



February 11, 2022

**Vincent Sapienza, P.E.**  
*Commissioner*

Honorable Eric L. Adams  
Mayor  
The City of New York  
City Hall  
New York, NY 10007

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**Re: Local Law Air Reports for Fiscal Year 2021**

Dear Mayor Adams:

Attached are the Local Law Air Reports for Fiscal Year 2021 as required by Local Laws 38, 39 as amended by local law 73 of 2013, 40, 41, 42 of 2005 and 43 of 2010 as amended by local law 119 of 2016.

These reports document the use of ultra-low sulfur diesel fuel, compliance with biodiesel requirements, as well as best available control technologies to reduce particulate matter and nitrogen oxides in the environment.

Sincerely,

A handwritten signature in black ink, appearing to read 'Vincent Sapienza', written in a cursive style.

Vincent Sapienza, P.E.

- c. Hon. Adrienne E. Adams, Speaker New York City Council
- Hon. Brad Lander, Comptroller
- Lorraine Grillo, First Deputy Mayor
- Dawn M. Pinnock, Commissioner DCAS
- David Banks, Chancellor, DOE
- Edward Grayson, Commissioner, DSNY
- Peter A. Hatch Commissioner, DCWP
- Ydanis Rodriguez, Commissioner, DOT
- Liam Kavanagh, Acting Commissioner, DPR
- Dave A. Chokshi, MD, MSc, Commissioner, DOHMH



## **Local Law 38 Annual Report Fiscal Year 2021**

This report details New York City's purchase of fuel-efficient light and medium duty cars (typically, cars and vans respectively). The aim of Local Law 38 of 2005 (LL38) is to achieve a 30% reduction in fuel consumption by Fiscal Year 2021 as compared to baseline fuel efficiency data from Fiscal Year 2005. This drop in fuel consumption would reduce the amount of greenhouse gas being released and would also improve the city's air quality.

The milestones in the legislation are as follows:

- October 1, 2005: The City will complete a fuel economy inventory of all light-duty vehicles purchased by the City during Fiscal Year 2005 and will calculate the average fuel economy of these vehicles.
- July 1, 2006: Each light-duty vehicle and medium-duty vehicle that the City purchases will achieve the highest California LEV II standards. The City will also achieve a 5% increase in average fuel economy in all light duty vehicles.
- January 1, 2007: The City will report for the last time, whether it has complied with the Local Law standard that 80% of the light duty vehicles are alternative fuel vehicles.

Following the July 2006 fuel economy milestone, the City is to achieve an increase of 8% in average fuel economy in 2007; 10% in 2008; 12% in 2009; 15% in 2010; 18% in 2012; 20% for fiscal years 2015 through 2018; 20% in FY 2019; 30% in FY 2020; and 35% in FY 2021 and FY 2022; and thereafter 40%.

As of Fiscal Year 2021, the City achieved the mandated 35% increase in fuel economy for light duty vehicles by achieving a 329% reduction. Gasoline usage by light and medium duty vehicles has decreased from 2005, but diesel consumption increased because emergency services make greater use of the gas card program for diesel fueling. This trend does not represent total fuel use which combines in-house and gas card (private) fueling. The City exceeded the legislative goal that 95% of purchases be of the lowest polluting vehicles in their class, by purchasing 100% of the City's fleet in the lowest polluting class. The City made a policy decision to purchase CNGs which are in a lower polluting category than the non CNG vehicles. However, not all agencies have the capacity for this charging infrastructure.

The answers below describe the status of the City's implementation of the law and respond to the specific questions posed in the legislation.

1. What is the total number of light-duty vehicles and medium-duty vehicles purchased by each agency?

Agency	Light Duty	Medium Duty	Total
Dept. of Health & Mental Hygiene (DOHMH)	11	0	11
Dept. of Environmental Protection (DEP)	9	0	9
Dept. of Transportation (DOT)	9	0	9
Dept. of Citywide Administrative Services (DCAS) & Managed by DCAS	28	9	37
Dept. of Parks & Recreation (DPR)	8	0	8
<b>Total</b>	<b>65</b>	<b>9</b>	<b>74</b>

NB: FDNY and PD are exempt from this reporting requirement as they are emergency vehicles. Agencies not listed did not receive light or medium duty vehicles.

2. What is the total number of light and medium duty vehicles purchased in each rating category, disaggregated by vehicle model?

- a. The total number of zero emission vehicles (ZEV) purchased;
- b. The total number of advanced technology partial zero emission vehicles (ATPZEV) purchased;
- c. The total number of partial zero emission vehicles (PZEV)/(TZEV) purchased;
- d. The total number of super ultra-low emission vehicles (SULEV) purchased;
- e. The total number of ultra-low emission vehicles (ULEV) purchased; and
- f. The total number of low emission vehicles (LEV) purchased.

Total ZEV	Total ATPZEV	Total TZEV	Total SULEV	Total ULEV	Total LEV	Vehicle Total
26	0	34	5	9	0	<b>74</b>

Note: Please see Attachment A for the breakdown of the above numbers disaggregated by vehicle model. It shows that the vehicles purchased were within the highest fuel efficiency ratings.

3. How many Alternative Fuel Buses were purchased?

Zero buses were purchased.

4. What is the percentage of light and medium duty vehicles purchased as the lowest polluting vehicle in each category? Target of 95%.

Lowest Category	Other	Vehicle Type
36*	0	Medium Size Sedan
3	0	Small-size Sports Utility
2	0	Mid-size Sports Utility
24	0	Regular Size Van
9	0	Medium Duty Vans
<b>Total: 74* vehicles</b>	<b>Total: 0 vehicles</b>	
<b>Total: 100% (see below)</b>		

\*As per 24-163.1(b)(2), The city shall not be required to purchase a zero-emission vehicle or advanced technology partial zero emission vehicle in accordance with paragraph one of this subdivision if the only available vehicle or vehicles that achieve such a rating cost greater than fifty percent more than the lowest bid as determined by the applicable procurement process for a vehicle available in the next highest rating category that meets the requirements for the intended use by the city of such vehicle or if, after consultation with the affected agency, the Commissioner determines that the use of such vehicle would be impractical or would unduly hinder the operations of a city agency, or if the commissioner determines that the city lacks the charging and fueling infrastructure to support use of such a vehicle, provided that the next highest rating category that meets the requirements for the intended use by the city of such vehicle shall be selected.

5. *What is the average fuel economy of light duty vehicle purchases?*

The average fuel economy is 101.9 miles per gallon. Please see Attachment B for details.

6. *If a vehicle was not purchased in the highest fuel rating category, what was the basis for purchasing a vehicle in the next highest fuel rating category?*

A waiver is needed from DEP in order to select a vehicle in the next rating category. In FY 2021 DEP issued no waivers.

7. *What is the percentage increase in fuel economy? Target of 35%.\**

The average fuel economy was 101.9 miles per gallon, which achieved the required reduction of 35% by Fiscal Year 2021 by obtaining a 329% increase. The baseline 2005 average fuel economy was 31.1 miles per gallon.

\* An analysis was completed using the 2021 MPG over the 2005 baseline year.

8. *What is the estimated amount of fuel consumed by motor vehicle, disaggregated by vehicle type?*

The chart below is based on the Gas Card System, which shows an increase in consumption of diesel since 2005. The increase in diesel use is because emergency services make greater use of the gas card program for diesel fueling. There was a decrease in gasoline consumption across the entire city fleet (light and medium duty vehicles) since 2005.

2005 Gallons of Diesel	2021 Gallons of Diesel
337,554	1,043,951

2005 Gallons of Gasoline	2021 Gallons of Gasoline
2,828,217	2,006,782

9. *What is the estimated total amount of equivalent carbon dioxide emitted for each type of fuel consumed by motor vehicles, disaggregated by fuel type?*

<b>CO<sub>2</sub> Calculations for Local Law 38 Fiscal Year 2021</b>		
<b>Year</b>	<b>2005</b>	<b>2021</b>
Gasoline Consumed (gal)	2,828,217	2,006,785
CO <sub>2</sub> emissions (lbs.)	54,867,410	38,931,629
Diesel Consumed (gal)	337,554	1,043,951
CO <sub>2</sub> emissions (lbs.)	7,493,699	23,175,712.2
<b>Total CO<sub>2</sub> Emissions (lbs.)</b>	<b>62,361,109</b>	<b>62,107,341.2</b>
<b>Reduction (lbs.)</b>	<b>NA</b>	<b>253,767.8</b>
<b>Reduction (%)</b>	<b>NA</b>	<b>-0.41%</b>

Attachment A

Emissions Ratings on City Requirements Contracts for Fiscal Year 2021

Vehicle Type	ZEV	TZEV	APTZEV	SULEV	ULEV	LEV
<b>Light Duty Vehicles</b>						
<b>Medium Sedan</b>						
Chevrolet Bolt Crossover	26*					
Ford Fusion, Energy		6				
Toyota Prius, Prime		4				
<b>Small-Size Sports Utility Vehicles</b>						
Ford Escape Hybrid SUV				3		
<b>Mid-size Sport Utility Vehicles</b>						
Toyota Highlander Hybrid				2		
<b>Regular Size Van</b>						
Chrysler Pacifica Hybrid Plug-In		24				
<b>Medium Duty Vans</b>						
Chevrolet Express Hybrid					9	

\* As per 24-163.1(b)(2), The city shall not be required to purchase a zero-emission vehicle or advanced technology partial zero-emission vehicle in accordance with paragraph one of this subdivision if the only available vehicle or vehicles that achieve such a rating cost greater than fifty percent more than the lowest bid as determined by the applicable procurement process for a vehicle available in the next highest rating category that meets the requirements for the intended use by the city of such vehicle or if, after consultation with the affected agency, the Commissioner determines that the use of such vehicle would be impractical or would unduly hinder the operations of a city agency, or if the commissioner determines that the city lacks the charging and fueling infrastructure to support use of such a vehicle, provided that the next highest rating category that meets the requirements for the intended use by the city of such vehicle shall be selected.

### **Emission Ratings**

(As defined by the California Air Resources Board)

[www.driveclean.ca.gov](http://www.driveclean.ca.gov)

#### **ZEV: Zero Emission Vehicles**

ZEVs have zero tailpipe emissions and are 98% cleaner than the average new model year vehicle. These include battery electric vehicles and hydrogen fuel cell vehicles.

#### **TZEV: Transitional Zero Emission Vehicle**

TZEV is the new terminology for Enhanced Advanced Technology Partial Zero Emission Vehicle and meet the same requirements of an enhance At PZEV and have additional “ZEV-like” characteristics. A dedicated compressed natural gas vehicle or a hybrid vehicle with engine emissions that meet the PZEV standards.

#### **AT PZEV: Advanced Technology PZEVs**

AT PZEVs meet the PZEV requirements and have additional “ZEV-like” characteristics. A dedicated compressed natural gas vehicle or a hybrid vehicle with engine emissions that meet the PZEV standards would be an AT PZEV.

#### **SULEV: Super Ultra Low Emission Vehicle**

SULEVs are 90% cleaner than the average new model year car.

#### **ULEV: Ultra Low Emission Vehicles**

ULEVs are 50% cleaner than the average new model year car.

#### **LEV: Low Emission Vehicle**

Minimum rating that will meet California Air Resources Board standards.

Attachment B

<b>CITYWIDE LIGHT DUTY VEHICLE PURCHASES FISCAL YEAR 2021</b>				
<b>CALCULATION OF AVERAGE CITY MILEAGE AS REQUIRED FOR LOCAL LAW 38 REPORTING</b>				
<b>VEHICLE TYPE</b>	<b>NUMBER PROCURED IN FY'21</b>	<b>FUEL TYPE</b>	<b>EPA MPG CITY</b>	<b>WEIGHTED FACTOR (COL. B x COL. C)</b>
CHEVROLET BOLT	26	ELECTRIC	127	3,302
CHRYSLER PACIFICA HYBRID	24	ELECTRIC/GAS	82	1,968
FORD ESCAPE HYBRID	3	ELECTRIC/GAS	43	129
FORD FUSION ENERGI	6	ELECTRIC/GAS	103	618
TOYOTA HIGHLANDER HYBRID	2	ELECTRIC	36	72
TOYOTA PRIUS PRIME	4	ELECTRIC/GAS	133	532
<b>GRAND TOTALS</b>	<b>65</b>			<b>6,621</b>
<b>AVERAGE CITY MILEAGE FOR LIGHT DUTY VEHICLES PURCHASED IN FY'21</b>				<b>101.9</b>



## Local Law 39/Local Law 73 Annual Report Fiscal Year 2021

Local Law 39 (LL39) requires all City owned and operated diesel-powered vehicles greater than 8,500 lbs., such as garbage collection trucks and DEP’s truck fleet, to use ultra-low sulfur diesel (ULSD) to reduce pollutants. In order to lower the emission of harmful pollutants into the environment, these vehicles also must install emission reduction devices.

All on-road diesel vehicles are powered by ULSD (since the passage of LL39, the EPA has required ULSD to be sold nationwide for the on-road fleet). The City Council passed Local Law 73 of 2013 (LL73) to further strengthen that the City fleet is using the cleanest vehicles. This law requires that as of January 1, 2017, 90% of on-road vehicles are equipped with Diesel Particulate filters. The City met this mandate by achieving a 97.3% compliance rate as shown in the Table for Q1 under the heading ‘Percent of all Non-Emergency Vehicles in compliance’.

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The answers below describe the status of the City’s implementation of the law and respond to the specific questions set forth in Section 24-163.4 (g)(1) of the Administrative Code.

1. *What is the total number of diesel fuel powered motor vehicles owned or operated by each City agency?*  
(Ad. Code 24-163.4(g)(1)(i))

Please see table below for each City agency under the column ‘All Non-Emergency Diesel Vehicles’. There are in total 6,806 non-emergency vehicles owned or operated by the City as of the end of FY21.

AGENCY	TOTAL NUMBER OF PRE 2007 NON-EMERGENCY DIESEL VEHICLES WITHOUT DPFs or MISSING DATA (1)	TOTAL NUMBER OF PRE 2007 NON-EMERGENCY DIESEL VEHICLES RETROFITTED WITH DPFs	TOTAL NUMBER OF PRE 2007 NON-EMERGENCY DIESEL VEHICLES LISTED FOR SALVAGE	IN PROGRESS OF INSTALLATION BY DCAS	TOTAL NUMBER OF PRE 2007 NON-EMERGENCY DIESEL VEHICLES	TOTAL NUMBER OF 2007 AND LATER NON-EMERGENCY DIESEL VEHICLES	ALL NON-EMERGENCY DIESEL VEHICLES	PERCENT of All NON-EMERGENCY DIESEL VEHICLES IN COMPLIANCE (2)
DCAS/DCAS CLIENTS	1	15	1	0	17	133	150	99.33%
DEP	10	31	8	0	49	527	576	98.26%
DOT	99	60	1	0	160	1091	1251	92.0.9%
PARKS	5	1	3	0	9	799	808	99.38%
DSNY	71	30	0	0	101	3898	3999	98.22%
DOHMH	0	3	0	0	3	19	22	100.00%
<b>TOTAL</b>	<b>186</b>	<b>140</b>	<b>13</b>	<b>0</b>	<b>339</b>	<b>6467</b>	<b>6806</b>	<b>97.27%</b>
'(1) This column includes the 157 Diesel Vehicles that have a Diesel Oxidation Catalyst (DOC) installed. While LL73 calls for the tracking of DPF compliance, the reduction in diesel pollutants by using these devices should be noted.								
'(2) Compliance includes units with retrofit DPFs, units purchased 2007 or later and governed by federal law on DPFs, units currently scheduled for salvage and units currently being retrofitted by DCAS.								

2. *What is the number of such diesel fuel powered motor vehicles that used best available retrofit technology (BART) to reduce the emission of pollutants, including a breakdown by vehicle model and the type of technology used for each vehicle? (Ad. Code 24-163.4(g)(1)(iii))*

140

Refer to the table above for Q1 for the total under the column 'Total Number of Pre 2007 Non-Emergency Diesel Vehicles retrofitted with DPFs'.

The Table below shows a sample breakdown by vehicle model, type and technology.

Agency & Vehicle	BART Manufacturer	BART Type
DSNY Collection Truck	Clearie	Diesel Particulate Filter (DPF)
DSNY Collection Truck	Fleetguard	DPF
DSNY Mechanical Truck	Engine Control Systems	DPF
DPR 16 Yard Dump Truck	OEM	DPF
DOT Utility Truck	ESW Thermacat	DPF
DOT Mack Dump Truck	Clearie	DPF
DOT Collection Truck	Engine Control Systems	DPF
DEP Mack CV713	Clearie	DPF
DEP Freightliner FL 70	HUG	DPF
DEP Sterling Acterra	HUG	DPF
DEP CAT L9500	Engine Control Systems	DPF
DEP Heavy Duty	ESW ThermaCat	DPF

Note: For a complete list of diesel equipment, engine details, and agency-specific vehicle counts, please contact DEP.

3. *What is the number of such diesel fuel powered motor vehicles that used other authorized technology in accordance with this section, including a breakdown by vehicle model and the type of technology used for each vehicle? (Ad. Code 24-163.4(g)(1)(iv))*

The table below shows a sample breakdown by vehicle model, type and technology.

Agency & Vehicle	BART Manufacturer	BART Type
DPR 16 Yard Packer	Donaldson	Diesel Oxidation Catalyst (DOC)
DOT Dump Truck Crew Cab	Nelson	DOC
DOT International 4700 LP	Cummings	DOC w/o CCV (technological concerns)

Note: For a complete list of diesel equipment, engine details, and agency-specific vehicle counts, please contact DEP.

4. *What were the number of such motor vehicles equipped with the applicable 2007 EPA standard for particulate matter as set forth in §86.007-11 of title 40 of the CFR? (24-163.4(g)(1)(v))*

6,467

Refer to Table above for Q.1 under the column ‘Total Number of 2007 and Later Non-Emergency Vehicles’.

5. *Were any findings made or waivers issued pursuant to §24-163.4(g)(1)(vii)?<sup>1</sup>*

No waivers were issued.

<sup>1</sup>These waivers are granted for vehicles that do not use ultra-low sulfur diesel fuel. These waivers were contemplated during the enactment of this legislation, as it was uncertain a sufficient supply of vehicles that run on ULSDF would be available.



## Local Law 40 Annual Report Fiscal Year 2021

Local Law 40 (LL40) requires all contractors managing the City’s solid waste disposal program or recycling program for the Department of Sanitation to use ultra-low sulfur diesel fuel (ULSD). It also requires these vehicles to be equipped with emissions reduction technology to reduce the pollutants their vehicles emit into the environment.

As of Fiscal Year 2021, all contractor vehicles were in compliance with this legislation.

Below are answers to the questions posed in the legislation describing the City’s status in achieving these milestones. The data for these questions was provided from the Department of Sanitation and their contractors.

1. *What is the total number of diesel fuel-powered motor vehicles and diesel-powered off-road vehicles, respectively, used in the performance of solid waste contracts or recyclable materials contracts? (Ad. Code 24-163.5(j)(1)(i))*

There were a total of Eighty vehicles used for these contracts and all of these vehicles are diesel fuel-powered on road and off-road vehicles.

<b>Action Environmental Systems, LLC.</b>						
Total No.	Company No.	Type of Vehicle	Make	Model	Year	EPA Certified Engine/BART
1	1	Excavator	Caterpillar	336EL	2013	Tier 4 Final
2	2	Loader	Caterpillar	980M	2017	Tier 4 Interim
3	3	Excavator	Caterpillar	336FL	2016	Tier 4 Final
4	4	Excavator	Caterpillar	336GC	2019	Tier 4 Final
5	5	Loader	Caterpillar	906M	2021	Tier 4 Final
6	6	Loader	Caterpillar	966M	2021	Tier 4 Final
7	7	Loader	Caterpillar	938M	2016	Tier 4 Final
8	8	Excavator	Caterpillar	320L	2018	Tier 4 Final
<b>American Recycling Management, LLC.</b>						
Total No.	Company No.	Type of Vehicle	Make	Model	Year	EPA Certified Engine/BART
9	1	Front Loader	Komatsu	WA500-3LE	1997	DLT4MINE
10	2	Excavator	Komatsu	PC-200-6LE	1998	DLT4MINE
11	3	Front Loader	Komatsu	WA500-8	2017	Tier 4 Final
12	4	Excavator	Sennebogen	818-R-HD	2018	Tier 4 Final

**Covanta Sustainable Solutions LLP**

<b>Total No.</b>	<b>Company No.</b>	<b>Type of Vehicle</b>	<b>Make</b>	<b>Model</b>	<b>Year</b>	<b>EPA Certified Engine/BART</b>
13	1	Skid steer	Bobcat	S550	2015	Tier 4 Interim
14	2	Skid steer	Bobcat	S530	2014	Tier 4 Interim

**Pratt Industries**

<b>Total No.</b>	<b>Company No.</b>	<b>Type of Vehicle</b>	<b>Make</b>	<b>Model</b>	<b>Year</b>	<b>EPA Certified Engine/BART</b>
15	1	Loader	Caterpillar	938M	2017	Tier 4 Final
16	2	Loader	Komatsu	WA380-7	2012	Tier 4 Interim

**Regal Recycling**

<b>Total No.</b>	<b>Company No.</b>	<b>Type of Vehicle</b>	<b>Make</b>	<b>Model</b>	<b>Year</b>	<b>EPA Certified Engine/BART</b>
17	1	Excavator	Caterpillar	320E	2013	Tier 4 Interim

**Republic Services (Allied Waste Systems)**

<b>Total No.</b>	<b>Company No.</b>	<b>Type of Vehicle</b>	<b>Make</b>	<b>Model</b>	<b>Year</b>	<b>EPA Certified Engine/BART</b>
18	1	Top Pick	Taylor	XRS-9972	2016	Tier 4 Final
19	2	Wheel Loader	Caterpillar	903C	2015	Tier 4 Final
20	3	Switcher	Ottawa	4x2	2019	Tier 4 Final
21	4	Switcher	Ottawa	4x2	2007	Claire Phoenix
22	5	Switcher	Ottawa	4x2	2007	Claire Phoenix
23	6	Mach Broom	Isuzu	Badger T4	2019	Tier 4 Final
24	7	Top Pick	Hyster	RS46-33CH	2020	Tier 4 Final

**Sims Municipal Recycling of New York LLC. (3 Locations)**

<b>Total No.</b>	<b>Company No.</b>	<b>Type of Vehicle</b>	<b>Make</b>	<b>Model</b>	<b>Year</b>	<b>EPA Certified Engine/BART</b>
25	1	Loader	Caterpillar	962M	2018	Tier 4 Final
26	2	Material Handler	Sennebogen	840ME	2013	Tier 4 Interim
27	3	Material Handler	Fuchs	MHL360	2016	Tier 4 Final
28	4	Loader	Volvo	L150G	2013	Tier 4 Interim
29	5	Loader	Volvo	L150H	2020	Tier 4 Final

**Sims Municipal Recycling of New York LLC. (3 Location)**

<b>Total No.</b>	<b>Company No.</b>	<b>Type of Vehicle</b>	<b>Make</b>	<b>Model</b>	<b>Year</b>	<b>EPA Certified Engine/BART</b>
30	6	Material Handler	Sennebogen	835ME	2018	Tier 4 Final
31	7	Material Handler	Sennebogen	840E	2021	Tier 4 Final
32	8	Material Handler	Sennebogen	840E	2021	Tier 4 Final
33	9	Loader	Komatsu	WA470-SHL	2019	Tier 4 Final
34	10	Loader	Volvo	L150H	2020	Tier 4 Final
35	11	Material Handler	Fuchs	MHL370	2016	Tier 4 Final

**Tully Environmental Inc.**

<b>Total No.</b>	<b>Company No.</b>	<b>Type of Vehicle</b>	<b>Make</b>	<b>Model</b>	<b>Year</b>	<b>EPA Certified Engine/BART</b>
36	1	Waste Handler	Komatsu	WA470-7	2014	Tier 4 Final
37	2	Waste Handler	Komatsu	WA470-8	2017	Tier 4 Final

**Waste Connections Inc. (2 Locations)**

<b>Total No.</b>	<b>Company No.</b>	<b>Type of Vehicle</b>	<b>Make</b>	<b>Model</b>	<b>Year</b>	<b>EPA Certified Engine/BART</b>
38	1	Front Loader	Caterpillar	966G	2002	CCRT
39	2	Front Loader	Caterpillar	966H	2008	CCRT
40	3	Skid Steer	Caterpillar	262D	2017	Tier 4 Final
41	4	Front Loader	Caterpillar	962G	1999	DLT4MINE
42	5	Front Loader	Caterpillar	966H	2010	CCRT
43	6	Front Loader	Caterpillar	966H	2010	CCRT
44	7	Skid Steer	Caterpillar	262D	2017	Tier 4 Final

**Waste Management of NY LLC. (4 Locations)**

<b>Total No.</b>	<b>Company No.</b>	<b>Type of Vehicle</b>	<b>Make</b>	<b>Model</b>	<b>Year</b>	<b>EPA Certified Engine/BART</b>
45	1	Wheel Loader	Volvo	L180H	2019	Tier 4 Final
46	2	Wheel Loader	Volvo	L60	2018	Tier 4 Final
47	3	Excavator	Volvo	EC300	2018	Tier 4 Final
48	4	Excavator	Volvo	EC300	2016	Tier 4 Final
49	5	Compactor	Caterpillar	826K	2018	Tier 4 Final

**Waste Management of NY LLC. (4 Locations)**

<b>Total No.</b>	<b>Company No.</b>	<b>Type of Vehicle</b>	<b>Make</b>	<b>Model</b>	<b>Year</b>	<b>EPA Certified Engine/BART</b>
50	6	Wheel Loader	Volvo	L180H	2016	Tier 4 Final
51	7	Wheel Loader	Volvo	L180H	2017	Tier 4 Final
52	8	Wheel Loader	Volvo	L90H	2019	Tier 4 Final
53	9	Compactor	Caterpillar	826K	2014	Tier 4 Final
54	10	Rail Switcher	Shuttle Wagon	NVX8040	2020	Tier 4 Final
55	11	Rail Switcher	Shuttle Wagon	NVX8040	2020	Tier 4 Final
56	12	Wheel Loader	Volvo	L180H	2016	Tier 4 Final
57	13	Forklift	Hyster	H80FT	2007	HUSS/CF
58	14	Wheel Loader	Volvo	L180	2014	Tier 4 Final
59	15	Excavator	Komatsu	EC250EL	2017	Tier 4 Final
60	16	Wheel Loader	Volvo	L180H	2020	Tier 4 Final
61	17	Wheel Loader	Volvo	L180H	2016	Tier 4 Final
62	18	Excavator	Volvo	EC300EL	2019	Tier 4 Final
63	19	Wheel Loader	Volvo	L70H	2020	Tier 4 Final
64	20	Excavator	Volvo	EC300	2014	Tier 4 Final
65	21	Container Handler	Taylor	TLX330S	2018	Tier 4 Final
66	22	Container Handler	Taylor	9972	2017	Tier 4 Final
67	23	Switcher	Shuttle Wagon	SWX525	2020	Tier 4 Final
68	24	Switcher	Shuttle Wagon	SWX525	2020	Tier 4 Final
69	25	Wheel Loader	Volvo	L120	2015	Tier 4 Final
70	26	Wheel Loader	Volvo	L120	2018	Tier 4 Final
71	27	Wheel Loader	Volvo	L70H	2016	Tier 4 Final
72	28	Wheel Loader	Volvo	L180H	2016	Tier 4 Final
73	29	Wheel Loader	Volvo	L180H	2015	Tier 4 Final
74	30	Wheel Loader	Volvo	L70H	2015	Tier 4 Final
75	31	Excavator	Volvo	EC300	2015	Tier 4 Final
76	32	Reach Stacker	Taylor	TL9972	2020	Tier 4 Final
77	33	Reach Stacker	Taylor	TS9972	2020	Tier 4 Final
78	34	Rail Switcher	Shuttle Wagon	NVX6030	2020	Tier 4 Final
79	35	Switcher	Shuttle Wagon	NVX6030	2020	Tier 4 Final
80	36	Excavator	Volvo	EC300	2018	Tier 4 Final

2. *What is the number of such vehicles that were powered by ultra-low sulfur diesel fuel (ULSDF)? (Ad. Code 24-163.5(j)(1)(ii))*

All Eighty vehicles used for these contracts were powered by ULSDF.

3. *What is the number of such vehicles that used the best available retrofit technology (BART), including a breakdown of such vehicles by model, engine year, and technology? (Ad. Code 24-163.5(j)(1)(iii))*

The above chart shows that out of the Eighty vehicles, ten of these vehicles used Classification Level IV Diesel Particulate Filters (BART). Seven vehicles are equipped with Tier IV Interim EPA Certified Engines. Sixty-Three vehicles are equipped with Certified Tier IV Final Engines. Certified Tier IV Final Engines are the most effective way to decrease pollutants as they use PM reduction technology along with NOx reduction technology reduce Nitrogen Oxide.

4. *What is the number of such vehicles that used other authorized technology? (Ad. Code 24-163.5(j)(1)(iv))*

No technology, other than those presented above, were used.

5. *What is the number of vehicles equipped with an engine certified to the applicable 2007 EPA standard for particulate matter as set forth in section 86.007-11 of title 40 of the Code of Federal Regulations (CFR)? (Ad. Code 24-163.5(j)(1)(v))*

There are Seventy vehicles certified to comply with section 86.007-11 of Title 40 of the CFR, as they are model engine year 2007 or later.

6. *What were the locations where such vehicles were used? (Ad. Code 24-163.5(j)(1)(vi))*

The locations were as follows:

- |   |   |
|---|---|
| 1). Action Environmental Systems, LLC<br>300 Frank W. Burr Blvd – Suite 39<br>Teaneck, NJ 07666 | 9). Sims Municipal Recycling of New York<br>3027 Greenpoint Ave<br>Long Island City, NY 11101 |
| 2) American Recycling Management, LLC<br>172-33 Douglas Ave<br>Jamaica, NY 11433                | 10). Tully Environmental Inc.<br>127-50 Northern Blvd<br>Flushing, NY 11368                   |
| 3). Covanta Sustainable Solutions LLP<br>445 South Street<br>Morristown, NJ 07960               | 11). Waste Connections Inc.<br>577 Court Street<br>Brooklyn, NY 11231                         |
| 4). Pratt Industries<br>4435 Victory Blvd<br>Staten Island, NY 10314                            | 12). Waste Connections Inc.<br>110 50 <sup>th</sup> Street<br>Brooklyn, NY 11232              |

- |   |   |
|---|---|
| <p>5). Regal Recycling<br/>172-06 Douglas Avenue<br/>Jamaica, NY 11433</p> <p>6). Republic Services (Allied Waste Systems)<br/>600 West Service Road<br/>Staten Island, NY 10314</p> <p>7). Sims Municipal Recycling of New York<br/>472 2<sup>nd</sup> Ave<br/>Brooklyn, NY 11232</p> <p>8). Sims Municipal Recycling of New York<br/>850 Edgewater Road<br/>Bronx, NY 10474</p> | <p>13). Waste Management of NY LLC<br/>38-50 Review Avenue<br/>Long Island City, NY 11101</p> <p>14). Waste Management of NY LLC<br/>475 Scott Ave<br/>Brooklyn, NY 11222</p> <p>15). Waste Management of NY LLC<br/>221 Varick Street<br/>Brooklyn, NY 11237</p> <p>16). Waste Management of NY LLC<br/>98 Lincoln Ave<br/>Bronx, NY 10474</p> |
|---|---|

7. *What waivers were issued for ULSD (Ad Code 24-163.5(j)(1)(vii))*

There were no waivers issued.

8. *What waivers were issued for the use of other authorized technology in lieu of the best available technology (Ad. Code 24-163.5(j)(1)(viii))*

There were no waivers issued because Local Law 74 of 2013 states that, *the Commissioner shall not renew any waiver issued pursuant to this subdivision after January 1, 2014.*

Local Law 73 of 2013 states, as of January 1, 2017, all diesel fuel-powered motor vehicles used in the performance of such contract shall utilize the best available retrofit technology that meets the level 4 emission control strategy or be equipped with an engine certified to the applicable 2007 United States Environmental Protection Agency standard. Therefore, contractors had to replace their older vehicles with newer ones that comply with current EPA standards.



## Local Law 41 Annual Report Fiscal Year 2021

Local Law 41 (LL41) requires all City-licensed sightseeing diesel buses to use Ultra Low Sulfur Diesel (ULSD) to reduce pollutants. In addition, to lower the emission of harmful pollutants into the environment, these vehicles must install emission reduction devices (BART).

As of Fiscal Year 2021, 100% of the required vehicles are complying by use of classification level 4 (BART) or equipped with 2007 or newer EPA certified engines. Also, all diesel vehicles are powered by ULSD (since the passage of LL41, the EPA has required ULSD to be sold nationwide).

LL41 codified at Section 24-163.6 (g) (1) of the Administrative Code, sets forth seven questions to be answered in the Annual Report. The questions and the charts below summarize those responses from Sightseeing Bus Companies and City Agencies.

*1. What is the total number of diesel fuel-powered sightseeing buses licensed pursuant to Subchapter 21 of Chapter 2 of title 20 of the Administrative Code? (Ad. Code 24-163.6(g) (1)(i))*

There are 72 sightseeing buses licensed pursuant to *Subchapter 21 of Chapter 2 of Title 20 of the Administrative Code. (Ad. Code 24-163.6(g) (1) (i))*

*2. What is the number of such buses that utilized the best available retrofit technology? (24-163.6(g) (1) (ii))*

37 Vehicles utilize BART (See table Below).

Sight Seeing Bus Company	Number Licensed by DCA	Number with OEM	Number with BART	Type of Technology
Gray Line New York Tours Inc.	0	0	0	No buses were operated during FY 2021 due to pandemic.
City Sights New York LLC	0	0	0	No buses were operated during FY 2021 due to pandemic.
Go New York Tours Inc.	20	13	7	Two CDTI Active Electrical Regeneration units, Five CDTI Passive units and Thirteen are certified 2010-2014 model year engines (Equipped with OEM Installed Technology).
Skyline Tours, LLC D.B.A. Big Bus Tours	5	5	0	All five are certified 2012, 2013 model year engines (Equipped with OEM Installed Technology).

Sight Seeing Bus Company	Number Licensed by DCA	Number with OEM	Number with BART	Type of Technology
Taxi Tours D.B.A. Big Bus Tours NYC	46	17	29	There are Twenty-Nine Classification Level IV CDTI (DPF)'s. Seventeen are certified 2013, 2014 and 2015 model year engines (Equipped with OEM Installed Technology).
City Brew Tours NYC LLC	0	0	0	No buses were operated during FY 2021 due to pandemic.
Aurora Tourism Services LLC	1	0	1	No buses were operated during FY 2021 due to pandemic.

\* Pursuant to EPA regulations, all 2007 and later model engine years are certified to be at least as or more stringent as "BART" requirements because the manufacturer (OEM) equips the majority of them with DPFs. These are EPA Certified engines, therefore, meet LL41 requirements.

2007 and newer engines meet applicable United States Environmental Protection Agency (EPA) standards for Particulate Matter (PM) as set forth in *Section 86.007-11 of Title 40* of the Code of Federal Regulations. (2010 or newer Certified Engines gives NOx benefit in addition to PM).

According to Local Laws no.73 and no.74 of the City of New York for the year 2013.

None of these buses from the above list are under any waiver provisions and they all meet level 4 emission control strategy.

3. *What is the number of such buses that utilized other authorized technology? (24-163.6(g)(1)(iii))?*

Not applicable. All were either Level IV (DPF's)/BART or equipped with 2007 or newer model year engine/OEM Technology.

4. *What is the number of such buses that are equipped with engines certified to the applicable 2007 USEPA standard for Particulate Matter as set forth in §86.007-11 of Title 40 of the CFR? (24-163.4(g)(1)(iv))*

There are 35 such buses out of the 72 that are certified to the applicable 2007 USEPA standard.

5. *What were the locations where such buses utilized the best available retrofit technology? (24-163.6(g)(1)(v))*

These buses tour all of New York City, and as a result, this report provides the permanent addresses for the sightseeing companies.

Sight Seeing Bus Co.	Permanent Address	Mailing Address
Gray Line New York Tours Inc.	43 2 <sup>nd</sup> Avenue Brooklyn, NY 11215	1430 Broadway New York, NY 10018
CitySights New York LLC	33 2 <sup>nd</sup> Avenue Brooklyn, NY 11215	1430 Broadway New York, NY 10018
Go New York Tours Inc.	74 Onderdonk Avenue Ridgewood, NY 11385	2 East 42 <sup>nd</sup> Street New York, NY 10017
Skyline LLC.	723 7 <sup>th</sup> Avenue, NY (5 <sup>th</sup> Floor) New York, NY 10019	Same
Big Bus Tours NYC / Taxi Tours Inc.	723 7 <sup>th</sup> Avenue (5 <sup>th</sup> Floor) New York, NY 10019	Same
City Brew Tours NYC LLC	1 Grove Street Watertown, MA 02472	Same
Aurora Tourism Services LLC	25 Broadway (9 <sup>th</sup> Floor) New York, NY 10004	Same

6. *What was the age of the engine that did not utilize BART? (§ 24-163.6(g)(l)(vi))?*

All were equipped with BART classification level 4 device or were certified to 2007 and later model year engines, which are exempt from BART pursuant to 40 C.F.R. § 86.007-11.

7. *Were any waivers issued for failure to use BART? (§24-163.6(g) (1)(vii))?*

No waivers were issued.



## Local Law 42 Annual Report Fiscal Year 2021

§24-163.7 of NYC Administrative Code required that by September 1, 2006, certain General Education (GE) diesel fuel-powered school buses be powered by a specific diesel fuel, ultra-low sulfur diesel fuel (ULSD). In addition, §24-163.7 required that by September 1, 2007, all of these school buses use best available retrofit technology (BART) to reduce emissions.

Finally, §24-163.7 requires the Department of Education (DOE) to submit a report each year regarding the use of ultra-low sulfur diesel fuel and the use of the best available retrofit technology by school buses during the immediately preceding fiscal year and answering the specific questions below.

Of DOE's contracted GE diesel fueled fleet, 99.6 % of the vehicles are using emission control devices and 98.96% of the vehicles are using the best available devices.

Below are answers to the specific questions posed in Ad. Code 24-163.7(j)(1):

1. *What is the total number of school buses used to fulfill the requirements of school bus contracts? (Ad. Code 24-163.7(j)(1)(i))*

There is a fleet of 2,121 diesel powered Type C and D, general education school buses used to fulfill the requirements. (In total, there are currently 9,774 active or spare vehicles listed by vendors in OPT's system.)

2. *What is the total number of such buses that were powered by ULSD? (Ad. Code 24.163.7(j)(1)(ii))*

All the above buses are powered by ULSD.

3. *What is the number of such buses that used BART, including a breakdown by vehicle model, engine year, and the type of technology used for each vehicle? (Ad. Code 24.163.7(j)(1)(iii))*

455 buses used this technology. Counts by year below; please see Table 1 below for further breakdown.

**Table 1. Pre 2007 school buses by type of particulate reducing technology and manufacturer year.**

Technology	Manufacturer	Engine-Type	USLD	2003	2004	2005	2006	Total
Diesel Particulate Filter (DPF) Only	IC, Bluebird, Thomas	Cummins/ IC-Navistar/ Caterpillar/ Freightliner/ Ford	Yes	0	0	18	26	44

Technology	Manufacturer	Engine-Type	USLD	2003	2004	2005	2006	Total
Diesel Particulate Filter (DPF) with Closed Crankcase Ventilation System (CCVS)	IC, Bluebird, Thomas	Cummins/ IC-Navistar/ Caterpillar/ Freightline/ Ford	Yes	17	33	92	269	411
Diesel Oxidation Catalyst (DOC) with CCVS	IC, Bluebird, Thomas	Cummins/ IC- Navistar/ Caterpillar/ Freightliner/ Ford	Yes	0	0	0	1	1
DOC Only	IC, Bluebird, Thomas	Cummins/ IC- Navistar/ Caterpillar/ Freightliner/ Ford	Yes	0*	0*	0*	0*	0*
CCVS Only	IC, Bluebird, Thomas	Cummins/ IC- Navistar/ Caterpillar/ Freightliner/ Ford	Yes	0*	0*	0*	2*	2*
None	IC, Bluebird, Thomas	Cummins/IC- Navistar/ Caterpillar/ Freightliner/ Ford	Yes	0*	0*	0*	19*	19*
<b>Total Pre-2007 GE Diesel Fueled Bus Fleet</b>	-	-	-	<b>17</b>	<b>33</b>	<b>110</b>	<b>317</b>	<b>477</b>

\*Not required to retrofit as buses are part of 5-year waiver from the Mayor's Office

4. *What is the number of such buses that used other authorized technology in accordance with the law, including a breakdown by model and engine age technology? (Ad. Code 24.163.7 (j)(1)(iv))*

None. Please see Table 1 for the breakdown.

5. *What is the number of such buses that are equipped with an engine certified to the applicable 2007 EPA standard for particulate matter in accordance with the law? (Ad. Code 24.163.7(j)(1)(v))*

1,644 buses are equipped with the applicable 2007 EPA standard engines.

**Table 2. Post 2007 school buses by year of manufacture.**

<b>Year</b>	<b>Manufacturer</b>	<b>Engine-Type</b>	<b>ULSD</b>	<b>Number of Buses</b>
2007	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	107
2008	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	211
2009	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	142
2010	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	72
2011	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	261
2012	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	103
2013	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	69
2014	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	137
2015	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	121
2016	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	92
2017	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	40

Year	Manufacturer	Engine-Type	ULSD	Number of Buses
2018	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	84
2019	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	75
2020	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	55
2021	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	50
2022	IC, Bluebird, Thomas	Cummins/IC-Navistar/Caterpillar/Freightliner/Ford	Yes	25
<b>Post-2007 buses</b>	-	-	-	<b>1644</b>

6. *Where were the locations of the school districts where such buses were powered by ULSD, used BART or other authorized technology in accordance with this section, or were equipped with an engine certified to the applicable 2007 EPA standard for particulate matter? (Ad. Code 24.163.7(j)(1)(vi))*

All 32 community school districts within the five boroughs of New York City used these buses as well as school districts in Westchester, Rockland, Nassau, and Suffolk counties in New York.

7. *Were any waivers granted pursuant to 24-163.7(h) of this law? (Ad. Code 24.163.7(j)(1)(vii))*

No waivers were granted.



## **Local Law 43 / 2010 as Amended by Local Law 119 / 2016** **Fiscal Year 2021 Annual Report**

### **Introduction**

The environmental and public health benefits of blending biodiesel into heating oil are substantial. Unlike petroleum diesel, biodiesel is non-toxic and biodegradable, making it less of a threat to human health and the environment than petroleum-based fuels in instances of spills, and other direct exposure scenarios. Blending biodiesel into home heating oil leads to reductions in emissions, like particulate matter (PM), sulfates and air toxics that are harmful to public health, reductions in lifecycle carbon dioxide (CO<sub>2</sub>) emissions, reductions in agricultural and food waste, and increased sustainability in fuel production practices.

Biodiesel is a blend stock commodity primarily used as a value-added blending component with diesel fuel. Biofuels are a renewable energy source derived from organic material either directly from plants, or indirectly from agricultural, commercial, domestic, and industrial wastes. Over the past decade, public policy at the federal level, as well as in some states, is requiring the use of biofuels to displace petroleum-based fossil fuels as a way to reduce emissions of greenhouse gases and to enhance energy security by reducing dependence on foreign oil.

### **Laws and Regulations:**

Effective in 2012, New York City local law has required all heating oil dealers in the city to sell a B2 biodiesel blend in place of traditional heating oil. This trend continues as evidenced by the passage of LL43/2010 and amended by LL 119/2016 together they increase the requirement in heating oil from B2 to B5 for all buildings in New York City by October 1, 2017, and increase the percentage blended over the next 20 years.

§ 3. Subdivision (h) of Section 24-168.1 of the Administrative Code of the City of New York, as amended by local law number 38 for the year 2015, is amended to read as follows:

(h) The Commissioner shall have the authority to sample, test and analyze heating oil supplied to buildings in the city to determine compliance with this section.

### **% Bio-Diesel Blend in Heating Oil Program:**

The DEP laboratory evaluates the level of % Biodiesel in heating oil collected from a building's storage oil tanks, major oil companies' terminals, and oil trucks delivering oil to residential and commercial buildings. If a sample result is found to be below the regulated % Bio-Diesel Blend levels in heating oil, then summonses are issued by the Bureau of Environmental Compliance's (BEC) Enforcement group.

### **Data Discussion:**

July 1st, 2020 to June 30, 2021 BEC's Enforcement inspectors collected oil samples totaling 597 from the buildings. Due to the Coronavirus (COVID-19) pandemic schedule, no samples were collected during April 2020 to July 2020.

953 attempts were made during July 1st, 2020 to June 30th, 2021, with no super on site at the building or no entry to the building. Notice of no entry and pending appointment letter were left at each building for the building owners to call us back for revisit.

Of 597 samples examined for the percentage of biodiesel mixture in heating oil, 1 sample had corrective steps needed by the Enforcement Unit of BEC.