.

To achieve the previous 80 by 50 goal and the citywide carbon neutral goal, the City is convening Technical Working Groups to analyze the GHG reduction pathways from the building, power, transportation, and solid waste sectors to develop action plans for these sectors. The members of the Technical Working Groups will develop and recommend the data analysis, interim metrics and indicators, voluntary actions, and potential mandates to effectively achieve the City's emissions reduction goal.

In 2017, the City published an assessment of key actions identified (climate action plan) to dramatically reduce GHG emissions in both the 2020 near-term and 2050 long-term.⁹ This climate action plan assesses near-term actions for their impacts and benefits, such as improved local air quality, preservation of housing affordability, and increased access to transportation and resources. As part of this plan, the potential for enhanced curbside collection by implementing a zone-based system for commercial waste was identified as a potential action to reduce GHG emissions within the City. In 2019, the City further identified the release of the Commercial Waste Zones Implementation Plan as a key initiative to support both the previous 80 by 50 goal as well as the more aggressive citywide carbon neutral goals.

In August 2016, DSNY, in partnership with Business Integrity Commission (BIC), released a feasibility study on the implementation of a CWZ program in New York City that would establish

⁶ Administrative Code of the City of New York, §24-803.

⁷ New York City Mayor's Office of Sustainability. *New York City's Roadmap to 80 x 50*. September, 2016

⁸ New York City Mayor's Office of Sustainability. *OneNYC 2050*. April, 2019

⁹ New York City Mayor's Office of Sustainability. *1.5°C: Aligning New York City with the Paris Climate Agreement*. September, 2017.

geographic zones for waste collection routes.¹⁰ The study considered a conceptual zone-based system of 11 zones and concluded that a CWZ program would be beneficial in reducing inefficiencies in waste collection routes and would reduce carter truck miles traveled by roughly half. Additionally, the study found a corresponding reduction to GHG emissions associated with the reduction in carter truck miles traveled for the zone-based system under consideration.

FUTURE WITHOUT THE PROPOSED ACTION

Typically, GHG assessments only consider total GHG emissions with a Proposed Action and do not consider the difference or increment between the Future without the Proposed Action (the “No Action” condition) and Future with the Proposed Action (the “With Action” condition). However, per the *CEQR Technical Manual*, an assessment of GHG emissions associated with a Proposed Action that would affect solid waste management should consider a baseline (or No Action condition) for the assessment. The assessment assumes that under the baseline, the solid waste management facilities, waste transportation modes, and associated disposal facilities would continue to operate as they do under the existing condition (including the phased implementation of current policy).

One of the City’s strategies to reduce GHG emissions is to increase recycling metal, glass, plastic (MGP), paper, cardboard, and, in some cases, food preparation waste (organics) and thereby divert such waste from landfills. As described in Chapter 2, “Land Use, Zoning, and Public Policy,” existing regulations require commercial businesses to separately manage recyclables from refuse to facilitate diversion from landfills. Under the No Action condition, the City would continue to expand recycling and organics diversions, including requiring all commercial businesses designated in LL146 of 2013 (LL146/2013) to separate organics for composting or anaerobic digestion to produce biogas, a renewable fuel. Recycling and organic waste collection trucks carry fewer tons due to lower waste density than similar putrescible waste collection trucks. Thus a net increase in the total number of collection trucks for these commodities would be expected as a result of the increased diversion to recycling and organics. This would result in a minor increase to Vehicle Miles Traveled (VMT) and GHG emissions within New York City and region-wide for travel to transfer stations and garages in New Jersey, Long Island, and upstate New York with the No Action condition.

Furthermore, under the No Action condition, all operating carters are expected to be fully compliant with LL145/2013 in the 2024 Analysis Year. These requirements target reductions to particulate matter (PM) emissions; while PM is not included in the list of standard GHGs, recent studies have shown that black carbon—a constituent of PM—may play a role in climate change due to PM concentrations influencing the temperature of the earth. Particles of PM can be light-absorbing and, consequently, can contribute to the rise in global temperatures, although these effects would be minimal.

Therefore, although PM emissions from commercial carter trucks would be reduced, there may be a minor increase to GHG emissions in the No Action condition due to the increased VMT associated with the expanded recycling and organic diversions. However, GHG reductions are anticipated as recycled material and organic waste are utilized after collection (as raw materials or for the production of biogas) and with reduced landfill disposal, as landfills emit GHGs in

¹⁰ New York City Department of Sanitation, City of New York Business Integrity Commission.

Private Carter Study Executive Summary. August 17, 2016. Retrieve from:

<https://www1.nyc.gov/assets/dsny/site/resources/reports/private-carter-study>

substantial quantities, notably methane and CO₂. Therefore, the minor increase in GHG emissions due to the increase in VMT would be partially or fully offset by the expected increase in recycling and organics diversion which reduces GHG emissions.

FUTURE WITH THE PROPOSED ACTION

The With Action condition evaluates the conditions that would exist in the Analysis Year of 2024 with the implementation of the CWZ Program. Climate change is driven by the collective contributions of diverse individual sources of emissions to global atmospheric GHG concentrations. Identifying potential GHG emissions from a proposed action can help decision makers identify practicable opportunities to reduce GHG emissions and ensure consistency with policies aimed at reducing overall emissions. While the increments of criteria pollutants and toxic air emissions are assessed in the context of health-based standards and local impacts, there are no established thresholds for assessing the significance of a project's contribution to climate change. Nonetheless, prudent planning dictates that projects address GHG emissions by identifying GHG sources and practicable means to reduce them.

As discussed in Chapter 5, "Transportation," the CWZ Program would result in an overall decrease of truck trips and decreased VMT within New York City and region-wide for travel to transfer stations and garages in New Jersey, Long Island, and upstate New York. Furthermore, the reduction in overlapping commercial carter trucks would result in reductions to VMT on low speed roadways within New York City. Therefore, the decreased VMT and reduced truck fuel use is anticipated to result in corresponding reductions to GHG emissions when compared to baseline emissions.

One of the goals of the CWZ Program is to prioritize investments in clean, modern fleets that make up a reliable, resilient, and sustainable waste management system. Under the Proposed Action, all commercial carter trucks operating in the City are anticipated be in full compliance with the truck emissions reduction requirements of LL145/2013, similar to the No Action condition. The fleet-wide PM emissions associated with compliance with LL145/2013 coupled with commercial waste carting under the CWZ Program and its reductions in commercial carter truck VMT are anticipated to be further reduced from the baseline conditions. However, similar to the No Action condition, the effect of reduced PM emissions on the rise in global temperatures and GHG emissions would be minimal.

In addition, the contracts awarded to selected carters would include incentives to provide improved environmental performance. Some of these improvements could include the conversion of commercial carter trucks to electric vehicles or the use of compressed natural gas, which is a cleaner fuel. These improvements in performance, if implemented, would further reduce GHG emissions with the CWZ Program.

Similar to the No Action condition, there may be a minor increase to GHG emissions under the Proposed Action due to increased VMT associated with the expanded recycling and organic diversions. However, the reduction in VMT resulting from the CWZ Program would be greater than the additionally VMT due to the waste diversion expansions and the CWZ Program would still result in decreased VMT. Furthermore, GHG emissions would be further reduced due to the expected increase in recycling and organics diversion which reduces GHG emissions.

As a result of the decreased VMT and the potential improvements to the commercial carter truck fleet, GHG emissions are expected to be reduced with the CWZ Program compared to baseline existing levels. For example, as a result of the anticipated 50 percent reduction in VMT from the No Action condition as stated in Chapter 5, "Transportation," GHG emissions have the potential

NYC Commercial Waste Zone Program

to be reduced between ~~39-42~~ and ~~66-67~~ percent from baseline conditions, depending on county, roadway type (i.e., arterial, highway, or local roads), and travel speeds.

Therefore, due to the projected reductions in GHG emissions as well as being identified as a key initiative to reduce citywide emissions, the Proposed Action would be consistent with the City's previous 80 by 50 and the superseding citywide carbon neutral GHG reduction goals under OneNYC. *

A. INTRODUCTION

This chapter assesses potential noise effects that could result from the Proposed Action. In accordance with the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, a noise analysis determines whether a proposed project would result in increases in noise levels that could have a significant adverse impact on sensitive receptors or whether a proposed project would introduce a noise-sensitive receptor into an area with high levels of ambient noise.

As described in Chapter 1, “Project Description,” the City of New York is proposing to establish and implement a Commercial Waste Zone (CWZ) Program across the five boroughs of the City to improve the carting of refuse, recyclables, and organic waste from commercial businesses (the “CWZ Program” or “Proposed Action”).

The Proposed Action does not involve new stationary sources of noise, nor introduce any new noise receptors; therefore, the noise analysis is focused on whether the Proposed Action would result in increases in noise levels at existing receptors from changes to mobile noise from commercial carter trucks.

B. SCREENING ASSESSMENT

The *CEQR Technical Manual* indicates that an initial impact screening analysis can be used to determine whether a project would have the potential to result in a significant noise impact based on its physical characteristics. A project may not require a noise analysis if it does not either generate mobile or stationary sources of noise or introduce a noise receptor into an area of existing high ambient noise levels.

The Proposed Action would reduce inefficiencies in commercial waste collection routes, resulting in a 50 percent reduction in commercial carting truck traffic vehicle miles traveled (VMT). As discussed in Chapter 5, “Transportation,” within the neighborhood case study areas, the Proposed Action would result in traffic reductions between approximately 40 and 62 percent. As a result, the Proposed Action would not cause any roadway segments to experience an increase in maximum hourly truck volume. Also, as discussed in Chapter 5, “Transportation,” the Proposed Action would not require changes in operations that would affect collection times, duration of collections, collection dates, frequency of collections, or number of nighttime collections. Consequently, the Proposed Action would not generate any increase in noise from mobile sources.

Commercial carter trucks are stationary when compacting refuse and, therefore, would, also be considered a stationary noise source at such times. The compacting cycle from all commercial carter trucks are regulated by Subchapter 5, §24-225 of the New York City Noise Control Code to a consistent level of noise emission. Commercial carter trucks compacting refuse at a given location would not result in a change in the level of stationary noise generated during

NYC Commercial Waste Zone Program

collections. Consequently, the Proposed Action would not generate any increase in noise from stationary sources.

Since the Proposed Action would not result in additional mobile or stationary source noise at any noise receptors, a more detailed noise analysis is not warranted according to *CEQR Technical Manual* guidance, and the Proposed Action would not have the potential to result in a significant adverse noise impact.

C. CONCLUSION

In view of the foregoing, it can be concluded that the CWZ Program would not cause a significant adverse noise impacts. *

A. INTRODUCTION

In accordance with the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, this chapter presents and analyzes alternatives to the Commercial Waste Zone (CWZ) Program.

As described in Chapter 1, “Project Description,” the City of New York is proposing to establish and implement a ~~Commercial Waste Zone (CWZ)~~ Program across the five boroughs of the City to improve the carting of refuse, recyclables, and organic waste from commercial businesses (the “CWZ Program” or “Proposed Action”).

Alternatives selected for consideration are generally those which are feasible and have the potential to reduce, eliminate, or avoid adverse impacts of a CWZ Program while meeting some or all of the goals and objectives of the action.

Although the ~~Draft-Final~~ Generic Environmental Impact Statement (~~DGEIS~~FGEIS) has not identified a significant adverse impact from the Proposed Action with respect to any CEQR environmental category, nevertheless, this chapter considers two alternatives to the CWZ Program:

- A No Action Alternative, which is mandated to be considered by CEQR and the State Environmental Quality Review Act (SEQRA), and is intended to provide the lead and involved agencies with an assessment of the environmental conditions that would exist if the CWZ Program were not implemented, and thus serves as a baseline against which the impacts of the Proposed Action may be assessed.
- An Exclusive Zone Alternative, in which one carter obtains the right to operate alone or exclusively in a zone.

B. NO ACTION ALTERNATIVE

The No Action Alternative, which is the same as the No Action condition, predicts the environmental conditions that would exist if the CWZ Program were not implemented. Under the No Action Alternative, the commercial waste industry would remain essentially unchanged, with the exception of any regulatory changes to the industry already expected by the Analysis Year of 2024. This analysis considers a static snapshot in time, but population growth and business economic cycles are expected, which would affect commercial waste generation and commercial waste operations.

LAND USE, ZONING, AND PUBLIC POLICY

As with the CWZ Program, the No Action Alternative would not result in any significant adverse impacts to public policy.

As discussed in Chapter 2, “Land Use, Zoning, and Public Policy,” the commercial waste industry is regulated largely by Titles 16 and 16A of the New York City Administrative Code and Titles 16 and 17 of the Rules of the City of New York. These laws and regulations would continue to

NYC Commercial Waste Zone Program

regulate the industry, and carters would need to comply with applicable policies; however, as at present, there would be a lack of effective enforcement mechanisms for private carters to comply with these regulations.

Local Law (LL) 145 of 2013 (LL145/2013) requires diesel commercial carting truck with engines older than Model Year 2007 to be upgraded by January 1, 2020 to reduce their exhaust emissions either by installing a newer engine, from 2007 or later, or by retrofitting the engine with pre-approved Best Available Retrofit Technology (BART) emission controls, such as diesel particulate traps. Under the No Action Alternative, all operating carters are expected to be fully compliant with LL145/2013 by the 2024 Analysis Year, similar to the CWZ Program.

LL 56 of 2015 (LL56/2015) requires that all commercial carting vehicles be equipped with side guards by January 1, 2024. Accordingly, 100 percent compliance with LL56/2015 is expected under the No Action Alternative, the same as under the CWZ Program.

LL152 of 2018 (LL152/2018) requires the reduction of permitted capacity at putrescible and non-putrescible solid waste transfer stations in four overburdened community districts in New York City. Under the No Action Alternative, such reductions will have occurred at the identified transfer stations and some waste that would be displaced from these facilities would be handled instead by other transfer stations.

Existing regulations require commercial businesses to recycle metal, glass, plastic (MGP), paper, cardboard, and, in some cases, food preparation waste (organics) and, thereby, divert such waste from landfills; however, enforcement and tracking compliance rates are difficult. LL146/2013 requires the New York City Department of Sanitation (DSNY) to assess, at least annually, the available regional capacity to process organic waste and to designate certain categories of businesses that must separate this material for a beneficial use, such as composting or anaerobic digestion to produce biogas. As with the CWZ Program, under the No Action Alternative, businesses would continue to comply with LL146/2013, and carters would collect the organic waste. It is estimated that 30 percent of commercial waste would be collected as recyclables (i.e., cardboard, paper, and MGP) and an additional 3 percent would be collected as organics throughout the City under the No Action Alternative.¹ This reflects a slight increase from existing conditions in which an estimated 24 percent of commercial waste is collected as recyclables and 1 percent is collected as organics throughout the City, but is less than the estimate collection rate of recyclable and organics under the Proposed Action.

2006 SOLID WASTE MANAGEMENT PLAN

As with the CWZ Program, continued implementation of the City's Solid Waste Management Plan (SWMP) would occur under the No Action Alternative. As discussed in Chapter 2, "Land Use, Zoning, and Public Policy," the goals of the SWMP are being achieved through the reconstruction of marine transfer stations and the reduction of solid waste processed in certain overburdened districts of Brooklyn, the Bronx, and Queens.

¹ Collection rate is the amount of designated recyclables or organic material collected in the system.

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Under the No Action Alternative, the City would continue to encourage sustainability and recycling as with the CWZ Program. However, there would be no added enforcement mechanisms for the City to meet the goals set forth under the plan, similar to existing conditions.

WATERFRONT REVITALIZATION PROGRAM

Under the No Action Alternative, there would be no changes to the commercial waste industry to warrant review with respect to the New York City Waterfront Revitalization Program (WRP) policies.

SOCIOECONOMICS

COMMERCIAL WASTE CARTERS

Recycling and Organics Collection Requirements

In the No Action Alternative, it is estimated that 30 percent of commercial waste would be collected as recyclables (i.e., cardboard, paper, and MGP) and 4 percent of commercial waste would be collected as organics throughout the City under the No Action Alternative.² This reflects a slight increase from existing conditions in which an estimated 24 percent of commercial waste is collected as recyclables and 1 percent is collected as organics throughout the City.³ This improved diversion is anticipated to come about due to the potential introduction of single-stream recycling, increased enforcement, and other policies and programs as discussed in Chapter 2, “Land Use, Zoning, and Public Policy,” including the additional designation of commercial businesses to begin source-separating organics for collection per LL 146/2013.⁴ However, this is less than the estimated collection rate of recyclables and organics under the Proposed Action.⁵

² Collection rate refers to the percentage of designated recyclables and organics in the system.

³ Current waste stream capture rates are estimated through comparison of DSNY, 2018, Transfer Station and Recycling Processor Reports and DSNY, 2018, Private Operator Disposal System (PODS) Database with total waste streams based on a waste characterization model derived from Census industry employment in New York City and waste intensities from CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California. It is estimated that increased enforcement and other City policies between the current year and the 2024 Analysis Year can increase capture rates by 15 percent for each waste stream compared to current conditions. It is assumed that at maximum no waste stream will reach a capture rate over 95 percent. With organics, the only organics material considered in the analysis is the organic material from the category of businesses covered by LL146/2013. The overall impact ~~of~~ along with increased enforcement is a potential increase in diversion by 9 percent in the No Action Alternative from existing conditions.

⁴ The City estimates that approximately 250,000 tons of organic material is generated by the businesses specified in LL146/2013 if all businesses were designated and it included front and back-of-the-house material. Currently, the City has designated a portion of the businesses specified in LL146/2013 and only back-of-the-house material, which amounts to a small amount of the organic material available in the waste stream. The No Action Alternative contemplates full designation of all businesses specified in LL146/2013 and includes both front and back-of-house material.

⁵ Increased diversion of organic and recyclable material in the No Action Alternative is not anticipated to result in additional revenues to commercial carters.

NYC Commercial Waste Zone Program

In order to reach the diversion rate anticipated in the No Action Alternative, carters would need to run an estimated 4 percent more collection routes and employ 4 percent more field employees to service the additional collection routes.⁶ It is expected that in order to service the increased collection routes an estimated 39 additional trucks and approximately 72 additional employees would be required.

Further, additional operational expenses and administrative costs would increase the cost of operation associated with diversion in the No Action Alternative. As seen in **Table 9-1**, in total, it is anticipated that the increase in the rate of diversion in the No Action Alternative would cost approximately \$15 million across the industry in the Analysis Year including the \$1.2 million necessary to acquire the additional trucks required to complete the additional diversion routes in the No Action Alternative.

Table 9-1
Cost Associated with 4-Percent Increase in the Rate of Diversion
in the No Action Alternative

Expense	Cost
Disposal Costs	\$ ⁻¹
Operating Payroll	\$6,017,190
Sales, General, and Administration Payroll	\$2,047,547
Total Payroll	\$8,064,737
Truck and Equipment	\$3,017,211
Other Expenses	\$3,008,912
Total	\$15,256,894
Notes: ¹ It is assumed that the cost of disposing of commercial waste would remain constant as the total amount of waste collected remains constant in the No Action Alternative. ² The costs of trucks and equipment includes the expense associated with acquiring additional trucks to service expanded diversion routes in the No Action Alternative.	
Sources: Analysis of BIC, 2015, Private Carter Financial Statements BIC, 2018, Private Carter Dump Tickets Waste Characterization Model based on Census industry employment in New York City and waste intensities from CalRecycle, Sept. 2015, 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California	

Local Law 145 of 2013

LL145/2013 requires commercial carters to modify all diesel waste collection truck engines older than Model Year 2007 to reduce their emissions. Non-compliant vehicles must have new engines installed or have engines retrofit with pre-approved BART emissions controls by 2020. While compliance with LL145/2013 is not fully reported, a majority of commercial carters have filed Compliance Plan Reports with BIC in 2017 providing insight into the industry's existing level of compliance and future plans for compliance by the 2020 deadline.⁷

⁶ An estimated 4 percent increase in routes is attributed to differences in load weights of putrescible, recyclables, and organics loads. Recyclable and organic routes carry less material per drop-off than putrescible routes based on BIC, 2018, Private Carter Dump Tickets. Thus, to service 9 percent more material as recyclables or organics instead of putrescible, an estimated 4 percent additional collection routes are needed.

⁷ BIC, 2017, LL145/2013 Compliance Plan Reports provided by carters at the request of BIC.

Approximately 64 carters that fall under the scope of the CWZ Program submitted compliance data in 2017. As of summer 2017, approximately one third of the trucks that were reported to BIC were in compliance with LL145/2013.⁸

Based on reporting by commercial carters to BIC and the additional vehicles introduced as a result of increased diversion in the No Action Alternative discussed above, approximately 1,014 commercial carting trucks would be accounted for within New York City in the scope of this analysis. Based on carter reporting, as shown in **Table 9-2** under LL145/2013, the 975 existing trucks are expected to become compliant utilizing the following compliance methods at the following rates: approximately 35 percent (341 trucks) are already compliant with LL145/2013; 22 percent (215 trucks) are anticipated to be replaced with new compliant trucks; 21 percent (205 trucks) would be retrofitted with BART; 16 percent (156 trucks) would be retrofitted with new engines; and 6 percent (63 trucks) would be removed from service. For the 39 added trucks due to the increased rate of diversion, it is assumed that they would be purchased new and therefore would be compliant with LL145/2013 (see **Table 9-2**).

Table 9-2
LL145/2013 Reported Compliance and Anticipated Cost

Compliance Method	Unit Replacement Cost	Count of Fleet	Retrofit Rate ^{1,2}	Total LL145/2013 Cost	Annual LL145/2013 Cost ³
Compliant	\$-	341	35%	\$-	\$-
Replaced	\$297,036	215	22%	\$63,714,222	\$6,371,422
BART	\$13,500	205	21%	\$2,764,125	\$276,413
New Engines	\$4,075	156	16%	\$635,700	\$63,570
Removed from Service	\$(2,964) ⁴	59	6%	\$(173,394)	\$(173,394)
Additional Diversion Trucks	\$-	39	-	\$-	\$-
Total		1,014		\$66,940,653	\$6,538,011
Notes: ¹ The retrofit rate is based on the LL145 of 2013 Carter Compliance Plan Reports and assesses the rate of LL145 of 2013 compliance of the existing truck fleet (975 trucks), and does not include trucks introduced as a result of increased diversion in the No Action Alternative. ² Due to rounding, the retrofit rate may not total 100 percent. ³ Due to the high cost of acquiring additional equipment, it is assumed that these costs would be distributed over a period of 10 years. ⁴ Vehicles removed from service are assumed to be sold for scrap at the identified rate. Sources: BIC, 2017, LL145 of 2013 Carter Compliance Plan Reports BIC, 2018, LL145 of 2013 Carter Compliance Reports					

Based on the reported compliance methods anticipated to be used by commercial carters to retrofit or replace vehicles per LL145/2013, the total anticipated costs for full fleet compliance is approximately \$67 million or if equipment acquisition costs are distributed over the course of 10 years, approximately \$6.5 million per annum.⁹

⁸ BIC, 2017 LL145/2013 Compliance Plan Reports provided by carters by request of BIC.

⁹ BIC, 2017, LL145 of 2013 Carter Compliance Plan Reports.

NYC Commercial Waste Zone Program

Local Law 56 of 2015

LL56/2015 requires commercial waste collection trucks be equipped with side guards by 2020 in an effort to decrease the number of serious or fatal injuries that occur as a result of a result of pedestrians or cyclists being run over by the front or rear axles of carting trucks during a side impact collisions. Unlike LL145/2013 where carters have provided information related to their intent to comply with the law, the number of vehicles already in compliance with LL56/2015 is unknown. Therefore, it is assumed that under the No Action Alternative, to be compliant with LL56/2015, the entire commercial carting fleet will have to be equipped with side guards. The purchase and installation of side guards is estimated at approximately \$3,000 per vehicle, and these costs are anticipated to be distributed over 8 years.¹⁰ The total cost of bringing the commercial carting fleet into compliance with LL56/2013 would require the retrofitting of the entire 1,014 vehicle fleet at a cost of approximately \$3 million which totals approximately \$380,346 per annum over the course of 8 years.

No Action Alternative Incremental Costs

In total, in the No Action Alternative, the commercial carting industry is expected to increase operational costs as a result of increased diversion by 4 percent, retrofitting of trucks to comply with new emissions requirements, and installation of side guards on all commercial carter trucks. As seen in **Table 9-3** these expenses are expected to total approximately \$22 million per year assuming that costs associated with LL145/2013 are distributed over the course of 10 years and the costs associated with LL56/2015 over 8 years. Again, in addition to the costs associated with these policies in the No Action Alternative, carters are expected to acquire an additional 39 trucks, and employ approximately 72 additional staff to account for the increased routes as a result of the increased rate in diversion.

Table 9-3
Additional Carter Expenses in the No Action Alternative

No Action Policy	Annual Expense
LL 145/2013	\$6,538,011 ¹
LL 56/2015	\$380,346 ²
Diversion Operations	\$15,256,894
Total Additional Expense	\$22,175,250
Notes: ¹ The costs of LL145/2013 are anticipated to be distributed over the course of 10 years. This 10-year span is meant to account for the 3 years between the LL145/2013 Compliance Plan Report year (2017) and the final compliance date according to legislation (2020) plus an additional 7 years from the date of last truck purchase due to the normal depreciable life of a truck, which is 7 years. ² The costs of LL56/2015 are anticipated to be distributed over the course of 8 years. This 8-year span is meant to account for the duration between the initiation of the policy (2015) and the final compliance date according to legislation (2023).	
Sources: BIC, 2017, LL145 of 2013 Carter Compliance Plan Reports BIC, 2018, LL145 of 2013 Carter Compliance Reports	

In total, as seen in **Table 9-4**, as a result of the additional annual expenses commercial carters will incur in the No Action Alternative, the cost of providing commercial carting services in the No

¹⁰ New York City Office of the Mayor, Feb. 9, 2015, "City Begins Installing Truck Sideguard to Protect Pedestrians and Cyclists"

Action Alternative is anticipated to rise by approximately 4 percent (\$22 million), from approximately \$553 million to \$575 million.

Table 9-4
Change in Commercial Carter Expenses

Expense Category	Total Expense		No Action Alternative Increment	
	Proposed Action	No Action Alternative	Cost	Percent Change
Disposal Costs	\$203,270,074	\$203,270,074	\$- ¹	0%
Operating Payroll	\$146,236,570	\$155,467,428	\$9,230,858	6%
Sales, General, and Administration Payroll	\$60,643,397	\$52,902,923	\$(7,740,474)	-13%
Total Payroll	\$206,879,967	\$208,370,351	\$1,490,384	1%
Truck and Equipment	\$62,768,606	\$86,040,720	\$23,272,115	37%
Other Expenses	\$88,348,613	\$77,741,918	\$(10,606,695)	-12%
Total	\$561,267,260	\$575,423,064	\$14,155,804	2%
Notes: ¹ It is assumed that the cost of disposing of all commercial waste will remain constant as the total amount of waste collected (including putrescible, recyclable and organic) remains constant in the Proposed Action; therefore the cost of disposal is not anticipated to increase as a result of the increased rate of diversion as a result of the proposed action.				
Sources: BIC, 2015, Private Carter Financial Statements BIC, 2017, LL145/2013 Carter Compliance Plan Reports BIC, 2018, LL145/2013 Carter Compliance Reports				

In total, as seen in **Table 9-4**, as a result of the additional annual expenses commercial carters would incur in the No Action Alternative, the cost of providing commercial carting services in the No Action Alternative is anticipated to be approximately \$14 million (2 percent) greater than under the CWZ Program as the No Action Alternative would not include the operational efficiencies associated with a zoned system, and therefore, in the No Action Alternative, carters would have additional operational expenses, need additional trucks to provide the same waste collection services and increased payroll related to staffing a greater number of employees to service the additional routes necessary to collect commercial waste.

Secondary Employment Market

In the No Action Alternative, it is anticipated that diversion would increase by approximately 9 percent over the existing rate of diversion. In response to this increased rate of diversion in the No Action Alternative, the secondary recycling market would require additional sorting capacity, and therefore is expected to require additional workers to manage and sort the additional diverted waste. The NYSDOL Quarterly Census of Employment and Wages reports approximately 400 employees working in materials recovery facilities in New York City.¹¹ ~~With a net increase in diversion rate of by 9 percent over the existing condition, it is anticipated that approximately condition could have the potential to generate approximately 139 additional jobs could be generated in the secondary market under the No Action Alternative. This would result in approximately 139 fewer new jobs within the secondary sorting market in the No Action Alternative as compared to the CWZ Program.~~

¹¹ DSNY, 2016, Private Carting Study

NYC Commercial Waste Zone Program

In comparison to the CWZ Program, the expenses associated with operation of the commercial carting industry would be higher under the No Action Alternative. This is because the No Action Alternative would not include the operational efficiencies associated with a zoned system, and therefore, in the No Action Alternative, carters would need additional trucks and staffing as compared to the CWZ Program in order to collect an equal amount of waste.

COMMERCIAL WASTE CUSTOMERS

Under the No Action Alternative, it is anticipated that for a business, overall, the cost of commercial carting services would be higher than the cost under the CWZ Program. As seen in **Table 9-4**, the expenses associated with commercial carting services in the No Action Alternative would be approximately 2 percent higher than expenses under the CWZ Program. This results in an approximately \$14 million increase to carter operating expenses in the No Action Alternative due as carters would have additional operational expenses, need additional trucks to provide the same waste collection services and increase payroll related to staffing a greater number of employees to service the additional routes necessary. As a result of this increase to operational expenses, carters are anticipated to increase the fee for commercial carting services in order to recoup the expenses associated with policies to be implemented in the No Action Alternative.

Further, in the No Action Alternative, the price for commercial waste collection services within New York City would continue to be regulated by the BIC rate cap, as opposed to through the bidding system outlined in the CWZ Program. As seen in **Table 9-5**, it is anticipated that the BIC rate cap would increase to \$15.88 per 100 lbs. in the No Action Alternative.¹² Further as the BIC rate cap would increase by 5.25 percent every two years it is assumed that in the No Action Alternative the median rate for commercial carting services within New York would also increase at this rate, as compared to the existing condition.

Table 9-5
No Action Alternative Anticipated BIC Rate Cap

Study Area	Existing Condition	No Action Alternative ¹
New York City BIC Rate Cap	\$13.62	\$15.88
New York City Median Rate	\$10.00	\$11.66
Midtown Manhattan CBD Median Rate	\$8.90	\$10.38
Flatbush Nostrand Junction Median Rate	\$11.30	\$13.17
College Point Median Rate	\$10.80	\$12.59
Notes: ¹ The No Action Alternative rate cap is anticipated to increase by 5.25 percent every 2 years between 2018 and 2024. In total, this amounts to a 17 percent increase in the rate cap between the existing condition and No Action Alternative. Sources: NYC Rules, 2018, Adopted Rules- http://rules.cityofnewyork.us/tags/trade-waste-0 BIC, 2017 Q2-Q4, Private Carter Customer Register		

As a result of the approximately 17 percent increase in the median rate charge for commercial carting services in the No Action Alternative, it is anticipated that the rate charged to customers for commercial waste collection in the No Action Alternative would increase as compared to the existing condition and the CWZ Program.

¹² Based on assumptions provided by DSNY/BIC.

Under the No Action Alternative, commercial businesses, which rely on the commercial carting industry to collect and dispose of waste, would experience an increase in the rate charged for commercial waste collection as compared to the CWZ Program. This is due to the increase in carter operating expenses, which would need to be offset by increased carter revenues. As documented in Chapter 3 “Socioeconomic Conditions,” under the CWZ Program businesses would likely see a reduction in the cost of carting services as compared to the No Action Alternative as the overall expense of commercial carting would be reduced, allowing carting prices to be more competitive. Further, businesses, regardless of industry sector or location, would likely receive improved services including free waste assessments and access to a dedicated call center at a competitive rate as a result of the CWZ Program, services which would not be offered under the No Action Alternative.

SOLID WASTE MANAGEMENT AND SANITATION SERVICES

As with the CWZ Program, the No Action Alternative would not result in any significant adverse impacts to solid waste ~~management~~ management and sanitation services.

Under the No Action Alternative, the City would continue to expand recycling and organics diversion, and all commercial businesses designated under LL146/2013 would be required to separate organics for a beneficial use, like composting or digestion. It is estimated that 30 percent of commercial waste would be collected as recyclables (i.e., cardboard, paper, and MGP) and 3 percent of commercial waste would be collected as organics throughout the City under the No Action Alternative, which would be less than the anticipated collection rate under the CWZ Program.

LL152/2018 reduces the permitted capacity at putrescible and non-putrescible solid waste transfer stations in four overburdened community districts in New York City and would continue under the No Action Alternative, as it would under the CWZ Program.

As discussed above in “Land Use, Zoning, and Public Policy,” continued implementation of the SWMP would also occur under the No Action Alternative.

TRANSPORTATION

As with the CWZ Program, the No Action Alternative would not result in any significant adverse impacts to transportation. As per the *CEQR Technical Manual*, some growth in background traffic is expected citywide by the Analysis Year of 2024 under both the No Action Alternative and Proposed Action. However, this growth would not be expected to result in significant traffic congestion during waste carting peak hours, as most commercial carting takes place at times that are not peak hours for background traffic.

Under the No Action Alternative, carters would continue to operate the same as under the existing condition—the routes, frequency, durations and pick-up times would remain approximately the same.

As described in Chapter 2, “Land Use, Zoning, and Public Policy,” under the No Action Alternative, the City would continue to expand recycling and organics diversion, including requiring all commercial businesses designated in LL146/2013 to separate organics for composting or digestion. Collection trucks carting recyclables or organic waste do not carry the same density of waste as similar-sized putrescible refuse collection trucks, thus a net increase in the total number of waste collection trucks would be expected as a result of the increased diversion to recycling and organics. This would result in a minor increase to Vehicle Miles Traveled (VMT) within New York City and region-wide for travel to transfer stations and garages in New Jersey, Long Island, and nearby upstate New York counties with the No Action Alternative. However, these minor increases in VMT are not expected to result in significant adverse impacts to

NYC Commercial Waste Zone Program

transportation under the No Action Alternative. **Table 9-6** provides the anticipated VMT across each of the case study areas for the No Action Alternative as compared to the CWZ Program.

Table 9-6

No Action and Proposed Action VMT (miles/day) per Case Study Area

Case Study Area	No Action Alternative VMT ¹	Proposed Action VMT ¹	Percent Reduction from No Action Alternative
Midtown Manhattan CBD	810	355	56%
Flatbush Nostrand Junction, Brooklyn	49	26	47%
College Point, Queens	499	200	60%
Notes: ¹ Simulation based on 2018 Routing Data collected between March 4, 2018 and March 17, 2018. Source: 2018 Routing Data simulated to reflect No Action Alternative and Proposed Action, including Diversion Program Impact.			

Table 9-7 provides the daily waste carting trucks per case study area for the No Action Alternative as compared to the CWZ Program. As shown, the number of daily carting trucks under the No Action Alternative is approximately 174, 46, and 85, within the Midtown Manhattan Central Business District (CBD), the Flatbush Nostrand Junction, and the College Point case study areas, respectively. Compared to the No Action Alternative, the Proposed Action is predicted to decrease the number of trucks in the future by approximately 40 percent to 62 percent per case study area (see **Table 9-7**).

Table 9-7

**No Action Alternative and Proposed Action
Daily Carter Trucks per Case Study Area**

Case Study Area	No Action Alternative Daily Trucks ^{1,2}	Proposed Action Daily Trucks	Percent Reduction
Midtown Manhattan CBD	174	104	40%
Flatbush Nostrand Junction, Brooklyn	46	24	48%
College Point, Queens	85	32	62%
Notes: ¹ Simulation based on 2018 Routing data collected between March 4, 2018 and March 17, 2018. All data for baseline condition in study areas is the MAX of weekday data. Source: 2018 Routing Data simulated to reflect No Action Alternative and Proposed Action, including Diversion Program Impact.			

AIR QUALITY

As with the CWZ Program, the No Action Alternative would not result in any significant adverse impacts to air quality.

As indicated above in “Transportation,” under the No Action Alternative, carters would continue to operate as they do under the existing condition: the routes, frequency, durations and pick-up times would remain approximately the same.

As a result of the increased diversion to recycling and organics, under the No Action Alternative, there would be an increase in the total number of commercial waste collection trucks and a minor increase in VMTs, within New York City and region-wide for travel to transfer stations and

garages in New Jersey, Long Island, and upstate New York. Furthermore, under the No Action Alternative, all operating carters are expected to be fully compliant with LL145/2013 by the 2024 Analysis Year. Therefore, although fleet-wide emissions associated with commercial carter trucks are anticipated to be reduced from existing levels, this reduction may be partially offset by a minor increase to pollutant emissions in the No Action Alternative due to the increased VMT associated with the expanded recycling and organic diversions. Overall, ambient air quality (particulate matter [PM] and Ozone) has been improving in recent years; no significant deterioration is predicted by the analysis year of 2024 in the No Action Alternative.

Therefore, overall, background growth in traffic under the No Action Alternative is not expected to result in significant adverse impacts to air quality.

GREENHOUSE GAS EMISSIONS

As with the CWZ Program, the No Action Alternative would not result in any significant adverse impacts to greenhouse gas (GHG) emissions.

As described above in “Transportation,” as a result of the increased diversion to recycling and organics, there would be an increase in the total number of commercial waste collection trucks and a minor increase in VMTs within New York City and region-wide for travel to transfer stations and garages in New Jersey, Long Island, and upstate New York with the No Action Alternative. Furthermore, as described above in “Air Quality,” under the No Action Alternative, all operating carters that indicate progress towards compliance with LL145/2013 are expected to be fully compliant with LL145/2013 by the 2024 Analysis Year.

The requirements of LL145/2013 target reductions to PM emissions. While PM is not included in the list of standard GHGs, recent studies have shown that black carbon—a constituent of PM—may play a role in climate change due to PM concentrations influencing the temperature of the earth. Particles of PM can be light absorbing and, consequently, can contribute to the rise in global temperatures, although these effects would be minimal.

Therefore, although PM emissions from commercial waste vehicles would be reduced, there may be a minor increase to GHG emissions in the No Action Alternative due to the increased VMT associated with the expanded recycling and organics diversion. However, this minor increase would be more than offset by the reduction in GHG emissions from reduced landfill disposal due to expanded recycling and organics diversion, as landfills emit GHGs in substantial quantities, notably methane and CO₂. The increased diversion from landfills along with the improved vehicle fleets is not expected to result in significant adverse impacts with respect to GHG emissions under the No Action Alternative.

NOISE

As with the CWZ Program, the No Action Alternative would not result in any significant adverse impacts to noise.

The No Action Alternative would not introduce any new noise receptors. As described above in “Transportation,” as a result of the increased diversion of recyclables and organics, there would be an increase in the total number of commercial collection trucks under the No Action Alternative. However, as described in “Transportation,” the carters would continue to follow the same routes, and pick-up times would remain approximately the same. The increase in truck traffic from this incremental diversion would be dispersed across the city and would be minor and, consequently, would not result in a doubling of traffic passenger car equivalents (PCEs) in the peak hour, which would be necessary to cause a significant increase in noise levels (i.e., a 3 A-weighted decibels

[dBA] or greater increase according to *CEQR Technical Manual* noise impact criteria) at a sensitive receptor. As such, as with the CWZ Program, the background growth in traffic under the No Action Alternative would not cause significant adverse noise impacts from mobile sources.

As carter vehicles are regulated with respect to noise, compacting refuse at a given location would not result in a change in the level of stationary noise generated during collections. Therefore, under the No Action Alternative noise from stationary sources is not projected to increase or result in any significant adverse noise impacts to sensitive receptors.

C. EXCLUSIVE ZONE ALTERNATIVE

Under the Exclusive Zone Alternative, each CWZ would have a single carter awarded the exclusive right to provide collection services for that zone, as compared with three to five carters per zone under the CWZ Program. The goals of the Exclusive Zone Alternative would be the same as the CWZ Program, as described in Chapter 1, “Project Description.” Under the Exclusive Zone Alternative, the same 20 zone configuration as shown in Figure 1-1 as the CWZ Program would be utilized for this evaluation.

As described in Chapter 1, “Project Description,” during the design of the CWZ Program, exclusive zones were removed from consideration given concerns about anticipated price increases to customers due to as a function of reduced competition, increased risks from carter insolvency within a restrictive market, the resulting lack of customer choice, and the potential inability of a single carter to meet all the needs of a district’s diverse ~~the~~ customers. However, an analysis of the potential impacts of the Exclusive Zone Alternative is provided below.

LAND USE, ZONING, AND PUBLIC POLICY

As with the CWZ Program, the Exclusive Zone Alternative would not result in any significant adverse impacts to land use, zoning, or public policy. The Exclusive Zone Alternative would not replace existing laws and regulations discussed in Chapter 2, “Land Use, Zoning, and Public Policy.” Rather, similar to the CWZ Program, the Exclusive Zone Alternative would require the carter to comply with the laws and regulations to obtain a service contract, including LL145/2013 (clean diesel) and LL56/2015 (sideguard requirement). Further, DSNY and BIC would have the mechanism through contract to enforce these regulations if a carter fails to comply.

As with the CWZ Program, under the Exclusive Zone Alternative, the reductions of permitted capacity at putrescible and non-putrescible solid waste transfer stations in four overburdened community districts in New York City would occur in compliance with LL152/2018.

In addition, as with the CWZ Program, under the Exclusive Zone Alternative, businesses would continue to comply with the commercial organics requirements of LL146/2013, and carters would collect organics waste.

The Exclusive Zone Alternative would support the goals of public policies as discussed in Chapter 2, “Land Use, Zoning, and Public Policy,” including the SWMP, *OneNYC*, and the New York City WRP as with the CWZ Program.

SOCIOECONOMICS

As with the CWZ Program, the Exclusive Zone Alternative would not result in significant adverse impacts on the viability of the commercial carting industry, or businesses that rely on the commercial carting industry. It is anticipated that under the Exclusive Zone Alternative, additional

efficiencies as a result of a single carter operating within each zone would decrease the overall cost of commercial carting operations within the City as compared to the CWZ Program. However, the elimination of competition within commercial waste zones has the potential to increase the costs of commercial carting services on customers and could lead to a reduction in customer service and satisfaction due to the single-service provider monopoly created by an exclusive zone system. Furthermore, implementing the Exclusive Zone Alternative has the potential to be a substantial logistical challenge, as few carters have the capacity to exclusively service a single zone, a larger number of customers would be required to change service providers in the transition period, and potential future service disruptions could result if the single carter fails to provide the necessary services.

COMMERCIAL WASTE CARTERS

It is anticipated that the Exclusive Zone Alternative could result in a reduction in the cost associated with commercial waste carting operations to a level even greater than under the CWZ Program as efficiencies including highly efficient routing and an overall reduction of routes would decrease the carting industries operational expenses. Under the Exclusive Zone Alternative, zone route efficiencies (ZRE) would increase efficiencies in payroll by 2 percentage points and efficiencies in routing by 6 percentage points over the Proposed Action. As shown in **Table 9-8** these efficiencies would reduce carter expenses by approximately \$8.7 million more than the CWZ Program would, a 2 percent total savings in the operational expenses associated with commercial waste collection services.

Table 9-8
Carter Operational Expenses in the Exclusive Zone Alternative

Expense Category	Proposed Action	Exclusive Zone Alternative	Change Between the Proposed Action and Exclusive Zone Alternative	
			Count	Percent
Disposal Costs	\$203,270,074	\$203,270,074	\$ ⁻¹	0%
Operating Payroll	\$146,236,570	\$147,812,758	\$1,576,188	1%
Sales, General, and Administration Payroll	\$60,643,397	\$55,788,347	\$(4,855,050)	-8%
Total Payroll	\$206,879,967	\$203,601,106	\$(3,278,862)	-2%
Truck and Equipment	\$62,768,606	\$57,290,121	\$(5,478,484)	-9%
Other Expenses	\$88,348,613	\$88,321,161	\$(27,452)	0%
Total	\$561,267,260	\$552,482,462	\$(8,784,798)	-2%

Notes:

¹ It is assumed that the cost of disposing of all commercial waste will remain constant as the total amount of waste collected (including putrescible, recyclable, and organic) remains constant in the Proposed Action; therefore the cost of disposal is not anticipated to increase as a result of the increased rate of diversion as a result of the proposed action.

Sources:

Business Integrity Commission, 2015, Private Carter Financial Statements
Previous Analyses as indicated in this chapter and Chapter 3, "Socioeconomic Conditions."

The largest operational savings under the Exclusive Zone Alternative is a \$5.5 million reduction in the cost of trucks and equipment. As seen in **Table 9-9** under the Exclusive Zone Alternative the carting industry would require approximately 674 trucks to haul commercial waste, this is a 9 percent (65 trucks) decrease over the CWZ Program. Furthermore, under the Exclusive Zone Alternative routing efficiencies would result in the reduction of 39 additional field employees as compared to the CWZ Program, a 2 percent reduction in total employment as compared to the CWZ Program. As there would be no competition for customers under the Exclusive Zone Alternative, staff in sales

NYC Commercial Waste Zone Program

roles would likely be reduced or shifted to other positions within a carting businesses in order for the carter to take on the expanded operation necessary to collect all waste from an exclusive zone.

Table 9-9
Changes to Carting Trucks and Employment
as a Result of the Exclusive Zone Alternative

Units	Proposed Action	Exclusive Zone Alternative	Change Between Proposed Action and Exclusive Zone Alternative	
			Count	Percent
Trucks	739	674	-65	-9%
Field Employees	1,751	1,712	-39	-2%
Office Employees	880	880	0	0%
Total Employment	2,631	2,592	-39	-1%
Sources: BIC, 2015, Private Carter Financial Statements NYSDOL, 2015–2017, Occupational Wages for New York City region Previous Analyses as indicated in this chapter.				

COMMERCIAL WASTE CUSTOMERS

It is anticipated that the Exclusive Zone Alternative could result in commercial businesses experiencing increased costs for commercial carting services. While carting operations would likely be more efficient within an exclusive zone system, the lack of competition associated with this alternative would eliminate the need for commercial carters to provide the lowest price of service to be competitive with other carters within zones, as is found in the CWZ Program. As customers have no choice but to utilize the exclusive carter, businesses would not be able to select services from different carters, reducing the competitive character of the market. Due to the reduction of carter operational expenses in the Exclusive Zone Alternative customers could receive carting services at a lower price in the Exclusive Zone alternative than under the CWZ Program. However, customers may experience a decrease in the quality of waste collection services as carters would not be as incentivized to maintain a high level of service in order to retain customers, as they would be under the CWZ Program. Furthermore, as zones are exclusive, if a carter were unable to operate effectively and ceased operations, carting customers would have little or no redundancy in commercial waste collection as they would not be able to contract readily with another carter this would likely result in service disruptions for businesses, and the possibility that DSNY would be obligated to and provide emergency collection services to ensure that commercial waste continued to be collected.

SOLID WASTE MANAGEMENT AND SANITATION SERVICES

As with the CWZ Program, the Exclusive Zone Alternative would not result in any significant adverse impacts to solid waste ~~management~~ and sanitation services.

Similar to the CWZ Program, the Exclusive Zone Alternative would not be expected to increase the overall volume of waste being produced or collected but would result in a redistribution of the type of waste collected and changes in the carter collecting the waste. As indicated above, with only a single carter operating within each CWZ in the Exclusive Zone Alternative, customers may experience a decrease in the quality of waste collection services and potential disruptions should a carter be unable to operate effectively and cease operations.

Under the Exclusive Zone Alternative, relevant regulations and management plans would continue to aim to achieve their goals. The City would continue to expand recycling and organics diversion, and all commercial businesses designated in LL146/2013 would be required to separate organics for composting or digestion. In addition, as with the CWZ Program, continued implementation of the SWMP would occur under the Exclusive Zone Alternative.

TRANSPORTATION

As with the CWZ Program, the Exclusive Zone Alternative would not result in any significant adverse impacts to transportation.

Similar to the CWZ Program, under the Exclusive Zone Alternative the number and type of customers and the pick-up times and frequency of pick-ups would be expected to remain roughly the same with existing condition and the No Action Alternative. Similarly, on a regional level, commercial carter trucks would continue to follow NYCDOT-designated truck routes.

As described in Chapter 5, “Transportation,” under the CWZ Program, and similarly under the Exclusive Zone Alternative, as a result of the increased diversion of recyclables and organics and associated carting routes carrying fewer tons per truck, there would be an increase in the total number of commercial carter trucks and a minor increase in VMTs within New York City and region-wide for travel to transfer stations and garages in New Jersey, Long Island, and upstate New York. However, similar to the CWZ Program, the Exclusive Zone Alternative would limit the number of carters within geographic zones, which would result in increased efficiency in waste collection routes, such that truck VMTs and overall truck traffic would decrease. The increased efficiency coupled with the increased diversion to recycling and organics would result in an overall decrease of overlapping trucks along road segments, which would result in decreased VMT within New York City and region-wide for truck routes to and from transfer stations and garages in Long Island, upstate New York, and New Jersey. The Exclusive Zone Alternative is anticipated to reduce citywide commercial waste carter VMT an additional 8 percent from the Proposed Action. **Table 9-10** provides the anticipated VMT across each of the case study areas for the Exclusive Zone Alternative as compared to the CWZ Program.

Table 9-10
Proposed Action and Exclusive Zone Alternative VMT (miles/day)
per Case Study Area

Case Study Area	Proposed Action VMT ¹	Exclusive Zone Alternative VMT ¹	Percent Reduction
Midtown Manhattan CBD	355	170	52%
Flatbush Nostrand Junction, Brooklyn	26	18	30%
College Point, Queens	200	171	15%
Notes: ¹ Simulation based on 2018 Routing Data collected between March 4, 2018 and March 17, 2018. Source: 2018 Routing Data simulated to reflect No Action Alternative and Proposed Action, including Diversion Program Impact.			

Table 9-11 provides the daily trucks per case study area for the Proposed Action and the Exclusive Zone Alternative. As shown, the number of daily commercial carting trucks under the Exclusive Zone Alternative is approximately 87, 18, and 36, within the Midtown Manhattan CBD, the Flatbush Nostrand Junction, and the College Point case study areas, respectively. The Exclusive Zone Alternative would result in fewer daily trucks than under the CWZ Program within the

NYC Commercial Waste Zone Program

Midtown Manhattan CBD and Flatbush Nostrand Junction case study areas, but slightly more trucks within the College Point case study area.¹³

Table 9-11

**Proposed Action and Exclusive Zone Alternative Daily Carting Trucks
per Case Study Area**

Case Study Area	Proposed Action Daily Trucks ¹	Exclusive Zone Alternative Daily Trucks ¹	Percent Reduction
Midtown Manhattan CBD	104	87	16%
Flatbush Nostrand Junction, Brooklyn	24	18	25%
College Point, Queens	32	36	-13%
Notes: ¹ Simulation based on BIC, 2018, Private Carter Routing Data collected between March 4, 2018 and March 17, 2018. Source: BIC, 2018, Private Carter Routing Data simulated to reflect No Action Alternative and Proposed Action, including Diversion Program Impact.			

Similar to the CWZ Program, under the Exclusive Zone Alternative there would not be a predicted exceedance of the *CEQR Technical Manual* Level 1 traffic screening threshold of an increase in 50 or more PCE in a peak hour within an intersection. Under the *CEQR Technical Manual*, a commercial carter truck is the equivalent of 1.5 PCEs. Therefore, detailed traffic analyses are not warranted and the Exclusive Zone Alternative is not anticipated to result in any significant adverse transportation impacts.

AIR QUALITY

As with the CWZ Program, the Exclusive Zone Alternative would not result in any significant adverse impacts to air quality.

As described above in “Transportation,” the Exclusive Zone Alternative would result in an overall decrease in trucks and a decrease in the VMT within New York City and region-wide for truck routes to and from transfer stations and garages in Long Island, upstate New York, and New Jersey as compared to the CWZ Program; therefore, there would be a reduction in emissions from commercial carter trucks.

As with the CWZ Program, under the Exclusive Zone Alternative, all carters operating within the program would be expected to be fully compliant with LL145/2013. Therefore, fleet-wide emissions associated with commercial carter trucks are anticipated to be reduced from existing levels.

¹³ Model simulations using BIC, 2018, Private Carter Routing Data randomly assigned truck routes to transfer stations based proportionally on the locations of the most commonly used transfer stations for routes ending in the zone. Similar to the methodology used to simulate VMT within the existing, No Action, and Proposed Action conditions, multiple iterations of the model were performed, and the average number of trucks are presented. The slight increase in trucks presented within the College Point study area is an average of multiple model runs, with some runs showing fewer trucks and some runs showing greater trucks. This could be due to the location of the Tully Environmental Willets Point Transfer Station and the major highway (Interstate 678) within the study area allowing additional trucks to pass through this area so that even with a single carter operating within the zone covered by the case study area, carters from other zones may pass through the zone to access the transfer station and/or utilize the highway (refer to **Table 9-9**).

Furthermore, commercial carter trucks used for the collection of recycling and organics would also be in full compliance with requirements set forth in LL145/2013. Therefore, similar to the CWZ Program, fleet-wide emissions associated with commercial carter trucks under the Exclusive Zone Alternative would be reduced from levels under existing conditions.

Therefore, the Exclusive Zone Alternative would not result in any significant adverse impacts to air quality.

GREENHOUSE GAS EMISSIONS

As with the CWZ Program, the Exclusive Zone Alternative would not result in any significant adverse impacts to GHG emissions.

As described above in “Transportation,” similar to the CWZ Program, under the Exclusive Zone Alternative, there would be an overall decrease of trucks and a decrease in the VMT within New York City and region-wide for truck routes to and from transfer stations and garages in Long Island, upstate New York, and New Jersey as compared to the CWZ Program; therefore, there would be a reduction in GHG emissions from carter vehicles.

One of the goals of the CWZ Program is to prioritize investments in clean, modern fleets that make up a reliable, resilient, and sustainable waste management system. As with the CWZ Program, under the Exclusive Zone Alternative, all commercial carter trucks operating in the City are anticipated be in full compliance with the requirements of LL145/2013. Therefore, the fleet-wide PM emissions associated with commercial waste carting are anticipated to be further reduced from existing conditions.

In addition, the contracts awarded to selected carters would include incentives to provide improved environmental performance. Some of these improvements could include the conversion of commercial carter trucks to electric vehicles or the use of compressed natural gas, which is a cleaner fuel with lower GHG emissions than diesel fuel. As with the CWZ Program, these improvements in performance, if implemented, would further reduce GHG emissions.

Therefore, the Exclusive Zone Alternative would not result in any significant adverse impacts to GHGs.

NOISE

As with the CWZ Program, the Exclusive Zone Alternative would not result in any significant adverse impacts to noise.

As discussed above in “Transportation,” similar to the CWZ Program, the Exclusive Zone Alternative would limit the number of carters within geographic zones, which would result in increased efficiency in waste collection routes, such that truck VMT and overall truck traffic would decrease. Therefore, the Exclusive Zone Alternative would not generate any increase in noise from mobile sources.

Further, as commercial carter trucks are regulated with respect to noise, compacting refuse at a given location would not result in a change in the level of stationary noise generated during collections. Therefore, the Exclusive Zone Alternative would not generate any increase in noise from stationary sources and is not expected to result in any significant adverse impacts to noise. *

A. INTRODUCTION

As described in Chapter 1, “Project Description,” the City of New York is proposing to establish and implement a Commercial Waste Zone (CWZ) Program across the five boroughs of the City to improve the carting of refuse, recyclables, and organic waste from commercial businesses (the “CWZ Program” or “Proposed Action”).

The Proposed Action is a generic action that would occur throughout the City and does not involve construction. Therefore, no construction period environmental analysis is warranted. Instead, this chapter provides an overview of the anticipated transition period from the existing open market commercial carting system to the CWZ Program and discusses how this transition period may affect certain technical areas analyzed for the CWZ Program’s operational period, such as air quality, noise, and traffic. Further, as other cities around the United States have adopted similar programs to the program that the City intends to implement with the Proposed Action, the City has been able to review the transition and implementation of these other cities’ programs, determine best practices, and apply the lessons learned from these peer cities to the implementation of the CWZ Program. These best practices and lessons learned have been incorporated into the planning, transition, and implementation of the CWZ Program in New York City and are discussed below. This chapter first discusses the transition process and then includes a discussion of the potential effects of this transition on applicable City Environmental Quality Review (CEQR) technical areas.

B. ANTICIPATED TRANSITION PROCESS

As described in Chapter 1, “Project Description,” the CWZ Program would likely be implemented in multiple steps. The transition would begin with a period for competitive solicitation of contracts through a Request for Proposal (RFP) in ~~late 2019 to 2020~~. Upon review of the proposals submitted and selection of the carters for the CWZ Program, a two-year transition period from 2021 to 2023 would begin to transition customers gradually to the awarded carters in order to successfully accommodate the needs of all customers and allow carters to appropriately scale up to service new customers. Full implementation of the CWZ Program is expected ~~by the Analysis Year of~~ in 2024.

The two-year transition period is longer than transition periods seen for commercial waste zone systems implemented in other cities. This is due to the size of the New York City commercial waste market in comparison to other cities and to allow a longer period of time for carters to adjust to new customers and service requirements. Customer transition may occur in multiple phases, with certain zones transitioning prior to other zones.

COMPETITIVE SOLICITATION PERIOD

Workshops would be setup prior to the release of the RFPs in order to assist carters in understanding the requirements of the CWZ Program, including the RFP and contracting process

NYC Commercial Waste Zone Program

to allow carters to properly prepare proposals for submission. This step was based, in part, on the review of the transition in other cities.

The New York City Department of Sanitation (DSNY) is expected to initiate the competitive solicitation by the end of 2019. The RFP would be released for all zones and would include specific details on the CWZ Program goals, methods for implementation, and other requirements and would take into account, as appropriate, account for any additional stakeholder or public feedback in the development of the RFP. In addition, DSNY would take steps to create RFP documents that are expected to allow carters to bid with price certainty, such as conducting a waste generation study to improve upon previous desktop models.

Once DSNY releases the RFP, carters would prepare and submit competitive proposals. DSNY would accept proposals from qualified carters, groups of carters that form a consortium for a particular zone, or brokers that can manage multiple carters to meet the goals of the CWZ Program as stated in the RFP, such as demonstrating route efficiencies.

Proposals would be evaluated on criteria outlined in the RFP that would determine which carters provide the best overall value consistent with program goals and service requirements. A specified evaluation team comprised of City employees from DSNY and the Business Integrity Commission (BIC) would evaluate each proposal based on designated criteria to determine an overall weighted score for each proposal, with pricing accounting for at least 40 percent of the overall weighted score. Contracts would be subject to negotiation with DSNY.

DSNY would award contracts to at most 3 to 5 carters per zone. Individual carters may be awarded up to 15 zones. In total, it is anticipated that DSNY would award a potential total of 68 contracts for waste collection across New York City. The evaluation and contracting process is expected to last approximately one year, and DSNY would evaluate and award all zones simultaneously.

CARTER TRANSITION PERIOD

Immediately preceding the transition period, carters would be restricted from entering new service agreements that extend beyond the transition deadline. Any carters that are not awarded a contract for a zone may continue to service customers in that zone until the end of the transition period. These carters would continue to follow applicable BIC regulations during the transition period, including the citywide rate cap. Carters that are not selected for a zone would be prohibited from continuing to provide service to customers after the end of the transition period and may be subject to civil and/or criminal penalties for violating regulations.

The CWZ Program transition may take place in multiple phases, with a set number of zones “going live” during each successive phase, with the timing and phasing determined at a later date.

During the transition period, carters would attend recurring progress meetings with the City to review the status of the transition, evaluate issues that arise, and resolve problems. Each carter would appoint a designated project manager to serve as a primary point of contact with the City. It is expected that the City would require each carter to create a transition schedule for its awarded zone with key milestones and to prepare key plans including but not limited to:

- Staffing and Training
- Technology Implementation
- Communication and Public Outreach
- Customer Service Platforms

- Vehicle and Equipment Procurement
- Sales and Billing Set-Up
- Customer Transition (i.e., existing and new) and Hand-off
- Health and Safety

Several additional activities are expected to occur after the selection of carters from the contract award process. These may include but are not limited to customer outreach and transition, contract transition, equipment transition, labor transition, establishing new collection routes, free waste assessments, establishing hotlines/call centers for customer inquiries, data reporting, and city operational and administrative preparations. In addition, compliance with existing legislation impacting the commercial waste industry, such as recycling and organics separation and mandatory sideguard installation requirements, would still be required.

Upon receiving notice of winning bids, carters would be expected to begin transitioning customers. This may include customer outreach and notification, establishing written service agreements with customers, and transitioning equipment. During the transition, DSNY would pay particular attention to the impact on carters and customers that have specialized equipment or are high volume waste producing locations with compactors and containers. Carters would be required to purchase equipment for non-awarded carters or switch out equipment from non-awarded carters with their own equipment with the new customers. Based on experiences in other cities, DSNY would anticipate gaps in this process and would take steps to mitigate this issue and may serve as a backup if equipment is not properly removed.

Labor transition is expected during the transition period to shift employees from carters that did not win awards to awarded carters. In 2018, during the suspension and subsequent loss of the operating license of a major carter located in the Bronx, a combination of City and labor union efforts was able to relocate employees from that carter to other companies and industries in a timely and efficient manner. The City will take lessons learned from this process to aid in the labor transition process anticipated during the transition to the CWZ Program.

As a function of the CWZ Program requirements, carters that win zones may be required to provide certain minimum added services, including but not limited to free waste assessments for customers that request them and hotlines/call centers for customer inquiries. Free waste assessments would be provided by a third party and paid for by the contracting carter. These waste assessments are intended to assist customers in establishing fair rates for waste collection services as well as identifying key waste streams and ways to improve recycling and organics collection. Carters may be required to have hotlines/call centers that are active during carter operating hours in case of customer inquiries and complaints. Carters may also be required to report hotline/call center metrics to the City to ensure that inquiries are addressed in a timely and appropriate manner.

Carters may be required to report additional data to DSNY and BIC during and after the transition process to monitor the effectiveness of the transition and adherence of carters to contract requirements as well as federal, state, and local laws. Carters may be expected to report metrics, including, but not limited to, existing and future staffing, existing equipment and new equipment purchase details, call center metrics, customer register, route information, financial information, waste collection prices charged to customers, disposal and recycling metrics, results of third-party waste assessments, technology upgrades, and success stories.

CUSTOMER TRANSITION PERIOD

Customer transition would occur during a set period of time following contract award. DSNY anticipates that the customer transition process would last up to two years in order to successfully accommodate the needs of all customers and allow carters to appropriately scale up to service new customers. Customer transition would begin in 2021.

The City would notify all customers of the selected carters for their zone and customers' rights and responsibilities under the CWZ Program. Once the transition period begins, customers may only make new service agreements with selected carters for their zone. DSNY would assign a carter to any customers that do not choose an awarded carter by the end of the transition period.

Experience with CWZ implementation in peer cities has shown that some customers may be abandoned by former carters before customer transition is complete in each zone if those carters do not win any zones. This can result in missed service pickups until service with a new carter can be established. Abandoned customers located within an active CWZ Program zone under transition would be automatically assigned to a carter for interim service. DSNY would serve as a provider of last resort during the transition.

CITY SUPPORT DURING TRANSITION PERIOD

In conjunction with the competitive solicitation and carter and customer transition process, DSNY would establish a new Division of Commercial Waste to administer the CWZ Program in conjunction with BIC and to consolidate DSNY's commercial waste outreach, enforcement, and regulatory function in the agency under a single chain of command. This division would oversee the solicitation and transition processes and ensure that the City achieves its stated program goals and requirements.

The division would also ensure compliance with contractual obligations after implementation related to reporting, recordkeeping, pricing, customer service, billing, disputes, health and safety, labor, etc. as outlined in the contracts. The division would be comprised of staff in a variety of roles and titles, potentially including Sanitation Police Officers in various enforcement functions.

The division would review reports and data from carters to ensure full program compliance. This may include environmental compliance related to emissions, routing, and fleet performance, proper waste management practices, ~~fair labor practices~~, and regulatory compliance, among others. The division would also resolve customer billing disputes that are not resolved independently by carters and customers. The team would also monitor pricing and compliance with contracted rates caps to ensure fair, transparent pricing across all zones.

The division would be responsible for addressing and resolving customer complaints received from 311. The City will be the secondary point of contact if customers are unable to resolve issues directly with the carters.

C. POTENTIAL IMPACTS OF TRANSITION PERIOD

Based on the anticipated limited impact of the transition period of the Proposed Action, the following CEQR technical areas are expected to be screened out of any need for detailed discussion: community facilities; open space; shadows; historic and cultural resources; urban design and visual resources; natural resources; hazardous materials; water and sewer infrastructure; energy; public health; neighborhood character; and construction.

LAND USE, ZONING, AND PUBLIC POLICY

The transition period would not result in changes to land use or zoning. Local laws affecting the commercial waste carting industry would remain in place and be enforced. These include Local Law (LL) 145 of 2013 (LL145/2013) (truck engine emission upgrade requirements), LL146 of 2013 (LL146/2013) (mandatory organics separation for select businesses), LL56 of 2015 (LL56/2015) (mandatory sideguard requirements), and LL152 of 2018 (LL152/2018) (transfer station capacity reduction requirements).

At all times, including before release of RFPs and during and after the competitive solicitation process, carters would be subject to regular review and investigation by BIC. Materials submitted as part of a bid in response to an RFP may be subject to background checks and investigation to verify carters are not in violation of existing Federal, State, and local laws and have not committed serious health and safety violations within three years prior to the submission of bids. In the event of serious violations found by BIC, a carter's bid may be invalidated. BIC's background checks and investigations would extend to carters bidding from outside New York City. Carters bidding from outside New York City must first apply for and be approved through BIC for a license to operate in New York City.

As carters would be expected to comply with all existing regulations during the transition period, and DSNY and BIC would have the mechanism through contract to enforce these regulations if carters fail to comply, significant adverse impacts to land use, zoning, and public policy during the transition period are not expected.

SOCIOECONOMIC CONDITIONS

COMMERCIAL WASTE CARTERS

It is anticipated that during the transition period, carters awarded contracts would have additional operational expenses and administrative costs to cover activities required by the CWZ Program. This includes but is not limited to customer outreach and transition, contract transition, equipment transition, labor transition, establishing new collection routes, free waste assessments, establishing hotlines/call centers for customer inquiries, data reporting, and City operational and administrative preparations.

As discussed above, carters that are not selected for a zone would be prohibited from continuing to provide service to commercial waste customers after the end of the transition period. Existing New York City carters, in anticipation of a competitive bidding process, may choose to consolidate companies or remove themselves from the market. As a result, during the transition period, it is also expected that there would be some transition of the labor force to shift employees from carters that did not win awards to awarded carters. As stated above, DSNY would provide aid during this labor transition process.

While the transition period and Proposed Action may have the potential to reduce the total number of commercial carters operating within the City, carters not awarded a zone may transition into the collection of waste streams excluded from the CWZ Program, such as construction and demolition (C&D) debris, engage in other agreements such as subcontracts to support contracted carters, concentrate on carting opportunities in the metropolitan area outside of New York City, or may leave the industry.

COMMERCIAL WASTE CUSTOMER

As documented above, a specified evaluation team comprised of City employees from DSNY and BIC will evaluate each proposal based on designated criteria to determine an overall weighted score for each proposal where pricing will account for at least 40 percent of the overall weighted score. The BIC carting rate cap would not apply to contracts under the CWZ Program. During the transition period, businesses may experience increased cost of carting services to account for the increased operational costs to commercial carters discussed above; however, the competitive nature of the procurement process and the non-exclusive nature of zones, where multiple carters will compete for customers, are anticipated to limit the rate charged to customers.

Customer transition would occur during a set period of time following contract award. The City would notify all customers within a zone of the selected carters and provide a summary of the customers' rights and responsibilities under the CWZ Program. Once the transition period begins, customers may only make new service agreements with selected carters for their zone. DSNY would assign a carter to any customers that do not choose an awarded carter by the end of the transition period.

Based upon the experience of other cities, it is expected that the City will find through this process that a number of commercial customers do not use licensed carters at all. In Los Angeles, for example, approximately 12 percent more customers were found to exist citywide during the program transition than anticipated from pre-program analysis of data such as customer rolls.¹ In a recent New York City Department of Investigation review of retail food stores or restaurant locations in New York City, it was found that approximately 10 to 20 percent of businesses were not registered for commercial waste collection or registered as a self-carter. The implication is that these businesses may be unlawfully using DSNY to remove their commercial waste for free by placing their waste with adjacent residential waste or in corner baskets. As such, any carting cost increment to such customers from adhering to the law under the CWZ Program, including during the transition period, would not constitute an adverse socioeconomic impact for environmental review purposes. During the transition period, the waste from these businesses is expected to be collected by commercial carters under the CWZ Program, and DSNY would be working to understand accurate customer counts within zones for the RFP.

While both commercial waste carters and customers would experience changes over the course of the transition period, significant adverse impacts to the socioeconomic conditions of commercial waste carters or their customers are not expected during the transition period.

SOLID WASTE MANAGEMENT AND SANITATION SERVICES

DSNY is expected to undertake an updated commercial waste generation study for the City in order to accurately understand the quantity and characteristics of commercial refuse, recyclables, and organics to refine the requirements of the CWZ Program before issuing the RFPs.

Similar to the Proposed Action, during the transition period, there would be no significant change in the overall volume of commercial refuse, recyclables, and organics being produced or collected. There would be some shifts in carting routes and adjustments in collections to handle an expected increase in recyclables due to improved compliance with recycling rules. As both carters and customers would be required to comply with any existing laws regarding recycling and organics as well as comply with any new or revised laws or regulations enacted during the transition period, there would be an expected increase in recycling and organics diversion, but this would not

¹ LA Sanitation, 2018, Progress Report: recycLA Transition

decrease the overall volume of total collections of all three types. Carters that are awarded contracts under the Proposed Action would be required to collect all waste, including refuse, recycling, and organics during the transition period.

During the transition period, DSNY would work with customers to ensure service pickups are not missed. Abandoned customers located within an active CWZ Program zone under transition would be automatically assigned to a carter for interim service. DSNY may also serve as a provider of last resort during the transition, thereby minimizing the potential for missed pickups. Providing this service is not anticipated to affect DSNY's residential collections as pickup for missed commercial waste collection would be performed separately by standby vehicles or at different times from residential waste collection.

Implementation of the Solid Waste Management Plan (SWMP) would continue through the transition period.

Therefore, significant adverse impacts to solid waste and sanitation services during the transition period are not expected.

TRANSPORTATION

During the transition period, carters will likely need to establish new routes to conform to zone boundaries. Such intermediate routes operated during the transition period may not achieve the full CWZ Program transportation efficiencies estimated to occur by the Analysis Year. Further, as stated above, any carters that are not awarded a contract for a zone may continue to service customers in that zone until the end of the transition period. The combination of the carters continuing to service customers through the transition period with the new intermediate routes operated during the transition period would have the potential to result in a temporary increase in the number of commercial waste collection trucks and a minor increase to Vehicle Miles Traveled (VMT) within New York City and region-wide for travel to transfer stations and garages in New Jersey, Long Island, and nearby upstate New York counties. However, these minor increases in trucks and VMT during the transition period would gradually be offset by reductions in VMT as the CWZ Program is rolled out, and are not expected to result in significant adverse impacts to transportation. These temporary increases would be eliminated after transition ends. Therefore, significant adverse impacts to transportation during the transition period are not expected.

AIR QUALITY

As indicated above in "Transportation," as a result of carters continuing to service customers during the transition period and intermediate routes established by carters awarded contracts under the CWZ Program, at the same time that new CWZ routes are reducing VMTs and truck trips, there would be the potential for a temporary increase in the total number of commercial waste collection trucks and a minor increase in VMTs within New York City and region-wide for travel to transfer stations and garages in New Jersey, Long Island, and upstate New York. The minor increases in trucks would have the potential to increase air emissions during the transition period. However, the potential increase in trucks and VMT would be temporary in nature and would be offset by reductions in VMT from the CWZ Program, and thus are not expected to result in a significant increase to regional pollutant emissions during the transition period.

Furthermore, all carters awarded a contract under the CWZ Program would be expected to be compliant with LL145/2013 during the transition period.

NYC Commercial Waste Zone Program

Therefore, overall, the transition period would not be expected to result in significant adverse impacts to air quality.

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

As indicated above in “Transportation,” as a result of carters continuing to service customers during the transition period and intermediate routes established by carters awarded contracts under the CWZ Program, at the same time that new CWZ routes are reducing VMTs and truck trips, there would be the potential for a temporary increase in the total number of commercial waste collection trucks and a minor increase in VMTs within New York City. However, these minor increases in trucks and VMT would be temporary in nature and would be offset by reductions in VMT from the CWZ Program, and thus are not expected to result in a significant increase to GHG emissions during the transition period, and would be offset by the anticipated reduction in the Future with the Proposed Action (the “With Action” condition). Therefore, the Proposed Action during the transition period would be consistent with the City’s ~~80 by 50~~ GHG reduction goals under ~~One New York: The Plan for a Strong and Just City~~ OneNYC2050: Building a Strong and Fair City (OneNYC).

NOISE

The transition period would not introduce any new noise receptors. As indicated above in “Transportation,” as a result of carters continuing to service customers during the transition and intermediate routes established by carters awarded contracts under the CWZ Program, at the same time that new CWZ routes are reducing VMTs and truck trips there would be the potential for a temporary increase in the total number of commercial carter trucks on certain street segments. This increase in trucks would be temporary and gradually offset by reductions in each zone’s truck traffic from implementation of the CWZ Program and, consequently, would not result in a doubling of passenger car equivalents, the screening level to avoid causing a significant increase in noise levels (i.e., a 3 A-weighted decibel [dBA] or greater increase according to 2014 *CEQR Technical Manual* noise impact criteria). As such, there would not be adverse noise impacts from mobile sources during the transition period.

As commercial carter trucks are regulated with respect to noise emissions, compacting refuse at a given location would not result in a change in the level of stationary noise generated during collections. Therefore, the transition period would not generate an increase in noise from stationary sources and would not be expected to result in any significant adverse impacts to noise.

✱

A. INTRODUCTION

This chapter summarizes unavoidable significant adverse impacts resulting from the proposed project. According to the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, unavoidable significant adverse impacts are those that would occur if a proposed project or action is implemented regardless of the mitigation employed, or if mitigation is impossible.

As described in Chapter 1, “Project Description,” the City of New York is proposing to establish and implement a Commercial Waste Zone (CWZ) Program across the five boroughs in the City to improve the carting of refuse, recyclables, and organic waste from commercial businesses (the “CWZ Program” or “Proposed Action”).

As discussed throughout this Final Generic Environmental Impact Statement (FGEIS)~~-DGEIS~~, unavoidable significant adverse impacts resulting from the CWZ Program have not been identified in any of the technical areas. *

Chapter 12:

Growth-Inducing Aspects of the Proposed Action

The term “growth-inducing aspects” generally refers to the potential for a proposed project to trigger additional development in areas outside the project site that would otherwise not have such development without the proposed project. The 2014 *City Environmental Quality Review (CEQR) Technical Manual* indicates that an analysis of the growth-inducing aspects of a proposed project is appropriate when the project:

- Adds substantial new land use, new residents, or new employment that could induce additional development of a similar kind or of support uses, such as retail establishments to serve new residential uses; and/or
- Introduces or greatly expands infrastructure capacity.

As described in Chapter 1, “Project Description,” the City of New York is proposing to establish and implement a Commercial Waste Zone (CWZ) Program across the five boroughs in the City to improve the carting of refuse, recyclables, and organic waste from commercial businesses (the “CWZ Program” or “Proposed Action”).

The Proposed Action would not add substantial new land uses, new residents, or employment that could induce additional development, nor will the Proposed Action introduce or expand infrastructure capacity. Therefore, an evaluation of growth-inducing aspects of the Proposed Action is not warranted. *

Chapter 13: Irreversible and Irretrievable Commitments of Resources

In accordance with the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, this chapter summarizes the Proposed Action and its impacts on the loss of environmental resources, both in the immediate future and in the long term. Resources include both human-made and natural resources.

As described in Chapter 1, “Project Description,” the City of New York is proposing to establish and implement a Commercial Waste Zone (CWZ) Program across the five boroughs in the City to improve the carting of refuse, recyclables, and organic waste from commercial businesses (the “CWZ Program” or “Proposed Action”).

The Proposed Action would not involve construction of new buildings or infrastructure on land. As such, the Proposed Action would not constitute a long-term commitment of resources typically associated with construction projects, including the materials used in construction; energy in the form of fuel and electricity consumed during construction and operation of the projects; and the human effort (i.e., time and labor) required to develop, construct, and operate various components of the projects. Further, the Proposed Action would not constitute a long-term commitment of land resources.

The Proposed Action’s commitment of resources consists principally of the use of fuel consumed by the commercial carter trucks for the collection of refuse, recyclables and organics throughout the City under the CWZ Program. This commitment is expected to be higher during the transition period but will be reduced by the Proposed Action overall as a result of more efficient truck routes after full implementation. This use of fuel would happen to an even greater extent without implementation of the Proposed Action. The temporary minor increase is therefore considered irretrievably committed because its reuse for some purpose would be highly unlikely. However, the Proposed Action would result in a net reduction in the use of fuel, compared to the No Action condition, and thus a net reduction in the irreversible and irretrievable commitment of resources.

The short term, minor increase in commitment of fuel resources during the transition period is weighed against the Proposed Action’s goals of creating a safer and more efficient collection system that would provide high-quality, low-cost service while advancing the City’s sustainability and recycling goals. The CWZ Program would improve customer service, public and worker safety, and industry compliance with labor standards; promote fairness and transparency; and reduce adverse environmental impacts from commercial carting trucks upon traffic, pedestrians, air quality, and noise levels. In addition, the CWZ Program would help further the environmental sustainability efforts of *One New York: The Plan for a Strong and Just City* OneNYC2050: Building a Strong and Fair City (OneNYC) (OneNYC) and reduce the environmental and community impacts of the commercial waste system, a goal of the City’s Solid Waste Management Plan (SWMP). *

A. INTRODUCTION

This chapter summarizes and responds to substantive comments received during the public comment period for the Draft Generic Environmental Impact Statement (DGEIS) for the Commercial Waste Zone (CWZ) Program. The DGEIS was issued for public review by the New York City Department of Sanitation (DSNY) on February 22, 2019. Public Hearings on the DGEIS were held on March 11, 2019 from 9:00 AM to 12:00 PM and on March 14, 2019 from 6:00 PM to 9:00 PM at 125 Worth Street, Second Floor Auditorium, New York, New York, 10013. The public comment period on the DGEIS was extended from March 25, 2019 to April 8, 2019.

Section B lists the organizations and individuals that provided comments relevant to the DGEIS. Section C contains a summary of these relevant comments and a response to each. These summaries convey the substance of the comments made, but do not necessarily quote the comments verbatim. Comments are organized by subject matter and generally parallel the chapter structure of the DGEIS. Where more than one commenter expressed similar views, those comments have been grouped and addressed together. **Appendix D** contains submitted written comments on the DGEIS and the transcript of the public meeting.

B. LIST OF ORGANIZATIONS AND INDIVIDUALS WHO COMMENTED ON THE DGEIS**AGENCIES**

1. New York State Department of Environmental Conservation, email dated April 8, 2019 (NYSDEC_051)

COMMUNITY BOARDS

2. Manhattan Community Board 5, emails dated March 13, 2019 (CB5_036) and April 5, 2019 (CB5_039)
3. Brooklyn Community Board 10, email dated April 5, 2019 (CB10_042)

ORGANIZATIONS AND BUSINESSES

4. The Action Environmental Group, Inc, email dated April 8, 2019 (AEG_043), Ron Bergamini, CEO, The Action Environmental Group, Inc, oral comment notes submitted March 11, 2019 (Bergamini_AEG_011), oral comments delivered March 14, 2019 (Bergamini_AEG_017), and oral comment notes submitted March 13, 2019 (Bergamini_AEG_037)
5. Hani J. Salama, President Building Owners and Managers Association of Great New York, letter dated March 11, 2019 (BOMA_001) and email dated April 8, 2019 (BOMA_046)
6. Steve Changaris, NYC Chapter Director, National Waste & Recycling Association, letter dated March 13, 2019 (Changaris_NWRA_035)

NYC Commercial Waste Zone Program

7. Kevin Dugan, Director of Government Affairs, New York State Restaurant Association, email dated March 11, 2019 (Dugan_NYSRA_004)
8. Eric Goldstein, New York City Environment Director, Natural Resources Defense Council, oral comment notes submitted March 11, 2019 (Goldstein_NRDC_010) and oral comments delivered March 11, 2019 (Goldstein_NRDC_032)
9. Susan C. Waltman, Executive Vice President for Legal, Regulatory and Professional Affairs, Greater New York Hospital Association, email dated April 8, 2019 (GNYHA_049)
10. Michael Heimbinder, Board Chair, Newtown Creek Alliance, email dated April 5, 2019 (Heimbinder_NCA_040)
11. Brendan Sexton, Manhattan Solid Waste Advisory Board, oral comment notes submitted March 14, 2019 (MSWAB_008), email dated March 14, 2019 (MSWAB_038) and oral comments delivered March 14, 2019 (Sexton_MSWAB_019)
12. Eric McClure, Executive Director, StreetsPAC, oral comment notes submitted March 11, 2019 (McClure_SPAC_007) and oral comments delivered March 11, 2019 (McClure_SPAC_031)
13. Andrew Moss, Government Affairs Manager, Waste Connections of New York, Inc., email dated April 1, 2019 (Moss_WCNY_041)
14. Michelle Oyewole, New York City Environmental Justice Alliance oral comments delivered March 14, 2019 (NYCEJA_016) and oral comment notes submitted March 14, 2019 (NYCEJA_044)
15. Kendall Christiansen, New Yorkers for Responsible Waste Management letter dated March 11, 2019 (NYRWM_003), oral comments delivered March 14, 2019 (NYRWM_013), and emails dated March 11, 2019 (NYRWM_033) and April 8, 2019 (NYRWM_048)
16. Fernando Ortiz, Climate Preparedness and Resiliency Organizer, THE POINT CDC, oral comment notes submitted March 14, 2019 (Ortiz_POINT_006) and oral comments delivered March 14, 2019 (Ortiz_POINT_012)
17. John Banks, Real Estate Board of New York, letter dated March 11, 2019 (REBNY_002), Sunny Velez, oral comments delivered March 14, 2019 (REBNY_021), and David Karnovsky and Fried Frank, Special Counsel email dated April 8, 2019 (REBNY_045)
18. Lisa Sorin, President, The Bronx Chamber of Commerce, email dated March 11, 2019 (Sorin_BCC_005)
19. Leslie Velasquez, Environmental Justice Programs Manager, El Puente, oral comments delivered March 14, 2019 (Velasquez_EP_022)
20. Phil Vos, Program Director, Energy Vision, oral comments delivered March 11, 2019 (Vos_EV_026)
21. Jessica Walker, President and CEO, Manhattan Chamber of Commerce, letter dated March 14, 2019 (Walker_MCC_034)
22. Tamir Rosenblum, Mason Tenders District Council, General Counsel, Waste Material, Recycling, and General Industrial Laborers Local 108, email dated April 8, 2019 (WMUL_047)
23. Justin Wood, Director of Organizing and Strategic Research, New York Lawyers for the Public Interest, oral comment notes submitted March 11, 2019 (Wood_NYLPI_009) and oral comments delivered March 11, 2019 (Wood_NYLPI_030)

GENERAL PUBLIC

24. Joe Arias, oral comments delivered March 14, 2019 (Arias_014)
25. Sean Campbell, oral comments delivered March 11, 2019 (Campbell_025)
26. William Crater, oral comments delivered March 11, 2019 (Crater_024)
27. Ramses Dukes, oral comments delivered March 14, 2019 (Dukes_015)

28. Jose Garcia, oral comments delivered March 14, 2019 (Garcia_020)
29. Rodney Hawkins, oral comments delivered March 14, 2019 (Hawkins_023)
30. Allan Henry, oral comments delivered March 11, 2019 (Henry_029)
31. Miguel Mondesi, oral comments delivered March 11, 2019 (Mondesi_028)
32. Frederick Phillips, oral comments delivered March 11, 2019 (Phillips_027)
33. Chio Valerio-Gonzalez, oral comments delivered March 14, 2019 (Valerio-Gonzalez_018)

FORM LETTER

34. Form Letter #1, 278 signatories, email dated April 8, 2019 (FormLetter1_050)

C. COMMENTS AND RESPONSES

PUBLIC INVOLVEMENT

Comment 1: The City should provide more time for stakeholders in this process, on behalf of customers, employees, and businesses, to review and evaluate the DGEIS. The comment period should be at least 120 days in order to develop and submit comments on the DGEIS. (BOMA_001, Bergamini_AEG_037, CB5_036, Changaris_NWRA_035, Dugan_NYSRA_004, NYRWM_003, NYRWM_013, NYRWM_033, REBNY_002, Sorin_BCC_005, Walker_MCC_034)

Response: DSNY has engaged extensively with stakeholders in developing the proposed CWZ Program. After publicly releasing the CWZ Program concept in a report in early November 2018, the formal public review period for the environmental review began with the issuance of the DGEIS on February 22, 2019. DSNY extended the public comment period on the DGEIS from March 25, 2019 to April 8, 2019, allowing 45 days to provide written comments. DSNY therefore met and exceeded minimum regulatory requirements related to public review and noticing for this review.

Comment 2: There should be a hearing in every Borough, including more than just one evening. (BOMA_001)

The City should conduct additional public hearings on the CWZ Program. (Changaris_NWRA_035)

We request adjournment of the public hearings schedule for March 11, 2019 and March 14, 2019 at 125 Worth Street in Manhattan and that new public hearings on the DGEIS be scheduled to take place in each Borough. (NYRWM_003, NYRWM_013, NYRWM_033, Sorin_BCC_005)

Response: There have been multiple opportunities for public comment on the CWZ Program. The public review period began with the issuance of the DGEIS on February 22, 2019. DSNY extended the public comment period on the DGEIS from March 25, 2019 to April 8, 2019. DSNY held two public hearings to receive comments on the DGEIS on March 11, 2019 from 9:00 AM to 12:00 PM and March 14, 2019 from 6:00 PM to 9:00 PM at 125 Worth Street, Second Floor Auditorium, New

York, NY, 10013. A morning and an evening public hearing were chosen to accommodate potential interested speakers' varying work schedules. The public comment period and public hearings on the DGEIS complied with all regulatory requirements related to public review and noticing. Additionally, the City Council's Committee on Sanitation and Solid Waste Management held a public hearing on the CWZ Program on June 27, 2019, affording the public another opportunity to comment. Environmental Review Process and Analysis.

Comment 3: The DGEIS relies on qualitative assumptions that are subjective and not supported by evidence. (AEG_043)

The DGEIS fails to provide the hard look required for a full and detailed assessment of the CWZ Program; it lacks essential transparency in its inclusion and presentation of data, analysis, and other justifications for its many assertions of the alleged, but largely undemonstrated environmental benefits of the CWZ Program. (NYRWM_048)

The DGEIS' rhetorical assertions about reductions/improvements in truck traffic, street congestion, air quality, noise, and quality of life are unsupported by data and hard analysis and remain rhetorical. (NYRWM_048)

Response: The DGEIS was prepared in accordance with the methodologies of the 2014 *City Environmental Quality Review (CEQR) Technical Manual* and used data and information provided by the private carter industry to develop the assumptions and factors that went into the impact assessment. The DGEIS evaluated the relevant areas of potential impact and presents an evaluation of the potential effects of the CWZ Program as determined by a conservative analysis, including potential effects on public policy (Chapter 2, "Land Use, Zoning, and Public Policy"), socioeconomic conditions (Chapter 3, "Socioeconomic Conditions"), the management of solid waste (Chapter 4, "Solid Waste and Sanitation Services"), traffic (Chapter 5, "Transportation"), air quality (Chapter 6, "Air Quality"), greenhouse gas (GHG) emissions (Chapter 7, "Greenhouse Gas Emissions") and noise (Chapter 8, "Noise"). The Final GEIS (FGEIS) incorporates relevant public comments on the DGEIS into the analyses. The FGEIS includes additional information on the methodologies and assumptions behind the evaluation of the CWZ Program and explains the basis for concluding that the CWZ Program would greatly reduce carter truck vehicle miles traveled (VMT) (see Appendix C of the FGEIS). The VMT methodology used routing data obtained from private carters in New York City through two BIC Directives through a Commissioner Directive on February 22, 2018 and March 7, 2018. The BIC directive collected routing data (2018 Private Carter Routing Data) for one week between March 4–March 10, 2018 and supplemental days between March 11–March 17, 2018 to replace the data collection on days impacted by snow. The 2018 Private Carter Routing Data was reviewed to collect relevant information including dates, routes, carter names, carter BIC ID numbers, customer names,

customer addresses, types of waste collected, garage locations, transfer station or disposal facility locations, and sequences for collection. Therefore, in conformance with CEQR, the FGEIS presents the full potential effects of the CWZ Program.

Comment 4: If the FGEIS recommends that a “monopoly” system be formally considered—either in addition to or as an alternative to the multi-provider plan—the CWZ Advisory Board should be reconvened and the EIS process redone because this system was rejected by DSNY and not fully vetted by the CWZ Advisory Board. (NYRWM_048)

Response: As stated in Chapter 1, “Project Description,” to determine the optimal structure of the CWZ Program, a robust, year-long stakeholder engagement process was conducted by DSNY, as lead agency, and the consultant team. Starting October 19, 2017, over 150 different stakeholders in the commercial waste industry were consulted, including commercial businesses receiving private carter services, labor groups, environmental justice advocates, private carters, BID representatives, real estate owners, property managers, trade organizations, other City agencies, traffic safety advocates, and elected officials. Based on consideration of stakeholder feedback and described in the Implementation Plan, the preferred zone design consists of 20 non-exclusive zones with 3 to 5 carters allowed to operate within each zone, which was evaluated in the DGEIS as the Proposed Action. The Exclusive Zone Alternative was also evaluated in the DGEIS, and like the CWZ Program, the Exclusive Zone Alternative would not result in any significant adverse environmental impacts. However, the non-exclusive CWZ Program remains the preferred alternative over the Exclusive Zone Alternative given concerns about anticipated price increases as a function of reduced competition, lack of customer choice, carter solvency within a restrictive market, the potential inability to meet the diverse waste management needs of the customers in a given zone, and the potential disruption and need for DSNY to be carter of last resort in the event of a zone’s assigned carter defaulting on its zone contract.

Comment 5: The unilateral rejection of scope-related comments urging consideration of the entire system, including waste transfer, processing, transport, and disposal, attempts to provide a “hard boundary” for the plan and the DGEIS, but also violates the “improper segmentation” requirements of SEQR. As there is obvious interplay between collection, delivery, and disposal (the cost of the latter is 40 percent of total system costs)—with some local companies engaged in both—the recent adoption of LL152 and its presumed implementation in 2020 cannot be ignored, and must be fully included in the analysis—especially since the process leading to its adoption stopped well short of a comprehensive EIS and public dialogue about the impacts of LL152. (NYRWM_048)

NYC Commercial Waste Zone Program

Response: Local Law 152 of 2018 (LL152/2018) requires the reduction of permitted capacity at putrescible and non-putrescible solid waste transfer stations in four overburdened community districts in New York City. The DGEIS analysis assumed such reductions would occur at the identified transfer stations and waste that would be displaced from these facilities by the required capacity reductions would be distributed to other transfer stations. This would not affect the CWZ Program or its stated goals, including the reduction of VMTs. Further, the Proposed Action directly impacts operational processes related to commercial waste collection in New York City and not the transfer, disposal and/or processing of such waste. As such, transfer and processing facilities as well as transport from transfer stations to the disposal or reuse site are outside the scope of the Proposed Action and are not evaluated in the GEIS. Therefore, this is not segmentation.

PROJECT DESCRIPTION

Comment 6: If DSNY and the Business Integrity Commission (BIC) have no additional power or authority, what will be the realistic checks and balances to ensure there will be no fraud or impropriety with these limited competition zones? (NYSDEC_051)

Will DSNY or BIC be in charge of enforcement? Please describe compliance enforcement to both carters and merchants. (CB10_042)

Response: DSNY and BIC would have additional authority under the CWZ Program pursuant to local law.

Commercial carters would submit proposals for commercial carting services to DSNY to be considered for and potentially be awarded a CWZ zone contract. Those selected to operate commercial waste collection under the CWZ Program would then enter into an enforceable contract with DSNY to provide waste carting services based on the submitted competitive bid. As stated in Chapter 10, “CWZ Transition Period,” of the DGEIS, DSNY would establish a new Division of Commercial Waste to administer the CWZ Program. The Division would ensure compliance with contractual obligations. Both DSNY and BIC would have the authority to issue civil penalties for violations of the CWZ Program. BIC would continue to license carters and ensure compliance with character, honesty and integrity standards. Both agencies would work collaboratively with each other and remain in close communication.

Comment 7: What experience and capability does DSNY have to be effective in the role as manager of a complex system for which it lacks historical knowledge and current experience? How large (and costly) a bureaucratic operation will be required to manage the proposed new system? (NYRWM_048)

Response: DSNY is one of the world’s largest sanitation department and operates and manages the City’s residential waste, source-separated organics, and recycling program. DSNY collects and manages the disposal or reuse of more than 3.25

million annual tons of residential and institutional garbage and 624,400 annual tons of recyclables throughout the City. DSNY operates refuse Marine Transfer Stations and regulates all private putrescible and non-putrescible transfer stations located within NYC, including permitting and enforcement through weekly inspections of each facility. As stated in Chapter 10, “CWZ Transition Period,” of the DGEIS, DSNY would establish a new Division of Commercial Waste to administer the CWZ Program. Also both DSNY and BIC would have the authority to issue civil penalties for violations of the CWZ Program.

Comment 8: The authorizing legislation should set out a clear organizational structure and delineation of responsibilities to promote communication among City agencies (e.g., 311 operators can effectively route and log complaints of missed pickups or usurping of duties), as well as communications between DSNY and BIC and private carters, businesses, residents, and community groups. DSNY should also consider creating Community Advisory Boards for the program based on borough or zone. (CB5_039)

Response: As stated in Chapter 10, “CWZ Transition Period,” of the DGEIS, DSNY would establish a new Division of Commercial Waste to administer the CWZ Program. This division would oversee the solicitation and transition processes and ensure that the City achieves its stated program goals and requirements. The division would also ensure compliance with contractual obligations after implementation.

The Division would review reports and data from carters to ensure full program compliance. This may include environmental compliance related to emissions, routing, and fleet performance, proper waste management practices, and regulatory compliance, among others. The division would also resolve customer billing disputes that are not resolved independently by carters and customers. The division would also monitor pricing and compliance with contracted rates to ensure fair, transparent pricing across all zones.

The Division would be responsible for addressing and resolving customer complaints received from 311. The City will be the secondary point of contact if customers are unable to resolve issues directly with the carters.

BIC would continue to license carters and ensure compliance with character, honesty and integrity standards. Both DSNY and BIC would have authority to issue civil penalties for violations of the CWZ program. Both agencies would work collaboratively with each other and remain in close communication.

Comment 9: An analysis of BIC-issued licenses within the last 5 years should be conducted in order to understand how many companies have entered and exited the industry, and the relative size of each. Consideration of a limit on BIC-issued licenses should be analyzed as an alternative. (NYRWM_048)

Response: Analysis of commercial carters in the DGEIS included an examination of BIC-licensed carters broken out by market share and fleet size. For the purposes of analysis, the 2017 Q2–Q4 BIC Private Carter Customer Register and 2015 BIC Private Carter Financial Statements were utilized as these were the most recent and complete datasets describing the existing condition of the commercial waste industry. Where necessary, other years of the BIC Private Carter Customer Register were referenced to check that the 2017 Q2–Q4 BIC Private Carter Customer Register and 2015 BIC Private Carter Financial Statements adequately covered enough of the industry to be reasonably representative. In 2015 there were 95 BIC-licensed carters collecting commercial waste and, of those, 74 carters reported financial information. Those 74 carters are estimated to have covered 95 percent of commercial waste customers in 2015.

The BIC Customer Register indicates the following number of commercial carters operating within New York City, which fluctuates year by year:

- In 2014, there were approximately 90 commercial carters operating in New York City;¹
- In 2015, there were approximately 95 carters²;
- In 2016, there were approximately 94 carters³; and
- In 2017, there were approximately 87 operating carters.⁴

As discussed in Chapter 10, “CWZ Transition Period,” the total number of commercial carters may decrease as a result of the CWZ Program; however, this would not result in substantial adverse effects on the commercial carting industry as the industry will become more efficient, reducing costs.

Limiting the number of BIC-issued licenses would not be in support of the CWZ Program’s goals—advance the City’s efforts to increase commercial recycling, reduce carter truck traffic and associated air, noise, and GHG emissions, and improve carting industry operational standards.

Comment 10: Under the No Action condition, it should be assumed that all BIC-licensed companies will operate Local Law (LL) 145-compliant collection trucks (as of December 31, 2019) with sideguards (as of January 2024); the No Action alternative must include the current use of on-board cameras, GPS, and other safety-related technology, and project their adoption over the next 3 years prior to any franchise-related requirement. (NYRWM_048)

¹ 2016 Private Carting Study, analysis by BuroHappold

² 2015 Private Carter Customer Register

³ 2016 Q4–2017 Q1 Customer Register

⁴ 2017 Q2–Q4 Customer Register

Response: As stated in Chapter 1, “Project Description,” of the DGEIS, under the No Action condition, operating carters are expected to be compliant with LL145/2013 (truck engine emission upgrade requirements) and LL 56 of 2015 (LL56/2015) (mandatory sideguard requirements) by the 2024 analysis year. Currently, there are no laws that require carters to install on-board cameras or GPS, and usage is unreported. Therefore, it cannot be assumed that all carters would install such equipment in the No Action condition. It is assumed that operating carters would be required to take on these costs to install this safety-related technology as a result of the CWZ Program.

Comment 11: Local Law is referenced through public hearing. Please provide the local law referred to in the hearing. (CB10_042)

Response: The CWZ Program would be authorized through the enactment of a new local law. The CWZ Program was introduced by Council Member Antonio Reynoso to the City Council on May 29, 2019 as Intro. 1574.⁵

Comment 12: The DGEIS incorrectly favors a multi-provider zone system based on flawed quantitative analyses and unsubstantiated assumptions that led to incorrect qualitative analysis results. The DGEIS overlooked that single-provider zones would create the necessary policy and operational framework to achieve the City’s goals. (AEG_043)

Response: The comment does not identify the purported flawed analyses and assumptions in the DGEIS. As stated in Chapter 9, “Alternatives,” of the DGEIS and in the response to Comment 4, the Exclusive Zone Alternative was deemed inferior to the CWZ Program on balance for a number of reasons. The Exclusive Zone Alternative would eliminate customer choice and carter competition within a zone, which potentially undermines quality of service and customer satisfaction, and it has the potential to be a substantial logistical challenge, as few carters have the capacity to exclusively service a single zone and a larger number of customers would be required to change service providers in the transition period. Also, serious future service disruptions could potentially result with an Exclusive Zone Alternative if the single carter fails to provide the necessary services. See response to Comment 4.

Comment 13: The authorizing legislation should require DSNY to provide no less than the same level of service to each current user. (CB5_039)

Response: As indicated in Chapter 1, “Project Description,” in the DGEIS, carters selected to collect commercial waste under the CWZ Program must be able to service all

⁵ <https://legistar.council.nyc.gov/LegislationDetail.aspx?ID=3963901&GUID=6D5F166D-1834-4EDD-BF64-DA5D1DD88C61&Options=Advanced&Search=>

NYC Commercial Waste Zone Program

potential customer commercial waste needs indicating that at least a similar level of services would be required. As individual customer waste service requirements vary, a customer would be able to contract for additional waste services beyond the minimum required for that zone. In addition, under the CWZ Program, the contracts would require that customers receive enhanced CWZ services, including dedicated customer service staff, currently not offered by some carters, and more transparent pricing and contracts. Further, if collection cannot be completed by the private commercial carter, DSNY would act as a last resort in order to support the commercial waste collection system.

Comment 14: What if an establishment is dissatisfied with all three choices of carting companies or is dissatisfied with a contract before 1 year is up? (CB10_042)

Response: As stated in Chapter 10, “CWZ Transition Period,” of the DGEIS, DSNY would establish a new Division of Commercial Waste to administer the CWZ Program and would be responsible for addressing and resolving customer complaints received from 311. Under the CWZ Program, customers would be able to terminate service with their contracted carter. The City will be the secondary point of contact if customers are unable to resolve issues directly with the carters. A zone with a limit of three carting companies would be expected to meet the requirements of all waste customers.

Comment 15: The DGEIS must consider the potential impacts if a designated provider dominates a zone—either immediately or over time—making it difficult for other providers to operate viably. What happens if the total number of service providers awarded zones declines to less than 10 companies, or as few as 5 under the CWZ Program? (NYRWM_048)

Response: As the CWZ Program is anticipated to award three to five carting contracts within each zone, carters selected to operate within individual zones would need to provide satisfactory service, including timely collection of waste, to compete for customers with the other selected carters. This would be expected to incentivize carters to provide good service; however, it is possible that based on the high quality of services offered by one or two carters, a carter could lose market share. Should a carting company go out of business or refuse to continue service under the contract, the contract would be awarded to another vendor. Under the CWZ Program, DSNY’s new Division of Commercial Waste would be responsible for addressing and resolving customer complaints of missed collections.

Comment 16: The DGEIS states the “[c]ommercial business customers of carters note the lack of transparency between carters and customers in the current system.” This is too broad and incorrect, according to BOMA members. (BOMA_046)

The assertion that the current system “lacks transparency” with respect to pricing of services must be supported by data and analysis; it is not universally shared by

the business community. Assertions as to how a new system might be more or better transparent also must be explained and supported. (NYRWM_048)

Response: The CWZ Program would require commercial carters to provide written contracts to commercial customers, which would include itemized costs for commercial carting services and providing maximum rates. This would improve transparency within the industry where in the existing condition over half of all contracts are oral according to 2017 Q2–Q4 Private Carter Customer Register and discussions with customers.

Comment 17: How will DSNY and/or BIC prevent the three carting companies in a zone from uniting to control price? (CB10_042)

Response: Under the CWZ Program, carters would be able to set their own rates through the solicitation and award process. However, based on the analysis presented in Chapter 3, “Socioeconomic Conditions,” of the DGEIS, the price for collection services is not anticipated to increase substantially, or reach a point where the price of waste collection becomes burdensome on businesses. The non-exclusive, competitive nature of the solicitation process is anticipated to provide a market constraint on the rate charged to customers. DSNY’s new Division of Commercial Waste would ensure compliance with contractual obligations after implementation related to pricing as outlined in the contracts.

Comment 18: A potential outcome of the CWZ Program is that large corporations that do not currently operate in the City will win all the contracts. This would increase competition for CWZs instead of reduce it. How would this scenario affect existing carters? (BOMA_046)

Response: All carters interested in engaging in the CWZ Program may submit competitive bids to the DSNY. It is possible carters that do not currently operate within New York City could submit and win commercial carting contracts. Any carter operating under the CWZ Program would be required to obtain a license from BIC and demonstrate its ability and capacity to serve the commercial customers within the designated zone. This would not affect business conditions outside of what is already discussed in Chapter 3, “Socioeconomic Conditions,” of the DGEIS. The RFP would require carters to provide an estimate of overall VMT for all proposed services and proposals would be evaluated and scored more favorably for demonstrating services that are more efficient and have less overall VMT.

Comment 19: The DGEIS does not contemplate the potential impacts of the CWZ Program attracting interest from national waste service companies that operate vertically integrated system, including owning and operating disposal capacity that can create a perverse incentive for its use instead of investing in waste diversion systems. (NYRWM_048)

Response: DSNY would accept proposals from qualified carters, groups of carters that form a consortium for a particular zone, or brokers that can manage multiple carters to meet the goals of the CWZ Program as stated in the RFP, such as demonstrating route efficiencies. Proposals would be evaluated on criteria outlined in the RFP that would determine which carters provide the best overall value consistent with program goals and service requirements, including the program goal of increasing recycling and organic diversion from disposal, and carters awarded contracts would be required to collect all three waste streams and comply with New York City's recycling laws. During the transition and implementation of the CWZ Program, as indicated in Chapter 10, "CWZ Transition Period," in the DGEIS, DSNY would create a new Division of Commercial Waste to administer the CWZ Program providing a mechanism for enforcing compliance with contractual obligations and program goals, including the collection of all three waste streams.

Comment 20: Who will regulate sub-contractors? (CB10_042)

MSWAB supports the idea that a winning carter may subcontract one stream or more to a micro-carter or smaller specialized company, as long as that subcontractor is also subject to the terms of the prime contract. (MSWAB_008, MSWAB_038)

We are concerned with the proposal that operators awarded a zone will be able to form consortiums and subcontract with other types of haulers without any specified limits. If subcontracts are allowed and encouraged within each zone, they should be limited in number, which should be specified in detail within the RFP beforehand. Subcontractors should be required to meet the same standards for the primary carters, otherwise the stated goals of the CWZ Program, such as decreasing VMTs, are negated. (NYCEJA_016)

DSNY should encourage CWZ zone-winning bidders to subcontract with micro-carters and others to provide specialized services. (CB5_039)

Response: As stated in Chapter 10, "CWZ Transition Period," of the DGEIS, DSNY would establish a new Division of Commercial Waste to administer the CWZ Program in conjunction with BIC. This division would oversee the solicitation and transition processes. During the solicitation process, DSNY would accept proposals from qualified carters, groups of carters that form a consortium for a particular zone, or brokers that can manage multiple carters to meet the goals of the CWZ Program as stated in the RFP, such as reducing VMTs. The RFP would not limit the number of carters that make up a consortium, but proposers submitting with subcontractors or as consortiums would have to include waste management, sustainability, customer service plans for all of their carters, or combine them. Additionally, DSNY must approve all subcontracting of carters to ensure that the use of subcontractors is consistent with the goals of the CWZ Program.

Comment 21: The DGEIS does not establish that the three neighborhoods analyzed for potential impacts characterize all neighborhoods in the City or are a worst-case scenario for each impact analysis chapter or topic. They are not the only types of neighborhoods in the City, therefore, other possible significant impacts in the City are not identified or disclosed. (BOMA_046)

The case study areas are much smaller than actual proposed zones and the ability to obtain meaningful information from these three case studies is not sufficiently explained. The approach ignores the impacts on customers that operate multiple locations throughout the City and across zones (e.g., commercial official buildings, utilities, health care institutions) even though the operational and cost impacts could be considerable. (NYRWM_048)

Response: As the Proposed Action is generic, the DGEIS studied representative types of commercial clusters and corridors within New York City and included an analysis of the Proposed Action's likely effects on its environmental setting in 2024, the expected year of full program implementation (Analysis Year). Since the Proposed Action is citywide, and as commercial activity within New York City is highly varied, as appropriate for the DGEIS analysis, three representative neighborhood case study areas were selected as typologies to provide a more detailed and contextual analysis of the potential benefits and adverse impacts of the Proposed Action in representative New York City commercial areas of varying density and the surrounding neighborhood and what is likely to be seen at a localized scale. The comment provides no evidence of ignored environmental impacts from the CWZ Program on customers that operate multiple locations throughout the City. As stated throughout the DGEIS, the CWZ Program will greatly reduce waste carter truck travel and is not anticipated to have significant environmental impacts from the lowest density retail neighborhoods to the largest, central business districts.

Comment 22: BIDs currently grapple with improper use of corner baskets with commercial refuse dumping. (CB10_042)

Response: The CWZ Program would improve the collection of commercial sector refuse, designated recyclables, and source-separated organic waste, addressing concerns of the existing system, including the improper use of corner baskets. In a recent New York City Department of Investigation review of retail food stores or restaurant locations in New York City, it was found that approximately 10 to 20 percent of businesses were not registered for commercial waste collection or registered as a self-carter. The implication is that these businesses may be unlawfully using DSNY to remove their commercial waste for free by placing their waste with adjacent residential waste or in corner baskets. To address this, as stated in Chapter 10, "CWZ Transition Period," of the DGEIS, once the transition period begins, customers may only make new service agreements with selected carters for their zone. DSNY would assign a carter to any customers that do

not choose an awarded carter by the end of the transition period. This would likely decrease the amount of businesses improperly using corner baskets. Further, DSNY would establish a new Division of Commercial Waste to administer the CWZ Program and would be responsible for addressing and resolving customer complaints and enforcing proper handling and disposal of commercial waste.

Comment 23: Will there be a liaison to help businesses, such as a help desk, where merchants can direct questions or provide anonymous feedback? (CB10_042)

Response: As stated in Chapter 1, “Project Description,” carters would be required to establish customer call centers as part of the CWZ Program. These centers would be the first point of contact between a business and a carter and serve to assist customers with waste collection issues. The City would be the secondary point of contact if customers are unable to resolve issues directly with the carters. This would be through the newly established Division of Commercial Waste which would administer the CWZ Program and would be responsible for addressing and resolving customer complaints received from 311.

Comment 24: Mandatory truck count monitoring should be used to ensure that vehicular transport is actually reduced in communities, specifically the South Bronx. (Ortiz_POINT_006, Ortiz_POINT_012)

Truck counts and mileage trackers for carters and subcontractors should be used to ensure that VMTs are actually reduced in communities. (NYCEJA_016, NYCEJA_044)

We encourage truck count monitoring to ensure that truck traffic is actually reduced in communities. (Velasquez_EP_022)

DSNY should commit to testing all assumptions made in the DGEIS when real data is available and redo analysis if that data varies significantly from assumptions. DSNY should have a mechanism to review and respond if, for example, costs are higher than predicted in RFPs or if VMTs are higher than expected during the CWZ Program. (BOMA_046)

Response: As discussed in the FGEIS, private carter VMT reductions are a principal objective of and an inherent feature of the CWZ Program. The VMT reduction would be citywide, not targeted to any specific neighborhood. The traffic analysis followed the 2014 *CEQR Technical Manual*, which does not require post CEQR traffic monitoring. As stated in Chapter 10, “CWZ Transition Period,” of the DGEIS, DSNY would establish a new Division of Commercial Waste to administer the CWZ Program and would review reports and data from carters to track the anticipated routing efficiencies through the on-board GPS units and as such, VMT reductions would be tracked and monitored.

Comment 25: DSNY should include in the RFP for these zones a requirement of an all-electric fleet for commercial carters and their subcontractors. (CB5_039)

The real possibility that electric-powered collection trucks could be introduced within 3 to 5 years and become a standard within 10 years—especially through an aggressive effort supported by the State and City—should be assessed with regards to achieving the City’s environmental goals, as well as potentially reducing operating costs for service providers under No Action alternative and Proposed Action. (NYRWM_048)

The City Council and de Blasio Administration should create and pass legislation that will put cleaner commercial waste collection vehicles on the streets. (Vos_EV_026)

Response: As part of the RFP process, DSNY will consider a carter’s plan to reduce air pollution and greenhouse gas emissions through operational best practices and infrastructure investments, including plans to invest in zero or low emission vehicles. DSNY would gain experience with an all-electric collection truck prototype next year. As noted in the FGEIS, BIC-licensed commercial collection trucks using diesel must meet strict emissions standards by 2020 under LL145/2013.

Comment 26: By adopting policies to encourage or mandate objective, third-party waste assessments, the CWZ Program could go even farther in helping businesses to reduce, donate, and recycle portions of their waste streams and reduce monthly garbage bills. (Wood_NYLPI_009)

Response: As part of the CWZ Program, carters will be required to provide third party waste audit services.

Comment 27: The potential for the CWZ Program to disrupt current methods for the handling and disposal of waste streams is a serious issue that requires study and consideration. (GNYHA_049)

Response: See response to Comment 4. The CWZ Program would regulate and improve the collection of commercial refuse, designated recyclables, and source-separated organic waste. Under the CWZ Program, carters awarded contracts for the right to collect waste in a zone would be required to provide recycling and organics collection as standard services in addition to refuse collection. As such, the Proposed Action would not be expected to increase the volume of waste being produced or collected but would reduce the truck travel required to collect it.

As discussed in greater detail in the Chapter 10, “CWZ Transition Period,” of the DGEIS, the City has been able to review the transition and implementation of other cities’ programs, determine best practices, and apply the lessons learned from these peer cities to the planning, transition, and implementation of the CWZ Program. For example, DSNY would work with customers to minimize any disruptions to

NYC Commercial Waste Zone Program

and to ensure service pickups are not missed during the transition period. Abandoned customers located within an active CWZ Program zone under transition would be automatically assigned to a carter for interim service. DSNY may also serve as a carter of last resort during the transition, thereby minimizing the potential for missed pickups. Providing this service is not anticipated to affect DSNY's residential collections as pickup for missed commercial waste collection would be performed separately by standby vehicles or at different times from residential waste collection.

In addition, DSNY would establish a new Division of Commercial Waste to administer the CWZ Program, which would require reports on disposal locations, plans for routing efficiencies and scaling up fleets.

Comment 28: The alternative approach to the City's goals framed in Intro 996 should not be dismissed as it is broadly supported; it merits serious evaluation as an effective, collaborative means of pursuing many of the City's goals sooner, better, and cheaper and without the risks associated with the CWZ Program. (NYRWM_048)

Response: Alternative regulatory reforms to the commercial waste industry have been proposed and considered within the past year in the City Council. However, the proposed reforms provide only step-wise changes to the commercial waste industry. While proposals to improve industry practices are encouraged, step-wise reforms do not comprehensively address major issues within the commercial waste industry, including excessive overlap of truck traffic and associated neighborhood and environmental impacts, price transparency, continued investment in fleet modernization, and citywide recycling goals. Intro 996 would not address these deficiencies. As Intro. 996 would not achieve the objectives of the Proposed Action, it was not included as an alternative to be studied in the DGEIS.

Comment 29: The standards for selecting contractors should place a high value on the terms and conditions of employment that bidders offer their employees as well as on the risk their non-selection presents to the disruption of existing forms of benefits, such as health care, pension, and training. (WMUL_047)

Please set a high standard; one carter in each zone, for high wages and real safety. (Arias_014)

There should be a minimum value on the monies contractors must spend on employee compensation, thereby essentially establishing a prevailing wage. (WMUL_047)

The CWZ Program should ensure that workers are treated fairly by employers. The operational savings for carters must translate into living wages, retirement benefits, reasonable shifts, state-of-the-art safety practices, and job security for

the thousands of people who cart and process commercial waste every night. (Wood_NYLPI_030)

Response: When selecting carters for the CWZ Program through the RFP process, the City would have the ability to look at a carter's history of compliance with local, state and federal laws, including but not limited to minimum wage laws and laws related to safety.

Comment 30: Current high-performing companies in the industry provide, on average, more than 16 hours of biannual training, meaning the proposed "new standards" are so minimal they may actually serve to lower the bar. This is not discussed in the DGEIS. (WMUL_047)

Absent real protections for workers, including rules and standards that benefit workers, Local 108 opposes the CWZ Program. (WMUL_047)

Response: As stated in Chapter 1, "Project Description," of the DGEIS, one of the goals of the CWZ Program is to improve training and safety standards to make the industry safer for workers and the public. The CWZ Program requires that carters provide safety and training programs to build a culture of safety within the commercial waste industry and ensure that workers know how to perform their jobs safely. Carters would be required to provide a minimum of 16 hours of worker safety training to all field employees, including drivers and helpers that collect waste on city streets. Additionally, during the solicitation process, carters would be evaluated, in part, based on the health and safety plans that they submit as part of the RFP process, as well as their safety record in previous years.

Comment 31: What is the City's plan for outreach? Can the City provide information about business outreach? (CB10_042)

Response: As described in Chapter 10, "CWZ Transition Period," of the DGEIS, DSNY would establish a new Division of Commercial Waste to administer the CWZ Program in conjunction with BIC and to consolidate commercial waste outreach, enforcement, and regulatory function in the agency under a single chain of command. This division would oversee the solicitation and transition processes and ensure that the City achieves its stated program goals and requirements. The City would notify all customers of the selected carters for their zone and customers' rights and responsibilities under the CWZ Program. Once the transition period begins, DSNY would use the customer rolls and neighborhood outreach to ensure that businesses within the zones have chosen a carter within the transition period. DSNY would assign a carter to any customers that do not choose an awarded carter by the end of the transition period.

Comment 32: Has the City met with current carting companies? Did they provide input? (CB10_042)

NYC Commercial Waste Zone Program

Response: As described in Chapter 1, “Project Description,” of the DGEIS, to determine the optimal structure of the CWZ Program, a robust, multi-year stakeholder engagement process was conducted by DSNY, as lead agency, and the consultant team. Starting October 19, 2017, over 150 different stakeholders in the commercial waste industry were consulted, including private carters as well as commercial businesses, labor groups, environmental justice advocates, Business Improvement District representatives, real estate owners, property managers, trade organizations, other City agencies, traffic safety advocates, and elected officials. A variety of formats were utilized, including structured one-on-one interviews, small group conversations, phone calls, field interviews, and focus groups, including small, medium, and large carters as well as micro-caters and self-carters. The City used the feedback it gained from this process, which included feedback from private carters, to determine the program goals, implementation strategies, and the necessary requirements for the eventual carter contracts. The City and project team are expected to continue to work with stakeholders during public review and implementation of the CWZ Program.

Comment 33: Will information regarding changes to carting policy be available in multiple languages? (CB10_042)

Response: Business education and outreach conducted by DSNY would be available in multiple languages and include details about carters chosen for their zone and information on the assistance line that would be provided by DSNY’s Division of Commercial Waste. Further, carters would be required to submit a plan for addressing multiple languages needs to ensure all customers can access information.

Comment 34: The FGEIS should detail the specific methodology for the issuance of the contracts in the limited competitions zones. (NYSDEC_051)

Assumptions related to the structure and parameters of the competitive zone bidding process under both the multi-provider option and the single-provider alternative lack clarity. (AEG_043)

The RFPs should reward women and people of color in this primarily male industry by hiring MWBEs in primary and subcontracts. (NYCEJA_016, NYCEJA_044)

For the RFP process, has the City vetted current companies? And do companies in good standing have an advantage in the process whereas companies with a bad stranding have a disadvantage? (CB10_042)

Response: The FGEIS is limited to the environmental review of the Proposed Action—the CWZ Program proposal of 20 non-exclusive zone with 3 to 5 carters operating in each zone. Following the enactment of the CWZ Program, the determination of which carters would operate in each zone would be made through a competitive

RFP process. Through the RFP process, the CWZ Program would allow for the organization of consortiums and would provide opportunities for partnerships. The RFP process and the criteria used to evaluate prospective carters are beyond the scope of this environmental review. As the CWZ Program is implemented and specific zones are selected for award to specific carters with known garage locations, consideration would be given as appropriate to the potential for significant individual or cumulative impacts that were not studied in the DGEIS or FGEIS. Such further review under CEQR would be based on guidance impact thresholds and criteria in the *CEQR Technical Manual*.

Comment 35: The requirement for third-party waste audits requires further analysis regarding its cost and overall efficacy. (NYRWM_048)

Alternative means of promoting capital investment in equipment and facilities should be identified and evaluated as to their efficacy. The CWZ Program presumptions about incentivizing capital investment must be supported by data and analysis. (NYRWM_048)

Response: As stated in Chapter 3, “Socioeconomic Conditions,” of the DGEIS, the CWZ Program would include requirements for commercial carters to purchase additional equipment, such as GPS units, as well as provide additional services to commercial carting customers, including free waste assessments and dedicated customer hotlines. Carters would also pay an annual administrative fee of up to 1 percent of gross revenue to support the administration of the CWZ Program. An analysis of these additional costs was conducted and in total, these additional expenses represent approximately 2 percent of total CWZ Program carters’ operating expenses.

Comment 36: According to the DGEIS, the proposed carting fee would constitute 40 percent of the selection criteria for each proposal. The heavy weight placed on this single criteria should be reevaluated in light of the importance of other important criteria that will (1) ensure the public health benefits of a CWZ system are more equally shared between communities and (2) improve worker safety and compensation and ensure the right to join a union that genuinely represents worker interests. (Heimbinder_NCA_040)

The weight of 40 percent for a carting fee allocated in CWZ Program is too high and reasonable and standardized rates for customers based on the amount of waste they contribute should be mandated instead. (NYCEJA_016, NYCEJA_044)

Response: As stated in Chapter 10, “CWZ Transition Period,” of the DGEIS, proposals would be evaluated on criteria outlined in the RFP that would determine which carters provide responses that best meet the program’s goals and service requirements. Each proposal would be evaluated based on designated criteria to determine an overall weighted score for each proposal. It is expected that pricing

NYC Commercial Waste Zone Program

would account for approximately 40 percent of the overall weighted score. The 40 percent was based on public and stakeholder input and consideration of impacts to local businesses. However, each proposal will also be evaluated based on the carter's ability to meet the CWZ Program goals, including improving training and safety standards to make the industry safer for workers and the public, reducing air and noise pollution, and providing reliable, high-quality service.

Comment 37: The City should require that carters and facilities submit joint proposals to ensure that facilities have a guaranteed stream of waste, recyclables, and/or organics. This will enable facilities to secure the capital required to make investments in their facilities, thereby reducing environmental impacts, improving worker safety, and increasing recycling rates. (Heimbinder_NCA_040)

Response: The CWZ Program directly impacts operational processes related to commercial waste collection in New York City and not the disposal and/or processing of such waste. The CWZ Program would allow for the organization of consortiums and would provide opportunities for partnerships.

Comment 38: What if a business fails before the contract is up? (CB10_042)

Response: Should a customer go out of business prior to the end of the contract, it would be expected that its carting company would continue to collect from the many other commercial business customers within the assigned zone.

Comment 39: What if a carting company fails before the contract is up? (CB10_042)

Response: Should a carting company go out of business, DSNY would work with customers that were contracted with that company to transition to another available carting company. DSNY would serve as a provider of last resort for interim service to ensure there are no missed pickups.

TRANSFER STATIONS

Comment 40: The CWZ Program should ensure reduction in VMTs for overburdened communities by incentivizing waste transport to transfer stations geographically close to the zone. This may include the marine transfer stations, which, while more costly to tip in, are equitably distributed throughout the City, well-run, and have the capacity to displace even more VMTs from the round trip export of waste, or VMTs from 48 long-haul, diesel trucks per barge. (Goldstein_NRDC_010, Goldstein_NRDC_032, Heimbinder_NCA_040, NYCEJA_016, NYCEJA_044, Ortiz_POINT_006, Ortiz_POINT_012, Velasquez_EP_022)

We recommend regulating disposal facilities and improving landfill diversion. (NYCEJA_016)

Response: The CWZ Program directly impacts operational processes related to commercial waste collection in New York City and not the disposal and/or processing of such waste. The evaluation of criteria for the selection of carters would be further defined in the RFP. See also Response to Comment 34, above.

Comment 41: The same oversight over carters that the CWZ Program promises should apply to facilities. The City should ensure that transfer, recycling, and compost facilities are required to meet the same basic labor standards as the carters. (NYCEJA_016, NYCEJA_044)

The City should use this opportunity to help communities overburdened with poorly sited, truck-intensive transfer stations and can facilitate creation of hundreds of new, high-quality, local jobs by encouraging haulers to make investments in more equitably sited, safer recycling facilities through the RFP process. (Wood_NYLPI_030)

The CWZ Program should consider the issue of overnight waste storage on the roads in Hunts Point. This is the immediate and next step in overcoming the disproportionate overburden that the community has endured due to the high concentration of transfer stations and truck traffic in our community of the South Bronx. (Ortiz_POINT_012)

The CWZ Program should protect Environmental Justice communities and workers because of the disproportionate siting of waste facilities in low-income communities of color. (NYCEJA_016)

Response: The CWZ Program directly impacts operational processes related to commercial waste collection in New York City and not the transfer, disposal and/or processing of such waste. As such, transfer facilities are outside the scope of the CWZ Program and is outside the scope of the environmental review. However, as a result of the CWZ Program, increased efficiencies of truck routes to and from transfer facilities and garages in Long Island, upstate New York, and New Jersey, would result in a reduction of carter truck traffic and associated air, noise, and GHG emissions in these areas.

LAND USE, ZONING, AND PUBLIC POLICY

Comment 42: The DGEIS fails to assess the efficacy of the comprehensive array of existing rules and regulations that govern the City's waste service providers, and protect and guide customers/generators, and the enforcement data (e.g., violations issued) as both an indicator of compliance and lessons learned. (NYRWM_048)

Response: Chapter 2, "Land Use, Zoning, and Public Policy," of the DGEIS provides an overview of officially adopted public policies and initiatives that are relevant to

NYC Commercial Waste Zone Program

the collection of commercial waste. Available information on compliance is provided; however, as enforcement and tracking compliance rates are difficult under the existing system, in certain instances the DGEIS uses available carter-reported compliance data to estimate the levels of compliance.

PUBLIC POLICY

Comment 43: Recently updated laws and regulations already are in play; the existing requirements for recycling-related services and expanding organics-related service will be fully phased-in by the time a zone system is fully implemented. However, the DGEIS ignores these issues which undermine the alleged benefits of the CWZ Program. (NYRWM_048)

Response: The DGEIS did not ignore these issues. As stated in Chapter 2, “Land Use, Zoning, and Public Policy,” of the DGEIS, there are existing local laws and policies regarding recycling and organics that commercial businesses are required to comply with, including existing regulations that require commercial businesses to recycle metal, glass, plastic (MGP), paper, cardboard and, in some cases, food preparation waste (organics) and, thereby, divert such waste from landfills; and LL146/2013 which requires DSNY to assess, at least annually, the available regional capacity to process organic waste and to designate certain categories of businesses that must separate this material for composting or digestion. The DGEIS accounts for the expansion and implementation of these programs as reflected in the increase in recycling and organics collection in the No Action condition from existing conditions. However, under the CWZ Program as a result of incentives for recycling and organics within the RFP process and improved enforcement facilitated by the CWZ Program, the collection of recyclables and organics would be even greater compared to the No Action condition.

SOCIOECONOMIC CONDITIONS

Comment 44: Commercial property owners gain significant benefits—including better pricing and operational efficiencies—due to their ability to manage waste collection operations across an entire building portfolio. The leverage created by this type of “group purchase” allows owners to be highly selective in identifying the carter(s) who best meet(s) their needs and can provide a high quality of service. The efficiencies gained by these buildings would be imperiled by the CWZ Program. (REBNY_045)

The CWZ Program harms commercial property owners without realizing any environmental benefits as any assumed environmental benefits (i.e., decreases in truck VMTs) would not be realized if the CWZ Program applied to these buildings. This fact remains unaddressed in the DGEIS and demands further study. (REBNY_045)

The DGEIS does not adequately evaluate the impact the CWZ Program will have on large commercial property owners who already operate efficient waste collection systems. (REBNY_021)

Large commercial buildings, especially those that use compactors and fill entire trucks, already operate at maximum efficiency and should be exempt from the zone system so they can use carters that meet their specific, complex, service needs. If not, the FGEIS should explain why waste zones are needed for these buildings and how they would improve service and the environment. (BOMA_046)

Large commercial buildings that divert their solid waste directly to waste-to-energy facilities cannot improve on their efficiency and should be exempt from the zone system. (BOMA_046)

Larger facilities (e.g., office buildings, hospitals, etc.) throughout the City that have efficient operations and rely primarily on the ability to fill an entire container (or compactor) or truck at a single location should be studied as to what if any benefits might be presumed. Similarly, customers that are sophisticated with respect to the environmental standards which they impose on their waste carters should be studied as to what if any benefits might be gained from the CWZ Program and how the CWZ Program will affect these programs. (NYRWM_048)

The DGEIS does not take a hard look at the potential of the CWZ Program to significantly affect business conditions in the commercial real estate market, particularly with respect to Class A properties that are critical to New York City's economic health and vitality. (REBNY_045)

The FGEIS must include a detailed analysis of the potential for a zone proposal to have detrimental impacts upon large building owners, and consider the potential for significant adverse impacts if the zone system cannot properly service the needs of customers for waste hauling services. (REBNY_021)

The FGEIS must consider these impacts upon the Class A office sector, and consider reasonable alternatives which would reduce or eliminate these impacts. These should include an exemption for large commercial office buildings located in central business districts, and other changes to address the concerns stated above, including significantly increasing the number of carters in each of the Midtown Manhattan, Financial District, Downtown Brooklyn, and Long Island City Core zones. (REBNY_045)

Response:

As stated in Chapter 3, "Socioeconomic Conditions," of the DGEIS, while under the CWZ Program some customers may experience an increase in the price of commercial waste carting services as compared to the price currently paid, the socioeconomic analysis indicated that overall the cost of commercial waste service for customers could decrease as a result of carter operational efficiencies under the CWZ Program—notably dramatic reductions in truck travel. Examination of the Midtown Manhattan case study area in the Proposed Action

further indicated that these efficiencies would likely be observed within areas with large concentrations of Class A commercial properties. The DGEIS concluded that the CWZ Program would not result in significant environmental impacts by jeopardizing the viability of any specific industry, even if specific businesses or industries experienced increases in the price of commercial carting services. As compared to the existing condition, the CWZ Program would provide all customers, including large commercial property owners, enhanced customer service, including through the provision of dedicated customer hotlines, transparent pricing, and written contracts.

Under the CWZ Program, carters servicing zones must be adequately prepared to handle all waste produced within a zone, and provide similar levels of service as seen in the existing collection system. Therefore, carters selected to operate in areas with large commercial properties would be well prepared to service the waste collection needs of large commercial properties. This would include additional services already received in the existing condition such as compactor rental, direct transport to waste to energy facilities, and flexible collection. The ability to adequately provide this service across within the zones, including those representing districts like Midtown Manhattan, would be a focus of the RFP review process.

As seen in **Table 14-1** analysis of the 2017 Q3–Q4 BIC Customer Register data indicates that larger commercial developments (21 floors or greater), do not receive substantially discounted rates for commercial waste collection as compared to other smaller office developments. While some customers may receive preferable pricing, the median rate per cubic yard (per yd³) for a large office is approximately \$18.50, the same as medium-sized offices, and smaller offices have a median rate of \$14.71 per yd³. At the bottom quartile, large offices pay a slightly higher rate (\$15 per yd³) as compared to small and medium offices, which pay \$12.20 per yd³ and \$14.23 per yd³.

Table 14-1
Rates for Putrecible Refuse Service in Office Buildings

Business Type	Bottom Quartile (25%)	Median Rate (\$/Cubic Yard)	Top Quartile (75%)
All	\$12.20	\$14.41	\$18.19
Offices, Small ¹	\$12.20	\$14.71	\$18.00
Offices, Medium ²	\$14.23	\$18.50	\$18.50
Offices, Large ³	\$15.00	\$18.50	\$18.87
Notes: ¹ Small offices are defined as office buildings with up to 10 stories ² Medium office buildings are defined as office buildings with between 11 and 20 stories. ³ Large office buildings are defined as office buildings with more than 21 stories. Sources: 2017 Q3–Q4 BIC Customer Register			

Comment 45: Limiting the number of waste disposal companies operating in a particular zone will stifle competition and lead to higher prices even if a facility’s current disposal company is selected. (GNYHA_049)

Response: As identified in Chapter 3, “Socioeconomic Conditions,” of the DGEIS, while some customers may be charged a higher rate as compared to the existing condition, overall the efficiencies introduced by the CWZ Program would reduce carters’ operating costs. In addition, as the bidding processes would be competitive, it is expected that as operating costs lower with the CWZ Program’s efficiencies, carters could offer lower prices when submitting bids to DSNY.

Comment 46: The DGEIS does not mention the impacts of the CWZ Program for artificially subsidized services, i.e., the collection of recyclables and organics must be priced less than non-recyclable waste, even if a true-cost analysis would find otherwise. (NYRWM_048)

Response: Analysis of waste collection costs to customers assumes all waste is collected as putrescible waste. It is anticipated that through the solicitation process, organics and recyclable waste would be priced at a lower rate to incentivize collection. Any reduction in the rate charged to collect recyclable and organic waste would likely be offset by an equivalent increase in the cost of putrescible waste collection. However, on balance, due to the competitive nature of the solicitation process, the cost for waste collection as a result of the CWZ Program is not anticipated to result in significant adverse environmental impacts.

Comment 47: The FGEIS should analyze a scenario where a minimum number of companies, including some larger companies not currently operating in New York City, receive all of the contracts, as some companies own waste transfer stations, others are too large to win just one or a few zones and remain in business, and other companies have more wherewithal to navigate the process and invest in all the upgrades in advance of starting operations (among other possible advantages). (BOMA_046)

The Direct Business Displacement section in Socioeconomic Conditions analysis should, as a reasonable worst-case scenario, determine which specific businesses would be most vulnerable to losing out in the franchising system and analyze the impact of those closures. This analysis should assume the minimum number of companies possible win franchises, and that some or all winners could be national waste handling companies currently not operating in the City. (BOMA_046)

The analysis of Direct Business Displacement should presume that a bare minimum of companies—as few as five—are awarded zone contracts. It should further presume and be analyzed that one or more national companies that do not currently operate in the City are awarded zone(s). Extensive consolidation and/or

bankruptcies among the existing smaller and mid-size waste hauling companies must be anticipated and analyzed. (NYRWM_048)

Response: As discussed in Chapter 3, “Socioeconomic Conditions,” of the DGEIS, the Proposed Action would not directly displace any businesses. The Proposed Action is a generic city regulatory program that would affect the commercial carting businesses operating within New York City, not a site-specific development project that could directly displace businesses. As identified in Chapter 1, “Project Description,” of the DGEIS, it is anticipated that all zones would have three to five operating commercial carters and that the total number of zones a single carter can serve is anticipated to be capped at 15 zones. Based on these anticipated restrictions, it would be highly unlikely for a minimum of approximately eight carters to service the entire City of New York. As stated in Chapter 1, “Project Description,” of the DGEIS, “all carters must be capable of servicing every customer within the zones they win or have a reasonable plan for scaling up service to accommodate all customers.” Therefore even in this unlikely scenario all operating carters would be expected to successfully service all commercial businesses within the City of New York.

It is anticipated that as a result of the CWZ Program some currently operating commercial carters may shift their operations to other waste streams such as C&D debris, which many carters already collect. Other carters are likely to be bought out or consolidated into larger carting consortiums, and others may close entirely. However even in a scenario where a small number of carters operate within New York and others close, this would not result in significant adverse environmental impacts. In order to scale up operations, winning carters would need to hire additional staff, offsetting any potential employment loss (outside of the identified 2 percent reduction in employment as a result of the CWZ Program). In addition, even in this high consolidation scenario, commercial carters would still be capable of servicing all customers. Therefore the analysis finds that while some carting businesses may be displaced, the essential service that they provide would still be available to local businesses as the CWZ Program would ensure that all businesses have access to high quality waste collection services, including improved customer service, transparent pricing, written contracts, and well-trained employees.

Comment 48: The DGEIS does not project the impact of the CWZ Program on businesses at large, including the hospital industry. (GNYHA_049)

The City’s health care facilities represent a specific, unique, and vulnerable industry. However, DSNY did not evaluate the significant adverse impacts that CWZ Program will have on these facilities. (GNYHA_049)

The CWZ Program’s limitations on the number of disposal companies will undermine the pricing and service efficiencies available to hospitals under

existing arrangements if their current primary contractor is not selected for their zone. (GNYHA_049)

The DGEIS' statement that the "likely benefit" from the CWZ Program to businesses does not account for the potential negative impact associated with reduced competition among carters nor consider the negative impact on health care facilities. (GNYHA_049)

A hospital or health system may be required to contract with multiple disposal companies, not of their choosing, due to the multiple zones in which hospitals are located, and will lead to both higher disposal costs and operational inefficiencies. (GNYHA_049)

Response: Hospitals, with the exception of medical waste (which is excluded from the CWZ Program), operate like other large commercial businesses, including the utilization of compactors and other containerized or curbside waste disposal systems—services which would still be offered in the Proposed Action. Please see response to Comment 44, which pertains to large commercial businesses that utilize containerized or curbside waste collection systems. While some customers may experience increased prices as compared to the existing condition, the analysis concluded that potential increases in pricing would not result in significant adverse environmental impacts by jeopardizing the viability of any specific industries. Further, allowing a hospital to continue to utilize one carter across multiple areas of the City would result in inefficient routing and would not be in support of the CWZ Program's goals—advance the City's efforts to increase commercial recycling, reduce carter truck traffic and associated air, noise, and GHG emissions, and improve carting industry operational standards.

Comment 49: The assertion in Chapter 3, "Socioeconomic Conditions," of the DGEIS that open competition leads to diminished service to businesses is incorrect. If a business needs special services, and none of the three carters offer it, the business will have to change or discontinue operations or pay significantly more for the service. This reality is not reflected in the DGEIS. (BOMA_046)

Response: Chapter 3, "Socioeconomic Conditions," of the DGEIS, indicates that under the existing regulatory framework competition for customers is high, and carters compete with each other to provide customers the lowest price, and as a result, safety and customer service are often sacrificed. However, as discussed in Chapter 1, "Project Description," of the DGEIS, service is not anticipated to diminish as a result of the CWZ Program as commercial carters selected to provide comprehensive waste collection services must be able to service all potential customer commercial waste needs. This would include additional services such as renting compactors and roll offs, servicing locked containers, container cleaning, and other potential services. As a result of the Proposed Action, customers would be entitled to transparent itemized pricing for all services, which would clearly lay out the costs of these services offered.

NYC Commercial Waste Zone Program

Comment 50: The DGEIS states “As carters would be able to set their own rate[s] under the Proposed Action, exact rates at which waste would be collected are currently unknown and would be determined during the solicitation process.” This uncertainty needs to be more fully emphasized, especially in disclosing potential impacts. (BOMA_046)

Response: Forecasting an exact rate for waste collection services throughout New York City would be speculative since rates would be proposed by carters as part of the competitive RFP process. While commercial carters would set their own prices during the competitive bidding process, the DGEIS analysis found that due to operational efficiencies introduced as a result of the CWZ Program, the operational cost of commercial waste collection would be anticipated to decrease by 2 percent from the No Action condition. As operational costs are reduced, it would be likely that carters could lower their rates for commercial waste collection, and in order to be competitive, carters would not set rates as to negatively affect businesses.

Comment 51: The presumed system of rate caps as applied to zones by multiple service providers desperately needs further explanation and analysis, especially if each provider operates with a different approved rate cap that will confuse customers and likely result in similar types of generators paying varying amounts for waste-related services—undermining one of the CWZ Program’s goals. (NYRWM_048)

Response: Carters would provide zone rates as part of the competitive solicitation process. This may result in single carters providing varying rates across zones based on the anticipated expense associated with collection, and different carters providing different rates within the same zone. DSNY anticipates outreach and education to be conducted prior to and during the transition of the CWZ Program to inform businesses of their rights and options under the new system.

Comment 52: The Secondary Employment Market section in the DGEIS claims that there will be 139 additional jobs in the waste recovery sector due to supposed increases in recovery rates. However, Appendix B, “Response to Comments on the DSOW,” states in response to transfer station impacts and elsewhere, “The Proposed Action directly impacts operational processes related to commercial waste collection in New York City and not the disposal and/or processing of such waste.” This should apply to processing recoverable materials as well, and these and any other such sections should be removed. (BOMA_046)

The assertion that 139 jobs might be created as a consequence of the presumed increase in waste diversion must be supported by data and analysis or removed because it violates the boundary of what is being analyzed in the DGEIS, i.e., collection-related services. (NYRWM_048)

Claiming credit for job creation violates the boundary condition for what is being assessed in the DGEIS and goes against how modern waste transfer and processing facilities operate. (NYRWM_048)

Response: As a result of increased emphasis on diversion and increased enforcement of diversion, the Proposed Action has the potential to increase the rate at which material is diverted from the commercial waste stream as compared to both the existing condition and No Action condition. This increase in diversion may increase demand for employment within the secondary market by 304 jobs. This potential effect is disclosed in the DGEIS, and the distinction is made between jobs in this secondary market and jobs within the carting industry. The DGEIS forecasted a net loss of 41 jobs in the carting industry as a result of the Proposed Action. Overall, such additional employment in the recycling market was not factored into the 2 percent reduction in total carting industry employment as compared to the No Action condition, as disclosed in Table 3-15 of Chapter 3, “Socioeconomic Conditions,” in the DGEIS.

Comment 53: The DGEIS does not mention many key elements of the CWZ Program, notably lacking an analysis of waste generation/composition. The outdated California waste generation modeled offered as a proxy is unjustified and unacceptable. (NYRWM_048)

Response: As discussed in Chapter 3, “Socioeconomic Conditions,” of the DGEIS, the CalRecycle waste generation model was identified as the best waste generation model available as it used an employee-based generation rate that was compatible with other data utilized in the socioeconomics analysis. In addition, to ensure this analysis accurately reflected waste generation within New York City, the CalRecycle waste generation model was modified based on the total tonnage of waste produced within New York City based on 2015–2017 Transfer Station and Recycling Processor Reports, and Private Carter Surveys provided by DSNY.

Comment 54: The assertion that waste diversion would increase (both recyclables and organics) must be supported by hard data and analysis. New York already has a robust waste diversion system in operation defined by both law and regulations, as well as generations of experience, and limited or down-turned markets for many recyclables have created a long-term challenge for waste service providers—a critical factor ignored by the DGEIS. (NYRWM_048)

Under the No Action condition, it should be assumed that all BIC-licensed companies provide collection services for waste, recyclables, and organics as required by law and regulations. Asserted increases over existing conditions must be documented with data. (NYRWM_048)

The assertions about increased diversion of recyclables and organics attributable to a zone-franchise system are unsupported by data and analysis, including the

NYC Commercial Waste Zone Program

recognition that the City's commercial recycling and organics laws, regulations, and systems are substantially more comprehensive and well-established than in most cities, and recognize the primary role of businesses that generate such wastes in ensuring their proper management under law and regulations. (NYRWM_048)

Where would the proposed additional 3 percent of organics go for composting and/or disposal? Where do organics from the commercial and residential programs currently go? Are residential or commercial organics disposed of in facilities, such as waste water treatment plants, with no beneficial end use? (BOMA_046)

DSNY has no basis for estimating the amount of waste that could or will be diverted without a commercial waste audit. A 19 percent increase in waste diversion (combining No Action and With Action increases) over the current amount, approximately 25 percent, lacks clear factual justification. (BOMA_046)

Response:

The DGEIS diversion analysis assumed an increase of 15 percent in waste stream capture rates in the No Action condition due to increased enforcement for recycling (paper, cardboard, and MGP) and organics waste streams covered by existing legislation through 2024, the Analysis Year. It is assumed that no capture rates would exceed 95 percent for any waste stream, and that organics waste collection only applies to the portion of the organics waste stream covered by businesses designated under Local Law 146 of 2013 (LL146/2013). The increase in capture rates in the No Action condition results in an estimated overall increase in diversion rates by 9 percent compared to the existing condition (due to limitations of increasing recycling collection, overall recyclable content of NYC waste, and limited coverage of the commercial organics waste stream under LL146/2013 designations).

While recycling is required under existing laws and regulation, data from the March 2018 Private Carter Dump Tickets suggest limited recycling service for commercial businesses in practice. Thus, there are customers missing access to recycling services. The DGEIS diversion analysis assumed an increase of an additional 25 percent in waste stream capture rates under the Proposed Action due to mandatory service for recycling (paper, cardboard, and MGP) and organics waste streams under the CWZ Program and additional enforcement of policies covered by existing legislation through 2024. Again, it is assumed that no capture rates can exceed 95 percent for any waste stream, and that organics waste collection only applies to the portion of the organics waste streams covered by businesses designated under LL146/2013. The increase in capture rates in the Proposed Action results in an estimated overall increase in diversion rates by 19 percent compared to the existing condition (due to limitations of increasing recycling collection, overall recyclable content of NYC waste, and limited coverage of the commercial organics waste stream under LL146/2013 designations). The programmatic requirement for carters to provide recycling and

organics services should improve collection of these materials under the CWZ Program (see **Table 14-2**).

Table 14-2
Anticipated Capture and Diversion Rates

Waste Stream		Recycling (Designated Recyclables)	Organics (Designated Businesses under LL146/2013)	Total ¹
Existing Condition	Capture Rate (as % by weight of Waste Stream)	60% ²	26%	-
	Diversion Rate (as % by weight of Overall Waste)	24%	1%	25%
No Action Condition	Capture Rate (as % by weight of Waste Stream)	75%	41%	-
	Diversion Rate (as % by weight of Overall Waste)	30%	3%	34%
With Action Condition	Capture Rate (as % by weight of Waste Stream)	95%	66%	-
	Diversion Rate (as % by weight of Overall Waste)	38%	6%	44%
Notes: ¹ Totals may not add exactly due to rounding ² Blended recycling capture rate for paper, cardboard, and MGP collections. Sources: DSNY Transfer Station and Recycling Processor Reports and DSNY, 2018, PODS Database				

Comment 55: The assumption that waste recovery will increase 9 percent prior to the Proposed Action is excessive based on historic trends and is not conservative. The new recycling rules have already been in place for several years, and any impact they had has likely already occurred. Similarly, capacity and other issues continue to hamper composting. Therefore, a much smaller increase of a few percent is more appropriate. (BOMA_046)

Response: The DGEIS diversion analysis assumes an increase of 15 percent in waste stream capture rates in the No Action condition due to increased enforcement for recycling (paper, cardboard, and MGP) and source-separated organics, through realization of existing legislation. The increase in capture rates in the No Action condition results in an estimated overall increase in diversion rates by 9 percent (due to limitations of increasing recycling collection, overall recyclable content of NYC waste, and limited coverage of the commercial organics waste stream under LL146/2013 designations).

LL146/2013 requires the DSNY Commissioner to annually evaluate whether capacity at regional food waste conversion facilities is sufficient to accept additional commercial sector food waste from New York City's commercial generators. If capacity in the region is found sufficient and the cost is competitive with disposal, the DSNY Commissioner must designate a new group of commercial businesses from the businesses provided in LL146/2013 to begin

source-separating their organics for a beneficial use. LL146/2013 provides that permitted beneficial uses for source-separated organics include composting, aerobic digestion, and anaerobic digestion. Since the initial 2015 annual review mandated by LL146/2013, the DSNY Commissioner found sufficient regional capacity in 2015 and 2017, resulting in two rounds of designations. Since the 2017 determination, new facilities have opened and several have forecasted opening in the near term. There are also several facilities currently seeking permitting or development approvals or that are currently under construction, including the 180,000-ton-per-year anaerobic digester facility in Long Island, which received approval from the Long Island Power Authority in March 2019. For more information, visit <https://www.governor.ny.gov/news/governor-cuomo-announces-approval-clean-energy-food-waste-recycling-facility-long-island>.

Since LL146/2013 requires the DSNY Commissioner to designate new businesses to source-separate organics if capacity in the region is sufficient to take additional material, this new capacity will require the Commissioner to designate additional businesses in the near-term and by 2024, the Analysis Year. Thus, this would increase the number of businesses diverting material.

For more information on the City's Organics Plan, visit <https://dsny.cityofnewyork.us/wp-content/uploads/2017/12/OrganicsCollection-LL77-NYCOrganicsCollectionReport-2015.pdf>

Comment 56: The DGEIS erroneously states under Table 3-7 that a 5.7 percent increase applies to diversion instead of to an increase in routes required to pick up 10 percent more recoverable materials. (BOMA_046)

Response: The paragraph in Chapter 3, "Socioeconomic Conditions," of the FGEIS has been updated to accurately reflect the increased rate of diversion and to clarify that the 5.7 percent increase identified in the DGEIS is the increase in total routes necessary to achieve a 10 percent increase in diversion over the No Action condition. This change does not affect the findings of the analysis.

Comment 57: The FGEIS should set forth more specifically how the new CWZ system will address the socioeconomic issue of providing fair wages and improved benefits to workers employed by companies that secure waste zone contracts. (Goldstein_NRDC_010, Goldstein_NRDC_032)

The Socioeconomic Conditions analysis is incomplete and confirms workers' worst suspicions about the consistent adverse effects of environmental regulation on employment and employment opportunities. Absent real and robust wage, benefit, and safety standards, the CWZ Program will have incredibly adverse socioeconomic impacts which the DGEIS ignores. (WMUL_047)

Response: Chapter 3, "Socioeconomic Conditions," of the DGEIS fully analyzed socioeconomic impacts prescribed in the *CEQR Technical Manual*. It included a

detailed analysis of the estimated cost impact to the carting industry to implement the CWZ Program's requirements, such as the requirement to provide worker safety training to all drivers and staff, customer service lines, and GPS equipment. This required an assessment of existing wages and future estimated wages.

The City would have the ability to look at a carter's history of compliance with local, state, and federal laws, including but not limited to minimum wage laws, during the RFP review and contract award process. Additionally, during the solicitation process, carters would be evaluated, in part, based on the health and safety plans that they submit as part of the RFP process, as well as their safety record in previous years. DSNY would also establish and maintain a displaced employee list.

Comment 58: Labor costs associated with the prospect of changing work rules (e.g., hours/days of service, increased benefits) should be studied to ascertain the current situation and project cost and other implications of possible changes on prices to customers and service impacts. (NYRWM_048)

Response: The CWZ Program is anticipated to reduce payroll expenses as well as other operational expenses for commercial carters as compared to the No Action condition. Due to this reduction in operational expenses forecasted under the CWZ Program, carters could reduce rates within the competitive solicitation processes while still remaining operationally viable. Any increases to pricing as a result of the CWZ Program are therefore not anticipated to result in adverse impacts to commercial businesses.

Comment 59: According to Tables 3-14 and 3-15 in the DGEIS, there would be a 27 percent reduction in trucks (275 total trucks) needed to collect all commercial waste between the No Action and With Action conditions, but only a 6 percent reduction in field workers (121 total). Why would a reduction in trucks not result in a greater loss of jobs when the majority of trucks have two field workers? (BOMA_046)

Response: Analysis of the commercial carting industry showed that field employment, which includes drivers, helpers, and support staff such as mechanics, dispatchers, and garage workers is not dependent on the number of trucks but on the amount of waste being collected, which is not changing with the CWZ Program. As a result of the CWZ Program, trucks would be more efficient in collecting commercial waste due to efficient routing and denser routes. It is these denser routes where workers during a shift would need to perform more customer pick-ups. Even though the total number of trucks needed to collect the same amount of waste is being reduced, workers would still be required to pick up the same amount of waste along each route. Therefore, the reduction in trucks overall by 27 percent does not equate to a proportional reduction in field employment, which the DGEIS concluded would be approximately 6 percent.

Comment 60: It is not clear how a 2 percent decrease in employer operational expenses helps workers, especially if it is being achieved through a 2 percent decrease in employment. (WMUL_047)

The assertion that operating costs of waste service companies might be reduced 2 percent through collection system efficiencies must be supported by transparent data and analysis. (NYRWM_048)

The DGEIS lacks substantive analysis of the types of jobs that will be lost versus those that will be created and moreover fails to address the current market conditions for recyclable debris. (WMUL_047)

Response: As shown in Table 3-15 of Chapter 3, “Socioeconomic Conditions,” of the DGEIS, the CWZ Program would result in a 2 percent reduction in total employment in the local municipal solid waste (MSW) carting industry as compared to the No Action condition. This is as a result of a 6 percent decrease in field employees (i.e., those who work collecting commercial waste on collection trucks) and a 10 percent increase in office employment (e.g. call center employees, accounts staff required per the CWZ Program).

The 2 percent reduction in operating costs is the result of both operational efficiencies introduced as part of the CWZ Program even though there are additional expenses incurred by commercial carters as a result of the CWZ Program. As seen in Tables 3-12 and 3-13 of Chapter 3, “Socioeconomic Conditions,” of the DGEIS, as compared to the No Action condition, where total operational expenses are approximately \$575 million per annum, the total operational costs of the CWZ Program (approximately \$561 million) are approximately \$14 million less per annum, a 2 percent reduction in total projected annual operating cost as a result of the CWZ Program.

Comment 61: The Socioeconomic Conditions analysis in the DGEIS suggests that displaced waste carting companies would change to cart other materials than commercial solid waste and recyclables (e.g., construction and demolition [C&D] waste). The FGEIS should provide evidence that there is capacity available to allow for this lateral move and should disclose the impact on other businesses that might be impacted by the increased competition. (BOMA_046)

The DGEIS does a superficial and unsupported analysis on the impacts of the CWZ Program on existing BIC-licensed waste service providers. The assertion that displaced waste service companies would transition to other work, (e.g., collecting C&D debris) must be supported by data and analysis, and informed by real-world discussions with such companies. A hard look at the number of companies expected to exit the industry by January 1, 2020, and beyond, must be conducted. The real-world experience of other cities (e.g., Los Angeles, San Jose, and Seattle) that shifted to a zone-franchise system and now lack a competitive

infrastructure with multiple service providers, and much higher service costs, should be used to provide a much more meaningful analysis. (NYRWM_048)

Response: As discussed in Chapter 3, “Socioeconomic Conditions,” in the DGEIS, commercial carters that are not selected to provide carting services under the CWZ Program may elect to transition to other waste streams, such as C&D, as many carters already engage in other types of waste collection. In the existing condition, \$121 million in revenue, representing about 21 percent of the carting industry was attributed to waste that would be excluded from the CWZ Program. Carters not selected for the CWZ Program could collect C&D debris, consolidate with other successful carters, or focus their efforts outside New York City in the region; some may elect to close. However, these would be individual business decisions.

During the CWZ Program planning process, DSNY considered more than 70 of the nation’s largest municipalities and counties and completed 21 case studies to help inform the design of a CWZ system that meets the unique needs and conditions of New York City, including reviewing case studies from San Diego, Boston, and Chicago. The transition of Los Angeles and other communities to a zoned waste system provides insight into how the CWZ Program in New York City may best be developed in order to avoid the difficulties experienced in Los Angeles and was also used as a lessons learned when deciding on the non-exclusive program.

Comment 62: The DGEIS takes no account of the socioeconomic effects that transpire if workers who have retirement benefits and health insurance through multi-employer trust funds lose those benefits because their employers go out of business or are no longer able to provide the benefits under a new system—for example, because of the entry into the market of large (non-union) corporate haulers. (WMUL_047)

Response: The CWZ Program does not affect the carting of all waste types. A portion of the carting industry would remain unaffected, such as carters collecting construction & demolition debris. Carters may choose to haul only unaffected waste streams when the CWZ Program is implemented or if the carter fails to win a contract under the program. Some carters may close. Per the *CEQR Technical Manual*, analysis of a project that has a citywide impact, like a regulatory proposal, requires analysis of the impact on the affected industry and on NYC businesses necessitating those services, which was undertaken in Chapter 3, “Socioeconomics Conditions,” of the DGEIS. The impact to pension or health benefits is not a socioeconomic effect under the *CEQR Technical Manual*, nevertheless, the Socioeconomic Conditions Chapter does estimate the potential job loss and the cost impact to carters from CWZ Program’s implementation.

. Unions and Multiemployer Benefit Trust Funds are not precluded by the CWZ Program.

NYC Commercial Waste Zone Program

Comment 63: According to Table 3-3 in the DGEIS, the costs to carters associated with the 9 percent increase, in terms of purchasing new trucks and paying new workers, is just over \$15 million, while, according to Table 3-8 in the DGEIS, the costs associated with the additional 10 percent is slightly less than \$34 million. Why are these costs different? (BOMA_046)

Response: Table 3-3 in Chapter 3, “Socioeconomic Conditions,” in the DGEIS, presents the increase in costs associated with a 9 percent increase in the rate of diversion between the existing condition and No Action condition. The costs presented in Table 3-8 in Chapter 3, “Socioeconomic Conditions,” in the DGEIS, reflect the total cost to a commercial carting operator associated with increasing diversion from 25 percent in the existing condition to 44 percent as a result of the Proposed Action (an approximately 19 percent increase in diversion between the existing condition and the Proposed Action condition).

COST

Comment 64: The FGEIS should disclose and analyze the costs to the City and DSNY for managing the CWZ Program. What are DSNY’s liabilities for picking up commercial waste if there are failures under the CWZ Program, both in general and specifically during the transition period? (BOMA_046)

Response: The cost associated with the implementation and oversight of the CWZ Program by DSNY is not known. In order to recover the costs associated with oversight of the CWZ Program, DSNY would impose an administrative fee on commercial carters operating under the CWZ Program.

In the event that a commercial carter was unable to provide adequate waste collection services or failed to collect commercial waste under the CWZ Program, DSNY would work to ensure waste was collected in a timely manner and find other carters to collect waste from affected customers. Such flexibility is one of the benefits of a non-exclusive system. However, emergency collection of commercial waste by DSNY would be costly and a last resort for waste collection.

Comment 65: How much information was collected on cost reduction? (CB10_042)

What data was collected on the current carting cost by Community District (CD) and Borough? (CB10_042)

What data was collected on the average price point of carting costs in CD 10? (CB10_042)

Response: As detailed in Table 3-18 of Chapter 3, “Socioeconomic Conditions,” of the DGEIS, customer pricing for commercial waste carting services is from the 2017 Q2–Q4 BIC Carter Customer Register. This dataset provides information including the location of carting customers (address) and price assessed for commercial waste collection. Utilizing this data, median prices for waste

collection services were calculated for New York City overall as well as for three specific case study areas (Midtown Manhattan, the Flatbush-Nostrand Junction, and College Point). No costs were calculated by Community District or Borough.

Comment 66: Will all zones have similar pricing structures? (CB10_042)

Response: As detailed in Chapter 1, “Project Description,” of the DGEIS, all zones would have a similar process for bidding and pricing, but due to the variation in waste production, customer composition and customer density, pricing is expected to differ within and among zones. As articulated in Chapter 1, “Project Description,” of the DGEIS, during the solicitation process, as part of their competitive bid, carters would identify a maximum rate to be assessed per unit of waste collected. Within a zone, different carters may have different maximum rates, and adjacent zones may have different rates.

Comment 67: There is a fear if only “good companies” serving the zone can control the price. (CB10_042)

Response: The competitive solicitation process would reduce the chance of one carter controlling pricing as all carters would be evaluated and selected based on their ability to provide good service.

SOLID WASTE AND SANITATION SERVICES

Comment 68: The FGEIS should address how the collection of recyclables and organic waste is handled by the CWZ Program. (NYSDEC_051)

Response: While there are existing laws and regulations regarding recycling and organic separation of commercial waste, discussions with commercial customers indicate they are not being offered organics service or even recyclables collection service currently. Under the CWZ Program, both carters and customers would be required by their contracts to comply with existing laws regarding recycling and organics separation of commercial waste, and they would be required by contract to comply with any new or revised laws or regulations enacted during the contract term. As part of their response to the City’s RFP, carters would be required to develop “zero waste” plans and identify innovative practices to support waste reduction, reuse, and recycling. The RFP and resulting contracts would also provide for additional oversight and reporting requirements to ensure that these practices are implemented. Customers would be responsible for ensuring that they follow the laws regarding recycling, including signage, education, separation, and set-out requirements. As such, recyclables and organics are forecasted as being collected at higher rates as compared to the existing and No Action conditions as is discussed in Chapter 3, “Socioeconomic Conditions,” and Chapter 4, “Solid Waste and Sanitation Services,” under the CWZ Program.

Comment 69: Please explain how waste franchising will achieve zero waste and how long it will take. How much capacity for composting would be needed to handle all of the food waste generated in New York City? How much is available now? What can be done with soiled waste? What can be done with film plastic and other non-recyclable materials? (BOMA_046)

Response: As described in Chapter 2, “Land Use, Zoning, and Public Policy,” of the DGEIS, one goal of the CWZ Program is to increase diversion of waste in order to work towards the City’s zero waste goals. The CWZ Program would require carters to comply with existing recycling and source-separation regulations so they could compete for contracts. As part of the RFP process, carters would develop “zero waste” plans and identify innovative practices to support waste reduction, reuse, and recycling and provide for additional oversight and reporting requirements to ensure that these practices are being followed. With more recycling and organic materials being separated, less waste would be sent to landfills, saving resources and energy, consistent with the City’s sustainability and recycling goals that align with *OneNYC*’s goals and adhere to the proposed policies pertaining to recycling and the disposal of organic waste.

The CWZ Program would not directly affect any facility for the transfer, sorting or disposal of refuse, organics or recyclables, or change New York City’s plan to rely on regional disposal capacity such as landfills and waste-to-energy plants for refuse. In addition, as stated in Chapter 4, “Solid Waste and Sanitation Services,” of the DGEIS, existing recycling and organic processing facilities within New York City and the surrounding area are anticipated to have adequate capacity to accommodate the increase in diversion as a result of the CWZ Program.

Comment 70: The assertion that waste diversion would increase (both recyclables and organics) must be supported by hard data and analysis. New York already has a robust waste diversion system in operation defined by both law and regulations, as well as generations of experience, and limited or down-turned markets for many recyclables have created a long-term challenge for waste service providers—a critical factor ignored by the DGEIS. (NYRWM_048)

Response: As stated in Chapter 2, “Land Use, Zoning, and Public Policy,” and Chapter 4, “Solid Waste and Sanitation Services,” of the DGEIS, there are existing local laws and policies regarding recycling and organics that commercial businesses are required to comply with. The DGEIS accounts for the expansion and implementation of these programs as reflected in the increase in recycling and organics collection in the No Action condition from existing conditions. As a result of improved enforcement facilitated by the CWZ Program, the collection of recyclables and organics would be even greater compared to the No Action condition. Please see response to Comment 43.

Comment 71: The absence of a comprehensive, locally focused waste composition/characterization study must be explained; the California waste generation model offered as a proxy should be rejected as outdated and irrelevant to understanding current local commercial waste conditions in New York City. A comprehensive waste composition/characterization study must be completed prior to establishing the number and size of zones, let alone determining actionable waste diversion projections. (NYRWM_048)

Response: Please see response to Comment 53. The *CEQR Technical Manual* Waste Generation Rates were not utilized in this analysis as they do not reflect updated waste composition and generation for New York City. In addition, these rates do not accurately reflect the industry sectors analyzed for the purposes of the CWZ Program.

Comment 72: The FGEIS needs to survey capacity, especially for composting facilities, and show there is adequate capacity to meet the increases in recoverable materials claimed in the DGEIS. (BOMA_046)

Response: As stated in Chapter 4, “Solid Waste and Sanitation Services,” of the DGEIS, existing recycling and organic processing facilities within New York City and the surrounding area are anticipated to have adequate capacity to accommodate the increase in diversion as a result of the CWZ Program. The Proposed Action directly impacts operational processes related to commercial waste collection in New York City and not the disposal and/or processing of such waste. Under LL146/2013, DSNY is required to assess the regional capacity for organics processing for a beneficial use, however this is outside the scope of the CWZ Program. Please see response to Comment 41.

Comment 73: The basis for the assumption that recycling and source separation of organics will increase by 19 percent over existing conditions is not in the Solid Waste Management analysis, but in the Socioeconomic Conditions analysis inexplicably. (NYRWM_048)

Response: The discussion around recycling and source separation of organics is necessary in Chapter 3, “Socioeconomic Conditions,” of the DGEIS, to discuss the impact that increased levels of diversion would have on industry employment and the operational cost to carters and businesses. As described in Chapter 3, “Socioeconomic Conditions,” of the DGEIS, under the CWZ Program commercial carters are anticipated to increase the rate of material diverted from the commercial waste stream destined for disposal to 44 percent as a result of further policies to be incorporated into the solicitation process, including the requirement that all carters submit a zero waste plan, which would further incentivize diversion of commercial waste in the Proposed Action. In total these diversion policies would result in an increase in diversion by approximately 10 percent over the No Action condition, or 19 percent over existing conditions. This

assumption has been added to Chapter 4, “Solid Waste and Sanitation Services,” of the FGEIS. This change does not affect the findings of the analysis.

Comment 74: The DGEIS commentary preempts a discussion as to whether the CWZ Program triggers the need for a formal update to the City’s Comprehensive Solid Waste Management Plan, adopted in 2006 without any reference to the scheme proposed, nor any significant discussion of the commercial waste collection system and the need for the system to be restructured. The New York State Department of Environmental Conservation (NYSDEC) should be identified as an involved agency and formally asked to review and comment on the DGEIS. (NYRWM_048)

Response: The Solid Waste Management Plan (SWMP) generally projects waste quantities, identifies disposal and recycling plans for the City, and identifies the facilities that would manage the transfer of residential and commercial waste, including designated recyclables, putrescible waste, C&D debris, and fill material such as dirt, concrete, brick and rock. The adopted SWMP emphasizes three broad categories of goals: (1) the improvement of conditions around transfer stations upon which both public and private carters currently rely; (2) transitioning from the development of a system reliant on trucks to export waste from local waste transfer stations to one that takes advantage of barge and rail transportation, reducing local waste truck traffic; and (3) the redistribution of transfer stations so that low-income and minority communities are not disproportionately burdened. In addition, the SWMP sets ambitious goals for recycling within the City, which would ultimately reduce the exportation of waste. As stated above, the implementation of the Proposed Action would alter the collection of commercial waste within New York City and not the waste streams themselves or facilities relied on to transfer, dispose, or otherwise manage waste originating in New York City. Therefore, modification of the SWMP is not required. NYSDEC was an Interested Agency in the CEQR review and provided comments on the DGEIS.

TRANSPORTATION

Comment 75: DSNY should confirm with BIC that it exercised its authority to audit the drivers’ route trips and that, in the opinion of the BIC, the routing data is a fair and accurate representation of the current routes. DSNY should then confirm the results of the BIC audit with the carters, or devise another method to solicit and report accurate data. (CB5_039)

A full explication of the most current data provided by the industry (March 2018) must be provided. (NYRWM_048)

Response: Routing data was obtained from private carters in New York City through two BIC Directives: one for data across four separate weeks in 2014–2015 that DSNY analyzed for development of the Implementation Plan, and a second directive

resulting in seven additional days of data in 2018. The 2018 data was used in the DGEIS.

All companies licensed by BIC are required to maintain certain records concerning their businesses and produce those records to BIC upon request for inspection and audit. See Title 17, Chapter 1, of the Rules of the City of New York (RCNY) §§ 1-07, 5-03. Among the records that licensees must maintain and produce for inspection and audit are drivers' route trip sheets. *Id.* at § 5-03(a). At BIC's discretion, BIC may conduct the inspection or audit at the offices of BIC. *Id.* at § 5-03(j). A licensee also "shall, upon request by the Commission, provide the Commission with a list of its collection routes and schedules." *Id.* at § 1-07.

A BIC Directive was provided directing carters to provide all drivers' route trip sheets and a list of collection routes and schedules for the periods of July 6–July 12, 2014; September 7–September 13, 2014; December 21–27, 2014; and January 25–January 31, 2015. Carters were provided with the option of two template formats to fill out, which included route dates, material type, vehicle information, garage locations, transfer station locations, times leaving garage, times arriving at transfer stations, customer sequences, and customer information for each route stop including customer name and address.

A BIC Directive was provided directing carters to provide all drivers' route trip sheets and a list of collection routes and schedules for the period of March 4–March 10, 2018. Due to a snowstorm impacting collection activities from March 6–March 8, 2018, carters were also directed to provide information for the dates of March 11–March 17, 2018 to replace the data collected on the dates impacted by snow. Carters were provided with one template to fill out, which included route dates, material type, vehicle information, garage locations, transfer station locations, times leaving garage, times arriving at transfer stations, times returning to garage, customer sequences, and customer information for each route stop including customer name and address. In lieu of filling out the template, carters were also allowed to provide GPS data and supplemental information by route.

Comment 76: A full and complete explanation of how VMT reductions were estimated, including a detailed explanation of DSNY's assumptions for VMTs under current conditions, must be provided. (NYRWM_048)

The DGEIS should contain a more thorough analysis of exactly how the increased efficiencies from the CWZ Program were calculated. (CB5_039)

The assumptions in the Transportation analysis and methodology were not identified or disclosed nor was the rationale for determining daily truck traffic. (AEG_043)

Response: The methodology of the VMT calculations is provided in **Appendix C** of the FGEIS.

NYC Commercial Waste Zone Program

Comment 77: If a small number of carting companies win the bulk of contracts, then it is likely that there will be significant numbers of trucks moving between zones. Such movements should be included in the Transportation analysis and VMT calculation. If they are banned from doing so, the analysis and calculation should include trucks that have to return to their base before embarking to the next zone (or whatever movement they would need to do to allow them to service the next zone). (BOMA_046)

Response: The objective of the VMT simulation was to estimate the impact of various potential zone designs on VMTs. In evaluating the CWZ Program impacts to traffic within the three different commercial density typologies and upon VMTs overall from carting, the current analysis in the DGEIS assumed the movements of trucks from their garage, from customer to customer along their routes within a designated zone, to the transfer station or disposal location and back to the garage. Because it is premature to predict which companies would win which zones, the analysis did not assume movement between zones. It is the City's intention to prohibit carters from running truck routes between different zones. However, the RFP would require carters to provide an estimate of overall VMT for all proposed services and proposals would be evaluated and scored more favorably for demonstrating services that are more efficient and create less truck traffic.

Comment 78: The likelihood that certain trucks operating within a confined zone may operate at less than full loads must be considered when analyzing VMTs and industry operating costs. (NYRWM_048)

Response: Based on a review of the BIC 2018 Private Carter Dump Tickets, the average net weight of waste per truck in the City is 8.2 tons. The VMT model used the median number of customers per route (based on the 2018 Private Carter Routing Data) to build modeled routes as it provides a more conservative estimate as compared to load efficiency. The model assumes trucks are picking up the same average amount of waste—approximately 8.2 tons—in the CWZ Program modeled simulation for VMT purposes, as they are in existing conditions.

Comment 79: The clustering methodology in the Transportation analysis was not disclosed. If the DGEIS calculations used the same methodologies as the CWZ plan, each route within a waste collection zone would serve a discrete geographic sub-area of clustered customers. (AEG_043)

Response: Please see response to Comment 76 and **Appendix C**.

Comment 80: Future studies regarding VMT reductions should analyze and aim to reduce the effects of clustering of waste truck depots or VMTs in neighborhoods, considering the added miles from origin and return to neighborhoods with these truck depots or garages. (NYCEJA_016)

Response: As discussed in the DGEIS, private carter VMT reductions are a principal objective of and an inherent feature of the CWZ Program. The VMT reduction would be citywide and not targeted to any specific neighborhood. The traffic analysis follows the *CEQR Technical Manual*, which does not require post-CEQR traffic monitoring. As stated in Chapter 10, “CWZ Transition Period,” of the DGEIS, DSNY would establish a new Division of Commercial Waste to administer the CWZ Program and would review reports and data from carters to ensure full program compliance. This may include environmental compliance related to routing and VMT performance. The CWZ Program would reduce commercial carter VMT but would not affect where carters may establish their garages or depots, which is determined by zoning regulation, which also establishes performance standards for such land uses. Please see also Response to Comment 34.

Comment 81: Due to the use of compactors and/or containers and the significant waste volumes produced by large commercial buildings, carters make a single trip to the building and proceed immediately to the transfer station. The CWZ Program would not result in any appreciable reduction in VMTs generated by waste pick-ups and disposal from these disposals. (REBNY_045)

Response: Compactor and open top container (roll-on/roll-offs) routes were treated as equal in the No Action condition and Proposed Action. In reviewing the 2018 Routing Data, if a route serviced one customer it was assumed that this route was a compactor/open top container route and could not be further optimized. However, overall the zone would become more effectively managed under the CWZ Program, reducing VMTs and would thus augment the efficiency of this business that has a container or compactor pick-up.

Comment 82: Chapter 5, “Transportation,” in the DGEIS states in a footnote that there will be 5.7 percent more truck routes due to increased collection of recyclables and organics. Why is this statistic in a footnote? How does it translate into number of truck trips? How was it derived? What would be the increase in VMT noted in the footnote? (BOMA_046)

Response: As described in Chapter 3, “Socioeconomic Conditions,” of the DGEIS, in order to meet an increased rate of diversion under the CWZ Program, commercial carters are expected to operate 5.7 percent more routes as compared to the No Action condition in order to collect the additional diverted material. The additional routes expected to address diversion are included in the VMT calculations. However, as further noted in Chapter 5, “Transportation,” of the DGEIS, the increased VMT needed to service diversion to recycling and organics would be offset by the increased efficiencies as a result of the CWZ Program, which would result in an overall decrease of overlapping trucks along road

segments and a decrease in VMT. This change does not affect the findings of the analysis.

Comment 83: The DGEIS states that the supposed increased diversion of recyclables and organics will reduce truck traffic. This needs to be justified. Why would this not result in increased truck numbers running parallel routes, as more trucks will be needed for each waste category? (BOMA_046)

Response: As stated in Chapter 5, “Transportation,” of the DGEIS, there would be a net increase in the total number of trucks collecting recycling and organics as a result of the increased diversion to recycling and organics. However, the CWZ Program would limit the number of carters with overlapping routes within geographic zones, which would result in increased efficiency in the waste collection routes as compared with current and No Action conditions, such that associated VMT and overall truck traffic would decrease.

Comment 84: The FGEIS should quantify the vehicle mile reduction in the three neighborhoods receiving 75 percent of the City’s waste to ensure they receive a fair share of reductions of VMTs. (NYCEJA_016, NYCEJA_044)

Response: As described in Chapter 5, “Transportation,” of the DGEIS, the CWZ Program would result in an overall decrease of overlapping trucks along road segments, which would result in decreased VMT within New York City and region-wide for travel to transfer stations and garages in New Jersey, Long Island, and nearby upstate New York counties with the Proposed Action. Using 2018 Private Carter Routing Data,⁶ the Proposed Action is anticipated to reduce citywide VMT by 50 percent from the No Action condition.

Comment 85: The assumption under the No Action condition that routes, frequency, durations, and pick-up times are presumed to remain essentially the same ignores current industry consolidation (acknowledged in the DGEIS) and the high degree of likelihood of significant consolidation in the future in light of upcoming mandates, which inherently will affect industry operations, economics, and efficiencies sooner than through implementation of the CWZ Program. (NYRWM_048)

Response: While carting industry consolidation has and would continue to occur and the industry may experience certain industry efficiencies earlier than the implementation of the CWZ Program, such changes cannot be predicted with reasonable certainty, and customer conditions would remain the same. Therefore, the No Action assumption is appropriate.

⁶ BIC, 2018, Private Carter Routing Data collected between March 4, 2018 and March 17, 2018, and was collected to provide carters the opportunity to provide more up-to-date routing data from the 2014–2015 data.

AIR QUALITY

Comment 86: The DGEIS did not assess potential impacts related specifically to the private carting industry, including air quality impacts within the vicinity of recycling and organic waste transfer stations. These are expected to rise as a result of the anticipated increase in diversion rates. (AEG_043)

Response: As stated in Chapter 6, “Air Quality,” of the DGEIS, while the CWZ Program would result in more waste being diverted to such facilities, the increased diversion to recycling and organic waste transfer facilities would be offset by the increased efficiency of the CWZ Program, which would result in an overall decrease of overlapping trucks along road segments. Overall, the CWZ Program would result in decreased carting truck VMTs and associated emissions within New York City and the region. Any incremental mobile source or stationary emissions from increased usage of permitted capacity at recycling and organics processing facilities would already be reflected in such facility’s existing permit and thus would not warrant further review. Therefore, there would be an overall reduction in emissions from commercial carter trucks.

Comment 87: Air quality monitoring should be done post-implementation to study the effects of the CWZ Program and ensure it is effective. (Velasquez_EP_022)

Response: The air quality assessment follows the *CEQR Technical Manual*, which does not require post-CEQR traffic or air quality monitoring. As stated in Chapter 10, “CWZ Transition Period,” of the DGEIS, DSNY would establish a new Division of Commercial Waste to administer the CWZ Program and would review reports and data from carters to ensure full program compliance. This may include data on VMT reductions and environmental compliance related to emissions. Data from the City’s air quality monitoring network can be reviewed as well.

GREENHOUSE GASES

Comment 88: The DGEIS largely avoids any serious discussion of the CWZ Program’s relationship to the City’s current GHG reduction goals. A fair analysis of GHG emissions in the waste management sector would find that the collection component is of little consequence; the majority of GHG emissions are the function of how waste materials are processed and disposed of. (NYRWM_048)

Response: The CWZ Program would regulate and improve the collection of commercial refuse, designated recyclables, and source-separated organic waste and greatly reduce the VMT of carting trucks, thereby reducing GHG emissions. The CWZ Program would not directly affect any facility that handles the transfer, sorting or disposal of refuse, organics or recyclables, and such facilities fall outside the scope of the environmental review. Please see response to Comment 41.

Comment 89: The assessment of GHG emissions impacts provided a percentage range of potential reductions with no supporting calculations or methodologies. (AEG_043)

Response: The DGEIS estimated potential reductions in emissions associated with the projected decrease in VMT as a result in the implementation of the CWZ Program. Emission factors were used to calculate regional emissions and to estimate the potential decrease in both the No Action and Proposed Action conditions.

Vehicular CO₂e engine emission factors for carter trucks (see **Table 14-3**) were computed using the EPA mobile source emissions model, called the MOVES2014b (MOVES). This emissions model is capable of calculating engine emission factors for various vehicle types, based on the fuel type (e.g., gasoline, diesel, or natural gas), meteorological conditions, vehicle speeds, vehicle age, roadway type and grade, number of starts per day, engine soak time, and various other factors that influence emissions, such as inspection maintenance programs. The inputs and use of MOVES incorporate the most current guidance available from the NYSDEC. The model was run to produce emission factors for both highway and local roads in each of the City’s five boroughs using representative speed data.

Table 14-3
GHG Emission Factors

County	Roadway Type	Representative Modeled Travel Speed (mph)	Roadway Emission Factors (g/VMT)
New York	Urban Restricted Access	35	1,347
	Urban Unrestricted Access	20	1,983
Queens	Urban Restricted Access	40	1,277
	Urban Unrestricted Access	25	1,667
Bronx	Urban Restricted Access	45	1,235
	Urban Unrestricted Access	25	1,667
Kings	Urban Restricted Access	35	1,337
	Urban Unrestricted Access	25	1,607
Richmond	Urban Restricted Access	45	1,231
	Urban Unrestricted Access	25	1,506

Note: g =grams of CO₂e

As discussed in Chapter 5, “Transportation,” using 2018 Private Carter Routing Data,⁷ the Proposed Action is anticipated to reduce citywide VMT by 50 percent from the No Action condition (please see response to Comment 76 and **Appendix C**). The VMT calculations were used to calculate the potential reduction in GHG emissions. The potential range of GHG emission reductions was estimated using the maximum and minimum emission factors—approximately 1,235 grams of

⁷ BIC, 2018, Private Carter Routing Data collected between March 4, 2018 and March 17, 2018, and was collected to provide carters the opportunity to provide more up-to-date routing data from the 2014–2015 data.

CO₂e per VMT (g/VMT) and 1,983 g/VMT, respectively. This would result in a reduction of GHG emissions between 42 and 67 percent under the CWZ Program from existing conditions, depending on county, roadway type (i.e., arterial, highway, or local roads), and travel speeds.

NOISE

Comment 90: The DGEIS did not assess potential impacts related specifically to the private carting industry, including noise impacts within the vicinity of recycling and organic waste transfer stations. These are expected to rise as a result of the anticipated increase in diversion rates. (AEG_043)

Response: While the CWZ Program would result in more waste being diverted to recycling and organic waste transfer stations, the increased diversion to recycling and organic waste transfer stations would be offset by the increased efficiency of the CWZ Program, which would result in an overall decrease in carting truck traffic along road segments within New York City and the region. Noise associated with potential increased use of existing permitted capacity at recycling and organic waste transfer stations would have been considered in the permitting of such facilities.

ALTERNATIVES

Comment 91: The DGEIS is flawed and overstates the VMT benefits of the multi-provider system over the alternatives. (AEG_043)

Response: The same methodology to calculate VMT was used for CWZ Program and alternatives evaluated in Chapter 9, “Alternatives,” in the DGEIS. Please see response to Comment 75.

Comment 92: The DGEIS assumes the diversion rates for recyclables and organics would increase at the same rate under the single-provider and multi-provider alternatives. However, the DGEIS does not account for the same potential increase in VMT as a result of the assumed increased diversion rate. (AEG_043)

Response: Under the CWZ Program and Exclusive Zone Alternative, despite an overall dramatic decrease in carter truck VMTs, there would be a minor increase in the total amount of commercial carting trucks and a small increase in the VMTs attributable to the increased diversion of recyclables and organics and from associated carting routes carrying fewer tons per truck. As described in Chapter 9, “Alternatives,” in the DGEIS, this increase in trucks would result in a corresponding minor increase in VMTs for such trucks within New York City and region. However, this increase would be more than offset by the overall reduction in refuse carting truck travel under both the CWZ Program and the Exclusive Zone Alternative. Both the CWZ Program and the Exclusive Zone Alternative

NYC Commercial Waste Zone Program

would limit the number of carters within geographic zones, which would result in increased efficiency in waste collection routes, such that truck VMTs and overall truck traffic would decrease. There would be slightly more efficient routing under the Exclusive Zone Alternative compared to the CWZ Program, and the Exclusive Zone Alternative is anticipated to reduce citywide commercial waste carter VMT an additional 8 percent from the Proposed Action.

Comment 93: Despite the significant gain in GHG emission reductions, the DGEIS does not provide the full analysis methodology and results for both the single-provider and multi-provider alternatives. (AEG_043)

Response: Please see response to Comment 89.

Comment 94: Potential impacts on traffic safety under both the multi-provider and single-provider alternatives should be assessed and compared. (AEG_043)

Response: As stated in Chapter 1, “Project Description,” of the DGEIS, one of the goals of the CWZ Program is to improve safety standards to make the industry safer for workers and the public. The CWZ Program would incorporate several requirements that are designed to improve worker safety and reduce routes, which would aid in improving traffic safety. The CWZ Program requires that carters submit a health and safety plan as part of the solicitation process and, if chosen through this process, provide a worker safety training to all drivers and workers collecting on city streets. Additionally, as part of the RFP process, DSNY would review the health and safety record of the carters submitting responses to the RFP. These steps would be identical in an exclusive or non-exclusive program. Improvements to traffic safety would be similar under the Exclusive Zone Alternative.

EXCLUSIVE ZONE

Comment 95: DSNY should select the Exclusive Zone Alternative described in Chapter 9, “Alternatives,” of the DGEIS. (Goldstein_NRDC_010, Goldstein_NRDC_032, McClure_SPAC_007)

The single model provides the greatest reduction of VMTs, safe operations, the highest potential for recycling, clearest accountability, easiest integration with other City services and fair pricing. (Bergamini_AEG_017)

An exclusive zone system can ensure that our communities, workers, and small businesses do not continue to pay for the hidden cost of a broken system. An exclusive zone system would bring about the greatest VMT reduction and emissions reduction; fair wages and transparency for small businesses; and leverage for the City to demand higher labor standards, worker safety, and a real opportunity to make second-chance jobs meaningful. (Valerio-Gonzalez_018)

An exclusive CWZ system in New York City would transform the way trash is collected in the City, improve working conditions, protect small businesses, reduce pollution, and make streets safer. (FormLetter1_050)

The CWZ Program should be an exclusive zone system, in which carters have less incentive to cut corners on safety, overload routes, and underpay workers. (Wood_NYLPI_030)

The DGEIS understates the benefits of the single-provider alternative. (AEG_043)

We need waste zones. We need exclusive zones. We need good wages at every company. We need reform now. (Mondesi_028)

Owners of bad carters are afraid of exclusive waste zones because the City will have the power to protect workers and ensure their wages and safety. We need reform now. The City's study showed the lowest scores with exclusive zones. The truck traffic was lowest with exclusive zones. (Henry_029)

An exclusive zone transition should be easier to implement than a non-exclusive zone system. There is a long history of transitions from open market to exclusive zones. (Moss_WCNY_041)

Chapter 9, "Alternatives" of the DGEIS explicitly states that "as with the CWZ Program, the Exclusive Zone Alternative would not result in significant adverse impacts on the viability of the commercial carting industry, or businesses that rely on the commercial carting industry" (emphasis added). It also correctly points out that carting companies' operational costs would decrease due to increased efficiencies. However, the DGEIS then inconsistently states that commercial service costs may increase and that the transition to such a system would be worse than a multi-zone system. Both of these assumptions are wrong. (Moss_WCNY_041)

A non-exclusive zone system does not offer the same probability of successful capital recovery and is less likely to generate market entrants. Because of the large number of proposals an exclusive system would attract, proposed pricing for service would be highly competitive. (Moss_WCNY_041)

The City's RFP process offering the single model will draw local and national interest from experienced, well-capitalized operators intent on offering highly competitive pricing and competition will be fierce, particularly with the priorities of service, sustainability, and safety. (Bergamini_AEG_011)

The private sanitation industry can operate just as well as DSNY with one carter per zone in the City. One street, one truck is safer for pedestrians and more affordable for customers. (Crater_024)

NYC Commercial Waste Zone Program

Too many workers, pedestrians, cyclists, and drivers have died because of the sanitation industry. The DGEIS shows that an Exclusive Zone alternative is the solution to these problems. (Campbell_025)

Under an exclusive zone system, the carter is dedicated to the zone and is always available to meet the zone's customers' specific needs. Moreover, in an exclusive system the City could require a building of a certain size to have a dedicated truck for its needs. (Moss_WCNY_041)

Recycling and other innovative programs can be tried in an exclusive model. (Moss_WCNY_041)

DSNY's study found that exclusive CWZ systems would reduce private garbage truck traffic by 60 percent across the City and is the most cost-effective way to collect commercial waste. (FormLetter1_050)

Response: As described in Chapter 1, "Project Description," of the DGEIS, during the design of the CWZ Program, over 150 different stakeholders in the commercial waste industry were consulted, including commercial businesses, labor groups, environmental justice advocates, private carters, Business Improvement District representatives, real estate owners, property managers, trade organizations, other City agencies, traffic safety advocates, and elected officials. A variety of formats were utilized, including structured one-on-one interviews, small group conversations, phone calls, field interviews, and focus groups. The City used the feedback it gained from this process to determine the program goals, implementation strategies, and the necessary requirements for the eventual carter contracts. The process to develop the CWZ Program design involved consideration of various iterations of potential zone configurations based on a wide consideration of factors, including the types of zone boundaries, level of exclusivity (i.e., the number of carters per zone), the number of zones, and the size of each zone, as further described below. Final zone designs were assessed using stakeholder feedback, ease of regulatory oversight, and potential pricing impact. As a result of this stakeholder outreach, exclusive zones were eliminated and the preferred zone design consists of 20 non-exclusive zones with 3 to 5 carters allowed to operate within each zone. This preferred zone design was chosen due in part to a desire to maintain customer choice, competition, fair pricing, and profitability for carters—and thus minimize market disruption. Customer businesses would be able to choose from a number of carters, allowing prices to be competitive. Carters would be able to protect profitability through competitive pricing and maintaining their customer base.

The Exclusive Zone Alternative would have drawbacks in comparison with the preferred CWZ Program option, with respect to lack of customer choice, anticipated price increases to customers as a function of reduced competition in a monopoly market, elimination of brokers, greater risks to carter solvency within a restrictive market, and increased risk of inability of the exclusive carter to meet the diverse customer needs in the zone. Implementing the Exclusive Zone

Alternative has the potential for more disruption of the system, as few carters have the capacity to exclusively service a single zone, a larger number of customers would be required to change service providers in the transition period, and potential future service issues could develop if the single carter is unable to successfully provide the necessary services. The Exclusive Zone Alternative would pose a greater risk to the taxpayers in the event that DSNY had to provide emergency collection services if the single-zone carter were to default on the contract and fail to perform.

In addition, as exclusive zones were eliminated early on in the stakeholder process as described above, the number of zones potentially under an exclusive zone system did not have the benefit of the same vetting process as the non-exclusive zoned program. For example, with an exclusive zone program, the proposed 20 zones may be too large to be serviced effectively by 1 carter. The DGEIS evaluated a system of 20 non-exclusive zones compared to a system of 20 exclusive zones with the same zone boundaries, however, the optimal number of zones under an exclusive zone program could potentially be greater than 20.

In view of the foregoing, a non-exclusive zone system is preferable to an exclusive zone system, despite the somewhat greater VMT reductions available under an exclusive system.

Comment 96: The DGEIS does not take a hard look at the socioeconomic impacts that would result from the Exclusive Zone Alternative. (REBNY_045)

Los Angeles' struggle to manage its exclusive zone system cannot be ignored in the analysis of the Exclusive Zone Alternative. The analysis must include an in-depth consideration of impact on Socioeconomic Conditions as well as how a deterioration in service conditions would impact the broader quality of life, including health and safety. (REBNY_045)

Response: Please see response to Comment 95. The transition of other municipalities to zone-based system, like Los Angeles's transition to an exclusive zoned waste system, provided insight into how to best develop and transition into a zone-based system in NYC. These examples also helped inform the DGEIS preference for a non-exclusive system. The socioeconomic impacts of the Exclusive Zone Alternative would be similar to those of the preferred non-exclusive zone CWZ Program, as discussed in Chapter 9. Neither would result in significant adverse impacts to neighborhoods, local businesses requiring carting services, or to the carting industry or other industry, in accordance with the *CEQR Technical Manual*.

Comment 97: The DGEIS, specifically the Transportation analysis, does not properly explain methodologies nor fully identify the advantages of a single-provider alternatives. (AEG_043)

NYC Commercial Waste Zone Program

Response: The methodology for calculating the expected VMT under the Exclusive Zone Alternative is the same as the CWZ Program. Please see response to Comment 75 for a discussion on the VMT methodology and Comment 95 for a discussion on the Exclusive Zone Alternative.

Comment 98: If a non-exclusive zone system with 3 to 5 carters per zone is problematic in terms of risking losing quality of service, a non-exclusive system with 1 carter per zone is completely unacceptable. It would create monopolies with no competition and no opportunity for customers to punish bad service or high costs by changing carters. (BOMA_046)

Response: As stated in Chapter 9, “Alternatives,” in the DGEIS, based on stakeholder feedback and review of configurations that proved effective in other jurisdictions in the United States, exclusive zones were found to be inferior to the proposed non-exclusive CWZ Program given concerns about the ability for exclusive carters to adequately provide waste collection services with exclusive zones, the lack of redundancy within the collection system, and the reduction in customer choice within an exclusive zone system.

Comment 99: The DGEIS mistakenly asserts that an exclusive carter will have no incentive to provide quality service. However, it is anticipated that the City will establish a protocol to provide customer protections under either system. (Moss_WCNY_041)

Response: As stated in Chapter 9, “Alternatives,” in the DGEIS, exclusive zones were found to be inferior to the proposed non-exclusive CWZ Program given concerns raised by stakeholders about the ability for exclusive carters to adequately provide waste collection services with exclusive zones, the lack of redundancy within the collection system, and the reduction in customer choice within an exclusive zone system.

NO ACTION ALTERNATIVE

Comment 100: The DGEIS underestimates the No Action alternative. Action Carting’s experts speculate that with increase and/or adequate enforcement and implementation on existing policies and natural market consolidation, the No Action alternative would come close to equaling the positive impacts of a multi-provider zone system. (AEG_043)

Response: As discussed in Chapter 1 “Project Description” and Chapter 9, “Alternatives,” of the DGEIS, under the No Action alternative many benefits of the Proposed Action—advancing the City’s efforts to increase commercial recycling, reducing carter truck traffic and associated air, noise, and GHG emissions, and improving carting industry operational standards—would not be realized.

Increased enforcement and natural market consolidation would not address the shortcomings associated with the current commercial waste industry, including but not limited to, excessive overlap of truck traffic and associated neighborhood and environmental impacts, GHG emissions, price transparency, continued investment in fleet modernization, and citywide recycling goals.

Comment 101: The comparison between the multi-provider system and the No Action alternative is flawed because the DGEIS assumes that under the No Action alternative there will be no upgrades in standards and service other than those already announced. This assumption rejects the dynamism and change occurring in the industry. (AEG_043)

Response: The No Action condition predicts conditions that would exist in the Analysis Year of 2024 without undertaking the Proposed Action, and any regulatory changes to the industry already scheduled to take effect by the Analysis Year of 2024. Making assumptions about additional potential regulatory changes that have not been adopted by the City Council and mayor for the No Action condition would not be appropriate per SEQRA and CEQR.

CWZ TRANSITION PERIOD

Comment 102: The potential impacts of the two-year transition period when businesses not awarded contracts either transition to other businesses or shut down, according to the DGEIS, before the full plan is active, need to be analyzed and disclosed. How will this impact commercial waste pickup? (BOMA_046)

Response: As discussed in Chapter 10, “CWZ Transition Period,” of the DGEIS, a two-year transition period from 2021 to 2023 would begin to transition customers gradually to the awarded carters in order to successfully accommodate the needs of all customers and allow carters to appropriately scale up to service new customers. Once the transition period begins, customers may only make new service agreements with selected carters for their zone. DSNY would assign a carter to any customers that do not choose an awarded carter by the end of the transition period. Experience with CWZ implementation in other cities has shown that some customers may be abandoned by former carters before customer transition is complete in each zone if those carters do not win any zones. This can result in missed service pickups until service with a new carter can be established. DSNY would establish a new Division of Commercial Waste to administer the CWZ Program in conjunction with BIC and to consolidate commercial waste outreach. The division would be responsible for addressing and resolving customer complaints received from 311, including missed pickups. Abandoned customers located within an active CWZ Program zone under transition would be automatically assigned to a carter for interim service. DSNY would serve as a

provider of last resort during the transition to ensure there are no missed service pickups.

Comment 103: The assertion that truck traffic during the transition period will increase is extremely important. However, there is no attempt to quantify or analyze impacts. This issue should be supported by additional data and analysis, especially given that it could extend for two years or more. (NYRWM_048)

Response: As stated in Chapter 10, “CWZ Transition Period,” of the DGEIS, during the transition period, carters would likely need to establish new routes to conform to zone boundaries. Such intermediate routes operated during the transition period may not achieve the full CWZ Program transportation efficiencies estimated to occur by the Analysis Year. In addition, as stated above, any carters that are not awarded a contract for a zone may continue to service customers in that zone until the end of the transition period. The combination of the carters continuing to service customers through the transition period with the new intermediate routes operated during the transition period would have the potential to result in a temporary increase in the number of commercial waste collection trucks. However, these minor increases in trucks and VMT during the transition period would gradually be offset by reductions in VMT as the CWZ Program is rolled out, and are not expected to result in significant adverse impacts to transportation. These temporary increases would be eliminated after transition ends. As such, they do not warrant detailed analysis.

Comment 104: The expectation that DSNY will serve as the “carter of last resort” in the event that a service provider is unable to provide the required services before, during, and after implementation of the transition to CWZ Program requires further analysis as to the potential impact on DSNY operations, costs, and billing of customers. (NYRWM_048)

Response: As stated in Chapter 10, “CWZ Transition Period,” of the DGEIS, DSNY through the new Division of Commercial Waste, would work with other carters to complete any missed pickups, and may serve as a provider of last resort. Providing this service is not anticipated to affect DSNY’s residential collections as pickup for missed commercial waste collection would be performed separately by standby vehicles or at different times from residential waste collection. Operational details of such a DSNY contingency plan are beyond the scope of this generic environmental review.

Comment 105: The lessons learned from cities, e.g., San Diego, Boston, Chicago, opting not to pursue geographic zone systems should be identified and assessed. (NYRWM_048)

Response: During the CWZ Program planning process, DSNY considered more than 70 of the nation’s largest municipalities and counties and completed 21 case studies to

help inform the design of a CWZ system that meets the unique needs and conditions of New York City, including reviewing case studies from San Diego, Boston and Chicago.

- Chicago—Chicago currently operates an open market system for the collection of commercial solid waste, with the type and level of services not regulated by the City. In 2008, Chicago’s Environmental Department conducted a study evaluating the benefits of developing an exclusive commercial waste zoned system, and found many benefits to implementing such a system, including cost savings, reduced VMT and GHG emissions and job creation. However, the City did not pursue implementation of such a system due to a lack of administrative resources.
- Boston—Boston has a permit program for commercial customers who receive front-end load dumpster collection service. The City has approximately nine service providers, large and small, that negotiate collection services and rates directly with commercial customers. The City monitors adherence to commercial collection program regulations, and violations can result in fines or revocation of a permit by the City. The City is currently developing a citywide Zero Waste plan. Additionally, preliminary discussions about zoning the commercial waste stream have occurred, but at this time, no further commitments have been made to pursue considerations of such a system. The Boston permit program is similar in terms of regulation to the current BIC licensing program in New York City.
- San Diego—San Diego has a closed, two-tiered non-exclusive zoned system, which has been in place since 1996. No new service providers are allowed to apply for a franchise in the City. The City’s commercial solid waste, recyclables, and C&D debris are currently managed by 21 franchisees that hold non-exclusive contracts with the City. The two-tiered franchise system qualifies service providers based on the amount of waste hauled annually. Class I franchisees are those that collect 75,000 tons or less of waste per year, whereas Class II franchisees collect 75,000 tons or more per year. The City is considered a single service area, with franchisees holding the right to service any commercial customers within the municipality. The system in San Diego has many similarities to the proposed system in New York City. Under the current non-exclusive franchise system, customers retain the freedom to choose their service provider and maintain some control of rates with the right to negotiate, incentives have been set to financially reward greater diversion rates, and safety programs are required for private haulers.

Comment 106: DSNY should consider a system to phase in a limited number of zones in each borough at the outset of the CWZ Program. The results from these limited programs could be compared to pre-established benchmarks, including the VMT reductions contemplated in the DGEIS. (CB5_039)

Response: As stated in Chapter 10, “CWZ Transition Period,” of the DGEIS, DSNY anticipates a two-year transition period from 2021 to 2023 would begin to transition customers gradually to the awarded carters in order to successfully

accommodate the needs of all customers and allow carters to appropriately scale up to service new customers. In addition, customer transition may occur in multiple phases, with certain zones transitioning prior to other zones.

Comment 107: The DGEIS fails to identify, critique, and assess an example of an analogous system in use in any other major city. It largely ignores the numerous intended and unintended consequences of such a plan's implementation both during the transition period, and after the transition period has concluded. (NYRWM_048)

Response: During the CWZ planning process, DSNY considered more than 70 of the nation's largest municipalities and counties and completed 21 case studies to help inform the design of a CWZ system that meets the unique needs and conditions of New York City.

Nationwide research shows that a zone system, where carters' operations and routes are constrained within geographic boundaries, is necessary to minimize the number of vehicles on the road and VMT by solid waste vehicles. Zone systems result in collection efficiencies due to increased customer density. Among the case studies, the types of commercial collection programs and geographic zone boundaries varied significantly. Across the nation, private carters operate within a variety of regulatory structures, such as exclusive or non-exclusive zone systems, license/permit programs, or open market systems. An exclusive or nonexclusive zone system may also be constrained by customer types and/or waste types in addition to geographic area. Geographic area constraints range from citywide—most commonly in smaller municipalities—to 10 or more zones. Hybrids of exclusive and non-exclusive zone systems, known as limited exclusive zone systems, also exist in a variety of forms. One example is Hillsborough County, Florida, where residential waste is collected in five exclusive zones. The carters that hold residential zone contracts are able to compete with one another across the county for commercial waste customers, in a non-exclusive environment.

The various systems also differed in the contract requirements for private carters related to customer experience, quality of service, environmental impacts, diversion, safety, administration, enforcement, economic efficiencies, and service rates. This suggests that commercial waste zoning is a flexible tool that can be tailored to further varying goals for management of commercial waste. A clear understanding of a community's goals and objectives is critical to developing the best structure for that community.

In all cases of the implementation of a new system, the execution of a detailed transition plan was essential to mitigate service disruptions and sustain a program. Timing and length of transition are also important factors for a successful transition. For example, San Jose, California alerted service providers five years prior to changing the commercial collection system and began an extensive campaign four years prior to promote stakeholder involvement. The transition

time also provided the new carters an opportunity to enter into contracts with some of the previous service providers to buy equipment and employ personnel.

Municipalities and counties approached the accommodation or consolidation of smaller to mid-sized service providers that do not win service contracts in several ways. This included having different regulatory structures for different generator type, (e.g., residential or commercial customers) and material types (e.g., putrescible waste, recyclables, organics, or C&D debris). The California jurisdictions of Los Angeles, Sacramento, and Santa Barbara County all observed incoming awarded carters acquiring smaller carters, or hiring employees from smaller carters, who had previously provided collection services in the service zones.

Other lessons learned that are most relevant to New York City's development of a commercial waste zone system include:

- As collection operations become more efficient, system-wide collection costs decrease.
- Adequate funding for program administration and enforcement is a critical element to the success of a program.
- Rate transparency occurs when local market rates are available to all customers.

STATEMENTS OF SUPPORT

Comment 108: MSWAB continues to support the CWZ Program and encourages the City to continue to move forward with its implementation. (MSWAB_008, MSWAB_038)

The Bronx supports the CWZ Program because of the benefit it can provide for the South Bronx, and for other environmental justice communities throughout New York City. (Ortiz_POINT_012)

Response: Comment noted.

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