

New York City Department of Sanitation New York City Mayor's Office of Operations

Street and Sidewalk Cleanliness

Report 2019-N-1 | September 2020

OFFICE OF THE NEW YORK STATE COMPTROLLER
Thomas P. DiNapoli, State Comptroller

Division of State Government Accountability



Audit Highlights

Objective

To determine whether the New York City Department of Sanitation (DSNY) effectively monitors the cleanliness of New York City's (NYC) streets and sidewalks. We also assessed the methodology used by the Mayor's Office of Operations to rate street and sidewalk cleanliness. Our audit covered the period January 1, 2015 to September 27, 2019.

About the Program

DSNY's mission is to keep NYC healthy, safe, and clean – by collecting, recycling, and disposing of waste; cleaning streets and vacant lots; and clearing snow and ice. DSNY has access to several data sources that monitor the cleanliness of NYC's streets and sidewalks. This includes NYC311 sanitation service request data and certain other DSNY daily records, such as Mechanical Broom Daily Performance logs as well as Scorecard Ratings (or Project Scorecard) created by the NYC Mayor's Office of Operations (Operations). Together, these data sources are available to DSNY officials for identifying ongoing problem areas as well as evaluating the effectiveness of its sanitation operations. However, DSNY uses Project Scorecard as its only performance measure for monitoring the cleanliness of NYC's streets and sidewalks.

Key Findings

DSNY needs to improve its communication, coordination, and record keeping processes to efficiently and effectively address persistent cleanliness problems on NYC streets and sidewalks. Based on our site visits to a sample of 271 NYC blockfaces (one side of a city block, corner to corner, including the street and its sidewalk) with multiple NYC311 complaints, we determined 189 streets and 159 sidewalks were dirty based on Operations' Scorecard Ratings criteria. DSNY officials did not analyze readily available data such as NYC311 service requests or even its own monitoring records to identify problem areas or trends.

- DSNY did not effectively utilize or share relevant information across its bureaus and divisions. For example, although DSNY's Enforcement Division created an Area of Concern watch list based on its monitoring efforts, this information was not shared with other relevant departments for data analysis or cleaning route-planning purposes.
- DSNY does not monitor the daily performance of its street cleaning staff nor do supervisors monitor the cleanliness of NYC streets and sidewalks. For example, DSNY officials did not show they used available information (NYC311 and internal records) to plan the supervision of their cleaning and enforcement operations. DSNY officials maintain their staff know the problem areas in their districts and can plan the best use of DSNY's resources.
- Although DSNY officials identified Project Scorecard as their only performance measure for monitoring the cleanliness of NYC's streets and sidewalks, DSNY does not obtain detailed information from Project Scorecard or the Mayor's Office to effectively deploy its resources in response to Project Scorecard's findings.
- While the Scorecard may provide policy makers at Operations and DSNY with useful information, it does not provide DSNY with actionable cleanliness information, as the specific location of any dirty conditions is not reported. The methodology Operations uses to select streets and sidewalks

for Scorecard Ratings inspections not only dates back to 1973 but also is not documented. As such, there is no assurance that the blockfaces sampled for inspection are statistically representative of NYC and its various sections.

- The inspections are performed from a moving car, making it difficult for the inspectors to have an unobstructed view of the street/sidewalk being rated.

Key Recommendations

To DSNY:

- Use all available data sources, such as NYC311 service requests, violation summons data, and internal DSNY monitoring forms, to routinely identify specific areas with recurring dirty streets and sidewalks.
- Identify the root causes for recurring dirty areas and develop solutions to address them, including seeking community, department, or cross-agency engagements, where necessary.
- Develop and implement additional performance measures for identifying targeted needs of NYC's streets and sidewalks.

To Operations:

- Ensure that the appropriate criteria are applied when calculating Scorecard Ratings.
- Explore the value of performing inspections from the street or using other methodologies that provide an unobstructed view of the blockfaces being rated.
- Re-establish the sampling methodology to ensure that sampled blockfaces are representative of current-day NYC streets and sidewalks.



**Office of the New York State Comptroller
Division of State Government Accountability**

September 16, 2020

Ms. Kathryn Garcia
Sanitation Commissioner
New York City Department of Sanitation
125 Worth Street
New York, NY 10013

Mr. Jeff Thamkittikasem
Director
Mayor's Office of Operations
253 Broadway - 10th Floor
New York, NY 10007

Dear Commissioner Garcia and Director Thamkittikasem:

The Office of the State Comptroller is committed to helping State agencies, public authorities, and local government agencies manage their resources efficiently and effectively. By so doing, it provides accountability for the tax dollars spent to support government operations. The Comptroller oversees the fiscal affairs of State agencies, public authorities, and local government agencies, as well as their compliance with relevant statutes and their observance of good business practices. This fiscal oversight is accomplished, in part, through our audits, which identify opportunities for improving operations. Audits can also identify strategies for reducing costs and strengthening controls that are intended to safeguard assets.

Following is a report of our audit entitled *Street and Sidewalk Cleanliness*. This audit was performed pursuant to the State Comptroller's authority under Article V, Section 1 of the State Constitution and Article III of the General Municipal Law.

This audit's results and recommendations are resources for you to use in effectively managing your operations and in meeting the expectations of taxpayers. If you have any questions about this report, please feel free to contact us.

Respectfully submitted,

Division of State Government Accountability

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Glossary of Terms

Term	Description	Identifier
Acceptably clean	Term used in Operations' Scorecard guidelines to describe conditions where inspectors found sparse or no litter	<i>Key Term</i>
ASP	Alternate side parking	<i>Key Term</i>
Blockface	One side of a city block, corner to corner, including both the street and its sidewalk	<i>Key Term</i>
BCC	DSNY's Bureau of Cleaning and Collections	<i>Department</i>
DCI list	District Cleaning Issues list	<i>Key Term</i>
Dirty	Used to describe conditions that did not meet the acceptably clean standard specified in Operations' Scorecard guidelines	<i>Key Term</i>
DSNY	New York City Department of Sanitation	<i>Auditee</i>
DS350B	DSNY's Mechanical Broom Daily Performance log for DSNY staff	<i>Key Term</i>
Enforcement	DSNY's Enforcement Division	<i>Department</i>
FY	Fiscal Year	<i>Key Term</i>
MMR	Mayor's Management Report	<i>Key Term</i>
NYC	New York City	<i>Key Term</i>
NYC311	Program designed to help NYC agencies improve service delivery – by promoting feedback between agencies and the public	<i>Program</i>
Operations	New York City Mayor's Office of Operations	<i>Agency</i>
OMD	DSNY's Operations Management Division	<i>Department</i>
Scorecard Ratings	Section-level, district-level, and borough-level cleanliness assessment conducted by Operations; also known as Project Scorecard	<i>Performance Measure</i>
Service requests	Public complaints or concerns addressed to DSNY through the NYC311 resource	<i>Key Term</i>

Background

The New York City (NYC) Department of Sanitation's (DSNY) mission is to keep NYC healthy, safe, and clean – by collecting, recycling, and disposing of waste; cleaning streets and vacant lots; and clearing snow and ice from approximately 6,300 miles of streets. According to the NYC Mayor's Management Report (MMR), DSNY disposed of about 3,248,100 tons of refuse during NYC fiscal year (FY) ended June 30, 2019. During this period, DSNY's workforce included 7,893 uniformed and 2,457 civilian personnel and a fleet of over 2,200 collection trucks, 450 mechanical brooms, and 690 large and small salt spreaders.

DSNY's Bureau of Cleaning and Collections (BCC), Enforcement Division (Enforcement), and Operations Management Division (OMD) have critical roles regarding street and sidewalk cleanliness.

- BCC is responsible for cleaning the streets and uses mechanical brooms (i.e., street sweepers) and motorized litter patrols. BCC also collects residential refuse, recyclables, and organics. During snow season, BCC removes snow and spreads salt on roads.
- Enforcement administers the laws and policies that govern the cleanliness of NYC's streets and sidewalks, including the proper storage and disposal of waste or recyclables, property owners' responsibility for sidewalk cleaning (including 18 inches from the curb into the street), and alternate side parking (ASP) regulations, which are enforced through issuance of violation summonses and fines.
- OMD is responsible for monitoring, analyzing, and strategizing ways to improve DSNY's operations, productivity, and performance.

DSNY has access to several data sources to monitor the cleanliness of NYC's streets and sidewalks, including: Scorecard Ratings created by the NYC Mayor's Office of Operations (Operations); NYC311 service requests data; and other daily records, such as DSNY's Mechanical Broom Daily Performance logs (DS350B). Together, these data sources can help DSNY to identify ongoing problem areas and evaluate the effectiveness of its sanitation operations.

Scorecard Ratings appear in the DSNY section of the bi-annual MMR, a document that contains performance metrics for all NYC agencies. DSNY uses Operations' Scorecard Ratings as its sole performance measure for monitoring the sanitation operations, and cleaning efforts are increased in areas where Operations assessed poor Scorecard Ratings. Operations creates a monthly Scorecard Rating on the percentage of acceptably clean streets and sidewalks in Sanitation Cleaning Districts (i.e., Community Districts) and subsets of areas within them, called Sanitation Cleaning Sections. The Scorecard Rating also provides an overall rating by borough as well as citywide for the period covered. Operations' Scorecard Ratings are based on inspectors' drive-by inspections for a fixed sample of approximately 8,200 blockfaces (i.e., one side of a city block, corner to corner, including both the street and its sidewalk) of the more than 120,000 blockfaces that comprise NYC.

Operations rates streets and sidewalks as either “acceptably clean,” “not acceptably clean,” or “filthy,” as further described in Table 1.

Table 1 – Scorecard Ratings Scale

Score	Observation	Evaluation
1.0	Clean; no litter	Acceptably clean
1.2	Clean; few traces of litter	Acceptably clean
1.5	Littered with gaps between litter; not concentrated; no piles	Not acceptably clean
1.8	Littered; concentrated in spots; large or small gaps between piles	Filthy
2.0	Littered; concentrated in spots; small gaps between piles	Filthy
2.5	Littered; highly concentrated; no gaps; straight line along and over the curb	Filthy
3.0	Littered; very highly concentrated; no gaps; straight line along and over the curb	Filthy

For the three FYs 2016-18, Operations determined that, on average, 95.3 percent of NYC streets and 97 percent of NYC sidewalks were acceptably clean.

Audit Findings and Recommendations

Weaknesses in key management controls, including communication, coordination of efforts, and record keeping, impede DSNY's ability to efficiently and effectively address ongoing cleanliness problems on NYC streets and sidewalks. DSNY's focus on day-to-day cleaning operations has led to weaknesses in how it identifies and ameliorates ongoing cleanliness issues. While DSNY has the tools to identify persistent problem areas and evaluate the effectiveness of its sanitation operations, it does not utilize them to identify problem areas or trends that require additional attention or to mitigate underlying causes.

Although DSNY makes certain monitoring reports and other information available throughout the agency, which could be useful in DSNY's oversight of the cleanliness of NYC's streets and sidewalks, it does not have procedures guiding staff on how to use them to enhance services and, in particular, resolve persistent problem areas, nor does it know if such reports are even used. In addition, DSNY has not taken steps to maximize the value of data compiled internally to identify root causes of chronic sanitation problems. As a result, certain properties continued to receive numerous cleanliness complaints through NYC311. Without analyzing and acting on all available data, including complaints, to identify and mitigate the underlying problem, there is material risk that the same sanitation problems will continue to surface and negatively impact the quality of life for residents and visitors in those areas. Furthermore, taking action to identify and address root causes could potentially free up resources to address other issues.

DSNY officials use Operations' Scorecard Ratings as their sole performance measure for monitoring the cleanliness of NYC's streets and sidewalks. However, Operations has not refined its methodology since the Scorecard Ratings program was established in 1973. It is likely that the many demographic and land use changes that have occurred in the nearly 50 years since could impact results.

DSNY's Oversight of NYC's Street and Sidewalk Cleanliness

DSNY is responsible for all functions and operations in NYC related to the cleanliness of streets and the disposal of waste – including sweeping and cleaning of streets and removing and disposing snow and other encumbrances from NYC's streets – and has a variety of tools (see Exhibit A) at its disposal to monitor and identify areas of NYC with persistent cleanliness issues. However, we found that DSNY officials' focus on day-to-day cleaning operations has led to weaknesses in how they identify and ameliorate ongoing cleanliness issues. To determine the effectiveness of DSNY's monitoring, we visited certain NYC streets (i.e., blockfaces) with a known history of being dirty to determine if DSNY was aware of these ongoing issues and took corrective actions.

Site Visits to Areas With Persistent Complaints

During the three-month period of July to September 2019, we visited a judgmental sample of 271 blockfaces based on addresses and adjacent areas with multiple

NYC311 complaints received and verified by DSNY between July 1, 2015 and June 30, 2018 to determine whether DSNY’s monitoring tools capture ongoing problem conditions and whether DSNY uses them to develop solutions to address root causes. Our purpose was not to draw conclusions about the cleanliness of all NYC streets, but rather to determine the adequacy of the processes that DSNY has in place to identify and monitor problem areas. For our review of the conditions at each of the sampled blockfaces, we used Operations’ Scorecard Rating definition of “acceptably clean” to determine if a sampled blockface was either acceptably clean or dirty. Based on our observations, we determined that, for the majority of these areas, sanitation problems were ongoing, as shown in Table 2. This included 64 dirty streets at blockfaces where street cleaning was scheduled for the dates of our visits. These blockfaces were assessed as dirty before and after the scheduled street cleaning times.

Table 2 – Summary of Observed Dirty Conditions, by Borough

Borough	Sampled Blockfaces	Blockfaces With Dirty Streets	Blockfaces With Dirty Sidewalks	Blockfaces With Dirty Streets Before/After Scheduled Cleaning
Bronx	53	34	28	30
Brooklyn	62	44	39	20
Manhattan	50	34	27	3
Queens	61	47	40	11
Staten Island	45	30	25	0
Totals	271	189	159	64

At one of the sampled blockfaces in Queens, we found dirty conditions on all three of our site visits, as shown in Image 1. The “No Garbage Call 311” spray-painted on a storefront gate is suggestive of area residents’ frustration with the persistent conditions.

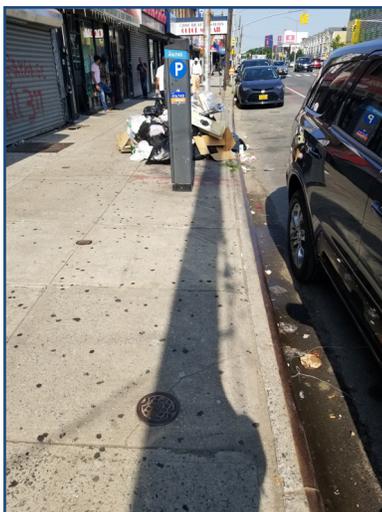


Image 1 (left to right): Conditions observed during three visits to a sampled blockface in Queens (July 9, July 16, and September 24, 2019, respectively).

At a Bronx blockface, scheduled for street cleaning on the day of our visit, we observed street and sidewalk litter (Image 2 left). We returned the next day to review the effectiveness of DSNY’s efforts at maintaining the blockface’s cleanliness, but found that litter conditions had deteriorated (Image 2 right).



Image 2: (Left) Street and sidewalk conditions observed on our first visit to a sampled blockface in Bronx. **(Right)** Observations of deteriorated conditions at the same blockface one day later.

Along with significant litter issues (e.g., unsecured litter, overflowing litter baskets with spillage, and litter dump areas), we also observed unsanitary conditions (feces, vomit, soiled diapers, decaying animal/rodent carcasses) and instances of opened hydrants flushing litter through the streets and, in some cases, down storm drains. None of these conditions were identified by DSNY.

Comparison of Our Blockface Observations With DSNY Monitoring Tools

DSNY maintains several internal tools to monitor sanitation conditions. District Condition Drop-Off logs are used to identify areas that need to be or have been cleaned. Mechanical Broom Daily Performance logs identify areas that street sweepers were unable to clean. The Areas of Concern watch list and District Cleaning Issues (DCI) list are used by Enforcement and BCC, respectively, to identify recurring issues.

A comparison of observations with these reports identified significant discrepancies, as shown in Table 3:

- Only 8 of the 189 blockfaces where we observed dirty streets were identified on the District Condition Drop-Off logs.
- The Mechanical Broom Daily Performance log did not document the dirty conditions we observed on the 64 blockfaces that were scheduled for cleaning.
- Only 47 of the 189 blockfaces that we identified as dirty were included on the Areas of Concern watch list and only 12 were on the DCI list. As discussed

earlier, these blockface samples received multiple NYC311 service requests and DSNY had confirmed that dirty conditions existed.

Table 3 – Discrepancies Between OSC Observations and DSNY’s Internal Monitoring Results

DSNY Monitoring Tool	Description	Number of Dirty Street Blockfaces Identified by OSC	Number of Dirty Street Blockfaces Identified by DSNY
DS350B – Mechanical Broom Daily Performance log	Daily report by street sweepers on conditions encountered or areas unable to be cleaned	64 (only includes blockfaces with scheduled cleaning)	0
DS1375 – District Condition Drop-Off log	Log maintained by DSNY supervisors that identified areas that need to be or have been cleaned by DSNY	189	8
Enforcement’s Areas of Concern watch list	Watch list of problem areas likely in violation of sanitation rules	189	47
DCI list	List of areas with recurring issues	189	12

Notably, neither the Areas of Concern watch list nor the DCI list include details of known issues in the area or the cause of the conditions, which could guide DSNY in mitigating the source of the problem. DSNY officials stated that, even if they possessed detailed information, they may not be able to address the root causes. Using one of our observations – of someone scavenging through garbage bags and spreading the contents on the street – as an example, Enforcement officials explained they are unable to issue violation summonses to prevent such behavior if, for example, the individual is homeless. However, officials were unable to show whether they attempted to coordinate with the relevant NYC or State agency for assistance. Without adequate coordination, such root causes remain unaddressed and require repeat DSNY resources to clean the areas.

DSNY Use of Monitoring Reports

As described earlier, DSNY has at its disposal a number of reports and sources of data that it can utilize to improve the effectiveness of its cleaning operations (see Exhibit A). While DSNY makes certain monitoring reports available throughout the agency, DSNY does not provide staff with meaningful guidance on how to use these tools, nor does it ensure that departments with resource planning and operations responsibilities are actually using them to enhance efficiency and effectiveness of their operations.

For example, as stated on the DSNY website, OMD is responsible for monitoring, analyzing, and strategizing ways to improve operations, productivity, and performance – responsibilities that would ordinarily require the use of key data sources for reliable analysis and informed decision making. When asked how OMD uses the reports for these purposes, DSNY officials advised us that OMD does not specifically analyze the cleanliness of NYC’s streets or sidewalks. Rather, OMD ensures the monthly Scorecard Rating and certain NYC311 data are available for review on NYC’s Citywide Performance Reporting system – a DSNY internal dashboard available to BCC and Enforcement.

DSNY also could not show that it analyzed other available data, including sanitation violation summons data, staff reports, and NYC311 service request data, to identify and address recurring problems or areas with ongoing cleanliness issues. For example, although DSNY officials identified sanitation events that hinder street-cleaning efforts (e.g., cars parked in violation of ASP rules, illegal dump areas), DSNY officials could not show they used available information to plan the supervision of cleaning and enforcement operations.

In response, DSNY officials emphasized the importance of the NYC311 service request reports they create for monitoring purposes; however, these reports are limited to only overflowing litter baskets, missed collections, and missed or inadequate sweeping. As shown in Exhibit B, there are over a dozen NYC311 complaint categories that relate to street and sidewalk cleanliness. Some of these conditions are reported more frequently, but DSNY does not monitor them in the same detailed way. For example, of the 142,084 NYC311 service requests related to street and sidewalk cleanliness made during FYs 2016 through 2019, 4,576 (3 percent) were related to overflowing litter baskets. However, nearly 11 times that number of service requests – 51,027 (36 percent) – were for dirty sidewalks, yet DSNY does not create a monitoring report for this category of complaints. By limiting their monitoring reports to such a narrow range of complaints, DSNY officials are not effectively identifying all the areas with ongoing cleanliness problems. In addition, NYC311 service requests are specific to an address or intersection and may not accurately capture the aggregate sanitation conditions along the entire blockface, which would consist of multiple addresses.

Throughout DSNY, we observed a focus on addressing the routine, day-to-day cleaning needs of NYC, such as completing cleaning routes and addressing 311 service requests. DSNY officials explained that, with their operational approach, problem areas receive routine, scheduled cleanings and service requests are addressed in a timely manner, and cited these as reasons for not regularly analyzing the data available to them. We firmly believe that analyzing and acting on available data can enable DSNY to more effectively plan and maintain cleanliness in these areas, thereby freeing up resources to address other service issues. DSNY must use its resources as judiciously as possible.

BCC Monitoring

BCC is responsible for monitoring street cleaning and collection activities. However, DSNY officials explained that, due to limited resources, BCC supervisors do not monitor the daily performance of their street cleaning staff or the cleanliness of NYC streets and sidewalks. When asked how they ensure staff are performing their duties to DSNY's standards, DSNY officials advised us that street cleaning staff are instructed to continually assess their own and their equipment's performance during operations. However, in comparison to our observations, as noted previously, the BCC monitoring reports (Mechanical Broom Daily Performance and District Condition Drop-Off logs) did not capture the majority of the conditions that existed. As a result, BCC's monitoring is incomplete as BCC supervisors do not monitor cleaning activities and the monitoring reports do not capture all conditions. The lack of information hinders their ability to make informed decisions on how to deploy limited street cleaning resources.

Enforcement Actions

Given its responsibilities to identify and respond to violations of street and sidewalk cleanliness rules as well as other violations of sanitation rules, Enforcement plays a valuable role in identifying and tracking areas with significant and persistent cleanliness problems. However, not all areas with cleanliness problems are tracked adequately.

Although Enforcement agents create logs of their daily activity, these logs do not appear to provide a clear record of specific addresses or areas with sanitation issues. While DSNY has access to internal and external data sets on sanitation violations, not all areas that are problematic or in violation receive a violation summons. For example, Enforcement agents may patrol city streets throughout the day, but DSNY can only issue certain violation summonses (i.e., tickets) to property owners or businesses during specific routing hours – that is, one hour in the morning and one hour in the evening for residential properties and a varied schedule for commercial properties. If a condition warranting a violation summons is observed outside of the routing hours, DSNY is not allowed to issue a violation summons.

Furthermore, as a matter of policy and law, DSNY does not issue tickets to public entities (i.e., federal, State, NYC agencies) – nor to the Metropolitan Transportation Authority. DSNY officials indicated that the agency is generally preempted from issuing summonses to federal and State agencies for dirty conditions. However, there does not appear to be any restriction on DSNY identifying and documenting cleanliness issues on such properties even if it does not take enforcement action. Such information could be used in conjunction with the data sets and monitoring tools described previously to help identify problem areas and facilitate coordination with other agencies to address the issue and possibly even resolve the underlying cause. As a result, the data available does not capture areas that are in violation of cleanliness and sanitation rules or the source of the issue. The lack of this information limits Enforcement's ability to make more informed decisions. Relatedly,

DSNY officials informed us that their staff does not contact other government agencies (e.g., New York Police Department) for assistance in enforcing ASP regulations.

DSNY officials advised us that their enforcement actions are not limited to violation summonses, and also include providing property owners with outreach materials or contacting public entity liaisons to inform them of conditions that are in violation. However, we note that, for NYC, State, or federal entities, DSNY does not maintain or track the location, frequency, or severity of areas with sanitation problems, nor does it track whether its outreach was successful. DSNY officials explained they were limited in the type of actions that could ensure public entities respond to their concerns. However, without adequate coordination, these areas may always be problematic. Furthermore, public entities are no less responsible for maintaining their properties than owners of private residential and commercial properties. Just as private property owners are subject to enforcement actions, DSNY should explore available options to ensure public entities fulfill their cleanliness responsibilities.

As mentioned earlier, Enforcement uses an Areas of Concern watch list to identify areas where dirty conditions persist. According to DSNY officials, Enforcement compiles this information from various sources, including NYC311 DSNY executive correspondence, DSNY's first deputy commissioner, BCC, Community Board representatives, and other NYC agencies. However, DSNY does not maintain a policy that directs how the watch list is created or used. Without a consistent basis for determining which areas are problematic, areas that warrant inclusion may be omitted from the list and areas that don't warrant inclusion may be added. In addition, sharing data with other DSNY units better ensures that relevant information can be assessed to identify root cause issues and effective mitigations. We also found that Enforcement did not share its findings with other DSNY divisions or bureaus (such as BCC or OMD). Moreover, despite documenting problem areas, DSNY provided no evidence that Enforcement used the watch list to plan enforcement routes. Instead, Enforcement officials advised us that their staff are assigned to predetermined regions and may choose to patrol their assigned regions as they deem fit unless otherwise directed by a supervisor.

DSNY officials informed us that, in response to the audit findings, OMD developed a monitoring report that identifies locations that have multiple NYC311 complaints and would make this report available to DSNY departments. Nevertheless, DSNY officials maintain their staff know the problem areas in their district and can thus plan the best use of DSNY's resources. Without reviewing available information, DSNY would not be utilizing relevant data that would allow it to effectively monitor the cleanliness of NYC's streets and sidewalks.

Scorecard Ratings

DSNY uses Operations' Scorecard Ratings as its sole performance measure for monitoring the cleanliness of NYC's streets and sidewalks. However, we identified certain weaknesses, most notably in Operations' street and sidewalk inspection

process and its calculation of ratings, that challenge the reliability of results. In response to our audit findings, Operations officials indicated they would take specific steps to improve their process.

Inspections

Based on our observations, we question whether Operations' drive-by approach to inspections provides inspectors with a clear line of sight of the actual conditions of NYC's streets or sidewalks, especially when inspecting areas that are blocked from view by parked cars or areas on the opposite side of the street. However, Operations officials maintain this process is similar to inspection processes other U.S. cities use in assessing streets and sidewalk cleanliness, and stated that drive-by inspections are cost-effective, require fewer resources, and are safer for inspectors. Nevertheless, drive-by inspections, where parked cars or other obstructions block the street gutter and parts of the sidewalk, are inherently prone to underreporting, and we believe Operations should take steps to ensure inspectors have a clear view of both the street and sidewalk that is being rated to increase the accuracy of the rating.

Sample Methodology

The Mayor's Office does not maintain a written copy of the blockface sample selection methodology. As a result, there is no assurance that the sample blockfaces, which Operations uses in rating cleanliness, are representative of NYC and its various sections. Furthermore, there is no assurance that the sample selection considered population density or other factors, such as land use, that may have a greater impact on public perception of an area's cleanliness when more individuals view the same location. In addition, the sample of blockfaces has remained unchanged since the initial selection in 1973 – areas that developed in the nearly 50 years since are not sampled or inspected.

Ratings Calculation

Operations used a new computer system to calculate the November 2018 cleanliness ratings and observed a sharp decline in cleanliness ratings. To compensate, Operations modified the ratings calculation from the existing process to average the November 2018 ratings with ratings from the year before. During our review of the Project Scorecard process, we identified an error in the code used by the new computer system, wherein the code was using a stricter criterion to determine which blockfaces were acceptably clean, and informed Operations of this. In response to our preliminary findings, the Mayor's Office disclosed in its FY 2019 MMR that certain coding errors affected the street and sidewalk cleanliness ratings for November 2018 through June 2019 and did not report ratings in the MMR for that time period. Operations officials expressed their intent to correct the system to ensure the appropriate methodology is applied. The Preliminary MMR issued in February 2020 notes that street cleaning information is not available for FY 2018 and FY 2019.

Blockface Segments

For rating purposes, inspectors divide blockfaces into smaller segments (up to four segments) and rate the cleanliness of each segment independent of the others. For each blockface, Operations averages the blockface segments' cleanliness ratings to determine whether the whole blockface is acceptably clean or dirty. The total number of acceptably clean blockfaces is converted into a percentage for each Sanitation Cleaning Section. To determine the percentage of clean streets and sidewalks for the entire Sanitation Cleaning District, each Section's rating is weighted by mileage.

Blockface segments are not predefined on the inspection maps and, therefore, inspectors must use their own judgment to determine the segments for a given blockface. Furthermore, Operations does not have written instructions to ensure all inspectors define segments in the same manner. Inspectors' variations in segment determination within a blockface can alter the blockface's cleanliness average rating by diluting or concentrating litter into certain segments. Operations inspects 8,273 of the more than 120,000 blockfaces in NYC. Of the 8,273 blockfaces inspected from January 2015 through July 2019, 5,883 blockfaces were inspected based on a different number of segments. While the sampled blockfaces remain static to ensure consistency, there is a risk that inconsistent segments can produce less reliable results. Table 4 illustrates how variations in segmentation for a given blockface can skew results. In our example, Blockface A would be considered clean based on four segments, but would be considered dirty based on three segments.

Table 4 – Impact of Variations in Blockface Segmentation on Overall Rating

Blockface A	Segment Rating				Average	Blockface Acceptably Clean?
	1	2	3	4		
Inspection based on 3 segments	2.0	1.2	1.5	NA	1.57	No
Inspection based on 4 segments	2.0	1.2	1.2	1.5	1.48	Yes

Operations stated that the use of a different number of segments is unlikely to significantly impact cleanliness ratings. However, its response was based on a review of over 475,000 inspections performed over the same period of our review and not on whether a specific blockface or Sanitation Cleaning Section may have been impacted. As we demonstrated, the number of segments can impact the overall blockface rating. More importantly, Operation officials' explanation is based on citywide averages across all blockfaces rather than the potential impact on a smaller area such as a Sanitation Cleaning Section, which contains a significantly smaller number of blockfaces. A single blockface change from a failing rating to an "acceptably clean" rating could impact the Sanitation Cleaning Section's overall rating. Operations should take steps to formalize the number and locations of segments within a blockface to ensure consistent ratings.

Use of Scorecard Cleanliness Ratings

While inspections are performed on a static sample of streets and sidewalks, the locations are known only to the Mayor's Office. According to Operations officials, locational information of inspection areas is intentionally confidential to ensure the integrity of inspection results. As such, Scorecard Ratings are only representative of larger areas such as Sanitation Cleaning Sections and Sanitation Cleaning Districts. As a result, when a Sanitation Cleaning Section receives a relatively lower rating, DSNY officials explained that they may assign additional resources to the entire Sanitation Cleaning Section rather than specific areas within the Section that are not "acceptably clean."

DSNY officials did not provide records to show they increased their efforts in such areas with a lower Scorecard Rating; rather, they explained they would continue to follow their usual cleaning and collection process. We note that Sanitation Cleaning Sections as well as borough cleanliness scores tend to fall within a narrow range across NYC, making it even more difficult for DSNY to determine where it may need to deploy additional resources. For example, the May 2018 Scorecard reported an overall cleanliness score for sidewalks of 98.2 percent, ranging from a low of 96.6 percent for the Bronx to a high of 99.1 percent for Manhattan and Staten Island. Only 2 of the 59 Sanitation Cleaning Districts had a cleanliness rating below 90 percent (88.7 percent).

DSNY officials cite a high Scorecard Ratings percentage of acceptably clean streets and sidewalks as support of the effectiveness of their cleaning operations, even though various DSNY officials acknowledged limits in the Scorecard's application. We believe that DSNY's ineffective use of its monitoring toolset hampers DSNY's ability to adequately identify and track areas with persistent problems that may not be represented in the Scorecard Ratings. To this point, DSNY could meet its future target for FYs 2020 and 2021 – that is, 92 percent of streets deemed acceptably clean – and certain areas of the City can be unacceptably dirty and spur repeat NYC311 service requests. Unless DSNY takes appropriate steps to improve its monitoring efforts, these specific addresses and intersections will continue to rely on DSNY to address persistently dirty areas on an ad hoc basis rather than potentially addressing the root causes and freeing up limited resources.

Recommendations

To DSNY:

1. Use all available data sources, such as NYC311 service requests, violation summons data, and internal DSNY monitoring tools, to routinely identify specific areas with recurring dirty streets and sidewalks, and take appropriate corrective actions.
2. Identify the root causes for recurring dirty conditions, and develop solutions to address them beyond the immediate need for cleaning. This can include

seeking community, department, and cross-agency engagements, where appropriate.

3. Develop and implement DSNY-driven performance measures for meeting the cleaning needs of NYC's streets and sidewalks that can be used in addition to Scorecard Ratings.
4. Develop measures to ensure the reliability of DSNY's monitoring data so that management can make appropriate governance decisions.

To Operations:

5. Ensure that the appropriate criteria are applied when calculating Scorecard Ratings.
6. Explore the value of performing inspections from outside of the inspection vehicle or using other methodologies that provide an unobstructed view of the blockfaces being rated.
7. Re-establish the sampling methodology to ensure that sampled blockfaces are representative of NYC streets and sidewalks.
8. Develop guidance for determining segment definitions for blockface inspections.

Audit Scope, Objective, and Methodology

The objective of our audit was to determine whether DSNY effectively monitors the cleanliness of NYC's streets and sidewalks. We also assessed the methodology used by Operations to rate street and sidewalk cleanliness. Our audit covered the period January 1, 2015 to September 27, 2019.

To accomplish our objective, we reviewed laws and regulations and policies, procedures, and directives related to street and sidewalk cleanliness. We interviewed officials from DSNY's BCC, Enforcement, and OMD and Operations to gain an understanding of their efforts. In addition, we obtained and analyzed Operations' cleanliness inspection data for inspections performed from January 2015 through July 2019. We became familiar with, and assessed the adequacy of, the internal controls in place at DSNY and Operations as they related to our audit objective.

We judgmentally selected blockfaces to visit and determine whether any DSNY monitoring tool identified the same conditions we observed. For our sample, we examined NYC311 service requests assigned to DSNY during the three FYs ended June 30, 2018 for a total of 104,714 service requests, as detailed in Exhibit B. Next, we identified and selected service requests where DSNY confirmed in the NYC311 data that its staff found dirty conditions at the reported location – by either issuing a violation summons or noting its staff cleaned up the location. From these service requests, we selected addresses to visit from Sanitation Cleaning Sections with the most confirmed dirty conditions. We performed visits to these addresses between July 2019 and September 2019 and evaluated the entire blockface and adjacent blockfaces.

Of the 278 blockfaces selected for review in each of NYC's boroughs (Brooklyn, Bronx, Manhattan, Queens, and Staten Island), 7 were either inaccessible at the time of inspection or there was not sufficient time to visit. We reviewed street and sidewalk cleanliness of the sampled blockfaces using the same criteria used by Operations. We compared our observations to DSNY resources, including DS350B, DS1375, enforcement logs, and lists of problem areas. The results of our sample cannot be projected to the population as a whole, but support the findings, conclusions, and recommendations in this report.

Statutory Requirements

Authority

This audit was performed pursuant to the State Comptroller's authority under Article V, Section 1 of the State Constitution and Article III of the General Municipal Law.

We conducted our performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

As is our practice, we notify agency officials at the outset of each audit that we will be requesting a representation letter in which agency management provides assurances, to the best of their knowledge, concerning the relevance, accuracy, and competence of the evidence provided to the auditors during the course of the audit. The representation letter is intended to confirm oral representations made to the auditors and to reduce the likelihood of misunderstandings. Agency officials normally use the representation letter to affirm that, to the best of their knowledge, all relevant financial and programmatic records and related data have been provided to the auditors. They further affirm either that the agency has complied with all laws, rules, and regulations applicable to its operations that would have a significant effect on the operating practices being audited, or that any exceptions have been disclosed to the auditors. However, officials at Operations have informed us that, as a matter of policy, mayoral agency officials will not provide representation letters in connection with our audits. As a result, we lack assurance from DSNY and Operations that all relevant information was provided to us during the audit.

In addition to being the State Auditor, the Comptroller performs certain other constitutionally and statutorily mandated duties as the chief fiscal officer of New York State. These include operating the State's accounting system; preparing the State's financial statements; and approving State contracts, refunds, and other payments. In addition, the Comptroller appoints members to certain boards, commissions, and public authorities, some of whom have minority voting rights. These duties may be considered management functions for purposes of evaluating organizational independence under generally accepted government auditing standards. In our opinion, these functions do not affect our ability to conduct independent audits of program performance.

Reporting Requirements

We provided a draft copy of this report to DSNY and Operations officials for their review and formal comment. Their comments were considered in preparing this final report and are attached in their entirety at the end of it. DSNY and Operations officials generally agreed with the report's recommendations, indicating that actions will be taken to strengthen practices. However, they did disagree with certain of our conclusions. Operations officials advised that the Scorecard Ratings have provided

a consistent measure of the cleanliness of NYC streets and sidewalks, and that this consistency has provided insight to DSNY on its performance. However, Operations officials acknowledge the value of updating their practices to ensure the ratings are accurate indicators of the city's street cleanliness. Budget cuts and realignment of funds have the potential to impact DSNY operations related to street and sidewalk cleanliness. Consequently, we recommend that DSNY ensure that its resources are used judiciously and effectively. Our responses to certain of DSNY's and Operations' comments are included in the report's State Comptroller's Comments.

Within 180 days after final release of this report, we request that the Commissioner of the Department of Sanitation and the Director of the Office of Operations report to the State Comptroller, advising what steps were taken to implement the recommendations contained herein, and where recommendations were not implemented, the reasons why.

Exhibit A

DSNY's Monitoring Tools

Name of Data Set	Description
External Tools	
Scorecard Ratings	Section-level, district-level, and borough-level cleanliness assessment
NYC311 Service Requests	Complaints about dirty area or unsanitary conditions
Internal Tools	
Mechanical Broom Daily Performance log (DS350B)	Reports on performance of street cleaning operations
District Condition Drop-Off log (DS1375)	Addresses/locations in need of sanitary services
District Cleaning Issues list	List of areas with recurring issues
Areas of Concern watch list	Watch list on problem areas in violation of sanitation rules
Violation summonses	Issued summonses for violations of sanitation rules and regulations

Exhibit B

NYC311 Service Request Categories Related to Street and Sidewalk Cleanliness City FY 2016 Through FY 2019

NYC311 Complaint Item No./Category	NYC311 Complaint Classification	Complaint Type per OSC Review	Service Request Counts
E3: Dirty Sidewalk	Dirty Conditions	Dirty Street/Sidewalk	51,027
E3A: Dirty Area/Alleyway	Dirty Conditions	Dirty Street/Sidewalk	25,413
E4: 18-Inch Law	Dirty Conditions	Dirty Street/Sidewalk	1,558
E5: Loose Rubbish	Dirty Conditions	Dirty Street/Sidewalk	5,382
E11: Litter Surveillance	Dirty Conditions	Dirty Street/Sidewalk	4,567
E12: Illegal Dumping Surveillance	Dirty Conditions	Dirty Street/Sidewalk	11,669
E13: Throw-Out	Dirty Conditions	Dirty Street/Sidewalk	1,447
3: Sweeping/Missed-Inadequate	Sweeping/Missed-Inadequate	Dirty Street/Sidewalk	90
3A: Sweeping/Missed	Sweeping/Missed	Dirty Street/Sidewalk	4,078
3B: Sweeping/Inadequate	Sweeping/Inadequate	Dirty Street/Sidewalk	1,304
9: Spill/Oil etc.	Sanitation Condition	Dirty Street/Sidewalk	20
E1A: Litter Basket/Improper Use	Dirty Conditions	Public Litter Baskets	1,214
6: Overflowing Litter Baskets	Overflowing Litter Baskets	Public Litter Baskets	4,576
6R: Overflowing Recycling Baskets	Overflowing Recycling Baskets	Public Litter Baskets	96
10: Litter Basket/Request	Litter Basket/Request	Public Litter Baskets	11,673
E8: Canine Violation	Dirty Conditions	Animal Excrement	9,275
8: Request to Clean Vacant Lot	Vacant Lot	Vacant Lot	8,695
Total			142,084

Agency Comments - NYC Department of Sanitation



sanitation

Kathryn Garcia Commissioner

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August 13, 2020

Kenrick Sifontes
Audit Director
Office of the State Comptroller
Division of State Government Accountability
59 Maiden Lane - 21st Floor
New York, NY 10038

Dear Audit Director Sifontes:

Thank you for the opportunity to provide responses to the Draft Audit Report of the Office of the New York State Comptroller regarding Street Cleanliness (Draft Report # 2019-N-001, dated July 15, 2020).

The New York City Department of Sanitation (DSNY) keeps our City healthy, safe and clean by collecting, recycling and disposing of waste, cleaning streets and vacant lots, and clearing snow and ice. The Department was originally created as the Department of Street Cleaning in 1881, and since that time has remain committed to our important work to protect public health and improve the quality of life in New York City.

Today, the Department employs more than 9,500 men and women who carry out this mission day-in and day-out. In fact, the success of our efforts is very much based on the routine and consistent nature of our services. We are one of the only city agencies that visits nearly every block across the city several times per week.

To keep the streets of New York City clean, DSNY employs a variety of strategies. Refuse collection crews and dedicated litter basket crews empty the city's 23,000 litter baskets. Mechanical brooms sweep up loose litter along the curb lines of our 6,500 miles of streets, often with the assistance of alternate side parking regulations to move cars out of the parking lane and open curb access. Mobile litter patrol crews address garbage drop offs and other conditions on streets and public spaces, while our lot cleaning unit cleans vacant lots public and private alike.

Our goal is for New Yorkers to wake up in the morning to empty litter baskets and clean streets, to improve the quality of life for New Yorkers in every neighborhood. Our work is most successful when we are not noticed – a clean curb or empty litter basket rarely draws a post on Twitter or call to 311. And over the past several years, we have largely achieved this goal.

We acknowledge that there is always more to do and opportunity for improvement. But at the time this audit was conducted, New York City was cleaner than ever before. This was true despite record high population, employment, tourism and economic activity.

New York's Strongest

Today, the importance of these day-to-day services cannot be clearer. The COVID-19 pandemic has taken an immeasurable toll on our City and State. In the face of economic hardship, and to ensure the City can continue to devote resources to essential safety, health, shelter and food security needs, the City has been forced to make several tough budget cuts, including to many of DSNY's cleaning programs. Today, we run 63 percent fewer litter basket trucks per week than we did a year ago. We have reduced staffing for lot cleaning and eliminated supplementary highway collection, and the City's budget crisis restricts us from responding as quickly and nimbly to cleaning issues as they arise.

These cuts have had real consequences. But they show very clearly that when you take away the routine and consistent service, litter accumulates, and cleanliness deteriorates. That is why we focus so heavily on these services and their effective, efficient delivery in our management of street cleanliness.

Detailed responses to the audit findings and recommendations included in the Draft Report are appended to this letter. However, I would also like to offer two clarifications to points presented in the Draft Report:

- While the cleaning of streets is a clear duty of the Department of Sanitation under the New York City Charter and Administrative Code, responsibility for cleaning sidewalks falls on the owners of the property adjacent to such sidewalks. Section 16-118 of the New York City Administrative Code requires that property owners keep clean the sidewalk abutting their property as well as the area along the curbline 18 inches into the street, a requirement that dates back more than half a century. The Department enforces these requirements but does not have resources to proactively clean litter off City sidewalks.
- The Draft Report correctly notes that DSNY does not issue tickets to other public entities, including city, state and federal agencies, due to a lack of authority over those agencies. However, state agencies and authorities often fail to properly maintain their properties, including adjacent streets and sidewalks. While we agree that DSNY could do more to identify and document this failure by other public entities, we also hope that the Office of the State Comptroller would exercise its jurisdiction over those entities to encourage good practice.

[Comment 1](#)

[Comment 2](#)

Thank you for the opportunity to provide these responses to the Draft Report. I appreciate your consideration of these responses as you finalize the audit.

Sincerely,



Kathryn Garcia
Commissioner

Attachment:

DSNY Response to Findings and Recommendations

We have reviewed your draft report # 2019-N-001, dated July 15, 2020, on whether the New York City Department of Sanitation (DSNY) effectively monitors the cleanliness of NYC’s street and sidewalks. The report highlights two major areas of concern, “DSNY’s Oversight of NYC’s Street and Sidewalk Cleanliness” and “Scorecard Ratings.” For each of the two areas, the report lists specific findings and recommendations as well as other issues that need to be addressed. In our response below, we will address each of the findings, recommendations and other areas of concern.

A. DSNY’s Oversight of NYC’s Street and Sidewalk Cleanliness:

Finding #1: (Reference – Page #1)

DSNY did not effectively utilize or share relevant information across its bureaus and divisions. For example, although DSNY’s Enforcement Division created an Area of Concern watch list based on its monitoring efforts, this information was not shared with other relevant departments for data analysis or cleaning route-planning purposes.

Agency Response:

DSNY disagrees with this finding. As highlighted throughout the audit report, DSNY utilizes many sources of data relating to cleanliness, street and sidewalk conditions, requests for service, coupled with daily reports and observations from the field supervisors and Enforcement personnel. In fact, the “Area of Concern” watch list is developed from the information provided by the District field staff and serves to coordinate enforcement efforts in areas of the city with recurring, problematic cleaning concerns.

The state auditors finding on how DSNY utilizes the data and daily observations, misinterprets how the various data sets are used daily to manage cleaning operations. While we appreciate that there is always room for improvement in how we catalog and utilize data, the statement that the Department does not effectively utilize or share data is plainly inaccurate. At the time of the audit, prior to the COVID-19 pandemic, New York City streets and sidewalks were cleaner than at any other time in the past century. Achieving such results with more than 6,500 linear street miles would not be possible without effective information sharing and coordination between bureaus and divisions.

[Comment 3](#)

As to the example that our Enforcement Division having an “Area of Concern” watch list that was not shared with other relevant DSNY bureaus and division, the Enforcement Division utilizes this list to assist code enforcement officers and agents with situational awareness who may lack familiarity to a specific geographical area. The other relevant bureaus and divisions, including the Cleaning Office and field districts, are the ones who facilitated the development of that list with daily communications and constant coordination. The Bureau of Cleaning and Collections district-assigned supervisors and the route planning teams are the ones who report locations and request added presence as needed from enforcement personnel. The District Superintendent will routinely direct enforcement activity towards areas of concern. The workflow, exchanges and interactions were explained to the State auditors, but the auditors appear not to have interpreted this information as it occurs in practice. The Bureau of Cleaning and Collection very intentionally shares data with the Enforcement Division to ensure the most comprehensive approach to keeping the streets clean.

[Comment 4](#)

Finding # 2: (Reference – Page #1)

DSNY does not monitor the daily performance of its street cleaning staff nor do supervisors monitor the cleanliness of NYC streets and sidewalks. For example, DSNY officials did not show they used available information (NYC311 and internal records) to plan the supervision of their cleaning and enforcement

operations. DSNY officials maintain their staff know the problem areas in their districts and can plan the best use of DSNY's resources.

Agency Response:

DSNY disagrees with this finding. The first sentence is misstated, since the state auditors interviewed field supervisors and observed firsthand that their scope of work included being assigned to cleaning operations in their respective geographic coverage area.

Additionally, the state auditors cited the closing out of 311 complaints, the entries in the District Cleaning log and comments on forms such as the DS350B. All those observations listed by the state auditors in the audit report clearly show that DSNY does monitor the daily performance of its street cleaning staff and the cleanliness of NYC streets.

[Comment 5](#)

DSNY Supervisors in fact did respond to the very same 311 complaints the state auditors cited in their report. Also, the auditors cite the specific "Areas of Concern" list utilized by the Enforcement Division in Finding #1, but then contradictorily state that we do not use internal reports to deploy enforcement resources in this finding. Hence, we completely disagree with the finding.

[Comment 6](#)

We also disagree with the way the finding was construed, since it portrays the agency as not monitoring its staff or the cleanliness of the city. Despite our limited resources, DSNY does monitor the daily performance of all staff assigned to street cleaning. Obviously, we do not assign an individual Supervisor to every Sanitation Worker operating a mechanical broom or crew assigned to basket collection or street cleaning functions. Such a practice would be operationally infeasible and financially irresponsible. Supervisors are trained to track the effectiveness of the several Sanitation Workers cleaning and collection crews they oversee daily, through field observations, field meetings, GPS technology, and other methods.

[Comment 7](#)

DSNY conducts extensive training for field supervisors, called "Cleaning Field Intensive Training" or "Cleaning FIT." All newly promoted Supervisors and Superintendents receive one-on-one field and administrative training from a Deputy or Assistant Chief in the Cleaning Office. The officers are trained in detail on how to properly supervise cleaning operations, inspect and address to 311 complaints, and complete the other elements of the daily Cleaning Field Inspection Checklist. Training typically occurs soon after the newly promoted officers have completed their promotional training at the Department's training facility at Floyd Bennett Field. The training takes place in the officer's assigned district to better acclimate the officer to their assigned work location. In the last two years, DSNY has trained 218 officers in Cleaning FIT, including 164 Supervisors and 54 Superintendents.

B. Scorecard Ratings:

Finding # 3: (Reference – Page #1)

Although DSNY officials identified Project Scorecard as their only performance measure for monitoring the cleanliness of NYC's streets and sidewalks, DSNY does not obtain detailed information from Project Scorecard or the Mayor's Office to effectively deploy its resources in response to Project Scorecard's findings.

Finding # 4: (Reference – Page #1)

While the Scorecard may provide policy makers at Operations and DSNY with useful information, it does not provide DSNY with actionable cleanliness information as the specific location of any dirty conditions is not reported. The methodology Operations uses to select streets and sidewalks for Scorecard Ratings

inspections not only dates back to 1973 but also is not documented. As such, there is no assurance that the block faces sampled for inspection are statistically representative of NYC and its various sections.

Agency Response to Finding #3 and #4:

DSNY disagrees with these findings. DSNY did not identify Project Scorecard as the only performance measure for monitoring cleanliness of NYC’s streets and sidewalks. While it is the primary indicator the Department uses to measure the overall effectiveness of our cleaning programs, it is far from the only measure used. The state auditors cited 311 requests and cleaning condition logs, both of which have a logged condition as well as a recorded investigative finding as well as a resolution action. The Department routinely issues internal reports on 311 complaint and service request data at the District and Borough levels and has developed a robust set of analytical tools and reports on the Oracle Business Intelligence platform. Additionally, there are several performance indicators published in the annual MMR directly relating to the cleanliness of NYC streets and vacant lots.

Comment 8

While DSNY defers to the Mayor’s Office of Operations on findings related to Project Scorecard methodology, DSNY disagrees with the overall characterization of the intent and usefulness of the Project Scorecard data.

As described in the Draft Report, Project Scorecard is an independent and objective evaluation of street and sidewalk cleanliness performed by the Mayor’s Office of Operations. It is intended to provide a neighborhood-level assessment of average cleanliness using a static survey sample across rating periods. Its general approach and methodology have remained largely consistent for nearly five decades, making the scorecard ratings an impressive and immensely useful longitudinal assessment of street and sidewalk cleanliness in New York City over time. We have a routine dialogue with the team at Project Scorecard. We exchange ideas and discuss methodology regularly.

As to getting “detailed information” or “actionable cleanliness information” from the Mayor’s Office of Operations as it relates to their findings, that is clearly not the intent of the program. The independence and anonymity of the Mayor’s Office operational routing is key to the integrity of the rating areas and is the cornerstone of the program – a feature, rather than a deficiency. The program is designed to limit the department’s ability to just focus resources exclusively on where we would be rated. The concept is their sampling gives an overview of all the streets in the City.

Finding # 5: (Reference – Page #2)

The inspections are performed from a moving car, making it difficult for the inspectors to have an unobstructed view of the street/sidewalk being rated.

Agency Response:

DSNY defers to the Mayor’s Office of Operations on findings related to Project Scorecard methodology.

A. DSNY Recommendations

Recommendation # 1: (Reference – Page #17)

Use all available data sources, such as NYC311 service requests, violation summons data, and internal DSNY monitoring tools, to routinely identify specific areas with recurring dirty streets and sidewalks and take appropriate corrective actions.

Agency Response:

DSNY does agree that utilizing all available data can help plan more effective resource deployments. We will conduct a review of all sources and look to consolidate reports to improve their effectiveness.

Recommendation # 2: (Reference – Page #17)

Identify the root causes for recurring dirty conditions and develop solutions to address them beyond the immediate need for cleaning. This can include seeking community, department, and cross-agency engagements, where appropriate.

Agency Response:

DSNY has a long tradition of engagement with the local stakeholders, other government agencies, and elected officials to educate and seek solutions for chronic areas of cleaning concerns.

Keeping NYC clean is a core mission for DSNY, but the majority of tools available to us and assessed in this audit are reactive ones—applied after a litter condition or dirty area is already present. In many cases, DSNY can provide the solution to a symptom of a problem, but not the underlying social, economic, psychological and behavior challenges that cause them. We continue to strive to better educate and inform the constituents and residents of the best practices and seek partnerships with other stakeholders to help address these underlying drivers of litter. Now, more than ever, we rely on the partnership of our fellow New Yorkers – residents and business alike – to keep our City clean.

[Comment 9](#)

Recommendation # 3: (Reference – Page #18)

Develop and implement DSNY-driven performance measures for meeting the cleaning needs of NYC’s streets and sidewalks that can be used in addition to Scorecard Ratings.

Agency Response:

As described in the response to findings above, DSNY uses a variety of performance measures, reports and data analysis tools to inform our approach to street cleanliness. In addition, some of the most critical information—including observations by field Supervisors—is called in and acted upon in real time, a level of responsiveness not represented by the auditors in this Draft Report.

DSNY will explore creating additional internal reports using all the data collected as well as the “real time” observations of DSNY field staff. However, given the current fiscal crisis brought on by the COVID-19 pandemic, it is unlikely that any new staff or resources will be available for this purpose at this time.

Recommendation # 4: (Reference – Page #18)

Develop measures to ensure the reliability of DSNY’s monitoring data so that management can make appropriate governance decisions.

Agency Response:

DSNY will take this recommendation under consideration. However, given the current fiscal crisis brought on by the COVID-19 pandemic, it is unlikely that any new staff or resources will be available for this purpose at this time.

Agency Comments - NYC Mayor's Office of Operations



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JEFF THAMKITTIKASEM
Director, Office of Operations

August 14, 2020

Mr. Kenrick Sifontes
Audit Director
Office of the New York State Comptroller
Division of State Government Accountability
59 Maiden Lane, 21st Floor
New York, NY 10038

Dear Mr. Sifontes,

The Mayor's Office of Operations (Operations) appreciates the effort and professionalism that the Office of the State Comptroller (OSC) displayed throughout this audit. Operations' mission is to serve New York City's vulnerable populations in a compassionate, efficient and effective manner and remains committed to identifying opportunities for improvement to the Scorecard program.

For almost five decades, Scorecard has generated a consistent measure of the cleanliness of New York City's streets and sidewalks, which has provided insight into the cleaning performance of the Department of Sanitation (DSNY), Business Improvement Districts (BIDs), and other stakeholders. The consistency of these ratings is a key value of Scorecard, as it allows for longitudinal analysis, amongst other benefits. Preserving the consistency of the ratings is a crucial factor in considering any changes to the program. Operations also recognizes the value of updating our practices and policies, to increase program efficiency, improve the job experience of Scorecard raters, and ensure the ratings produced are accurate indicators of the city's street cleanliness.

[Comment 10](#)

Over the past year, Operations has identified and implemented improvements for Scorecard, including upgrades to inspection reporting technology. The exploration of further improvements is underway, with implementation determined by feasibility and benefit to the program. In this context, Operations appreciates OSC's findings and takes its recommendations for improvement seriously. In the text below, Operations provides input, clarity and context to OSC's audit.

Inspections

Since its inception, Scorecard has conducted street and sidewalk cleanliness ratings with pairs of raters assessing conditions from moving cars. This method is time efficient as it enables the teams to visit a high number of blockfaces.

As of July 1, 2020, Scorecard launched a pilot program in which raters work solo, rather than in teams of two, and exit their vehicle to conduct visual inspections. Operations will review the performance of the pilot, determine its effectiveness, and decide if it makes sense to adopt going forward.

Sample Methodology

The Urban Institute, a DC-based think tank, independently developed the Scorecard blockface selection methodology. That methodology was then adapted for use by New York City by the Fund for the City of New York and DSNY. The potential for bias in the sample is limited, since the selection of the blockface sample was based on an objective methodology, created by an independent entity.

Operations' analysis of the blockface sample found that the selection is spatially random within each section, which is one approach to equitably sampling the city. Random spatial selection is not inherently less valid than sampling with respect to population density, as OSC suggests. For example, analysis of Scorecard data does not demonstrate a correlation between higher population densities and lower cleanliness scores.

However, Operations does appreciate the analytic opportunities that could result from the selection of a new sample of blockfaces, generated from an updated methodology produced by the City, and will explore this further. In this effort, Operations will consider the use of factors recommended by OSC, while balancing the value generated from Scorecard's historic continuity.

Ratings Calculation

Scorecard has resolved the technical error that caused a ratings miscalculation in a transparent and proactive manner. The error is noted in both the FY 2019 MMR and FY 2020 Preliminary MMR.

OSC's report inaccurately notes that, "[The Preliminary MMR issued in February 2020] sets a target of 92 percent for street cleanliness for FYs 2020 and 2021, which is a level below what has been previously reported." However, the target of 92 percent for "Streets rated acceptably clean (%)" has been stable since 2009 (when it increased from 90%), so it is not clear what is being referred to in OSC's statement.

[Comment 11](#)

Blockface Segments

Operations has begun developing a distance-based scheme to pre-assign the number of segments for each blockface in the Scorecard sample. This assignment is currently underway, and Operations anticipates launching the new procedure with pre-assigned segments in the coming months. This approach will increase consistency, automate the rating process, and simplify decision-making processes.

Although Operations is working to optimize the process of assigning segments to blockfaces, it disagrees with OSC's finding that the existing assignment procedure biases Scorecard's ratings. The example provided by OSC does not accurately capture the rating process and supports an inaccurate conclusion. More detail about this analysis is included in an endnote.¹

[Comment 12](#)

Use of Scorecard Ratings

The consistent reporting of cleanliness indicators over decades is a feature of the program, and is unmatched by other cities across the country. The value of this consistent reporting is preserved by Scorecard's blockface sample remaining undisclosed to DSNY. By design, Scorecard provides section, district, borough, and citywide level cleanliness indicators, but not more granular, blockface level data.

OSC Recommendations

OSC's Recommendation: "Ensure that the appropriate criteria are applied when calculating Scorecard Ratings."

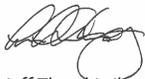
Operations' Response: Operations has already corrected the technical error that caused the ratings miscalculation.

OSC's Recommendation: "Explore the value of performing inspections from outside of the inspection vehicle or using other methodologies that provide an unobstructed view of the blockfaces being rated."
Operations' Response: Operations is piloting a solo-rating program that features raters exiting the vehicle. Continuation of the pilot will be subject to reviews of the pilot's performance.

OSC's Recommendation: "Re-establish the sampling methodology to ensure that sampled blockfaces are representative of NYC streets and sidewalks."
Operations' Response: Operations is exploring the development of a new methodology and a new blockface sample.

OSC's Recommendation: "Develop guidance for determining segment definitions for blockface inspections."
Operations' Response: Operations is currently implementing a pre-assigned segment scheme that will be deployed in the upcoming months.

Sincerely,



Jeff Thamkittikasem

ENDNOTE

¹OSC's audit provides an example of two blockface ratings to support the claim that "Additional segments can alter the average by concentrating or diluting litter into certain segments." This claim does not accurately capture the rating process and supports an inaccurate conclusion. Inspectors rate blockfaces by splitting them into equally sized segments, and then scoring each segment based on the physical quantity of litter in the segment. Changing the number of segments does not change the amount of litter present on the street. Thus, in OSC's example, if an inspector were to rate the same street with different numbers of segments (3 segments vs. 4 segments), the scores for each segment will change and the average blockface score will not change substantively. In the hypothetical example OSC provided, splitting a blockface into different numbers of segments produces contradictory results (see Figure 1). OSC's example is inaccurate because it assumes the inspector has altered the length of each segment when assigning 4 segments instead of 3, but has not subsequently altered the actual segment ratings.

Operations' data analysts modified this visual to more clearly align with inspectors' practice of assigning segments of equal length to a given blockface (see Figure 2).

When the inspector assigns 4 blockfaces instead of 3, the changed segment boundaries result in the altered scores for segments 1 and 2, and thus produces a higher blockface average than OSC's example. Assigning the blockface 4 segments, instead of 3, does not change the overall result; the blockface still fails the inspection. While this is just one hypothetical response to OSC's example, it demonstrates the point that changing only the number of segments for a blockface does not alter the underlying distribution of litter, and therefore does not present an easy or straightforward way to bias the overall blockface average score.

[Comment 12](#)

Figure 1. OSC Example

Blockface	Segment 1	Segment 2	Segment 3	Segment 4	Blockface Score	Number of segments
A	2	1.2	1.5	Blank	1.57	3
A (OSC - different segment count)	2	1.2	1.2	1.5	1.48	4

Figure 2. Operations Version of OSC Example

Blockface	Segment 1	Segment 2	Segment 3	Blockface Score	Number of segments
A	2	1.2	1.5	1.565	3

0.33 weight
0.33 weight
0.33 weight

Blockface	Segment 1	Segment 2	Segment 3	Segment 4	Blockface Score	Number of Segments
A (OSC - different segment count)	1.8	1.8	1.2	1.5	1.575	4

0.25 weight
0.25 weight
0.25 weight
0.25 weight

x represents a quantity of litter

State Comptroller's Comments

1. Our report recommends that DSNY identify the root causes of recurring dirty conditions, thereby reducing the recurrence of such conditions and freeing up limited resources.
2. DSNY is responsible for enforcing the rules and regulations regarding street and sidewalk cleanliness and for encouraging other government agencies to act responsibly. Our role is to review these efforts and provide meaningful recommendations for improved DSNY practices.
3. We did not misinterpret how the various data sets are used. Rather, we identified gaps in DSNY's monitoring of street and sidewalk cleanliness and how these gaps relate to areas with recurring dirty conditions. DSNY's responses to the draft report and throughout the audit reflect a focus on day-to-day operations. Our recommendations are designed to help DSNY use data more comprehensively and effectively and, in so doing, identify and address areas with recurring conditions. As discussed in the report, the Scorecard Ratings do not provide the level of detail needed to identify such areas. Moreover, existing 311 reports were significantly limited in scope.
4. DSNY explained that the Areas of Concern watch list is compiled through various sources, but ultimately Enforcement has the discretion regarding what areas to include on the list. However, Enforcement could not explain what criteria are used to determine the areas that are included on the list. Additionally, communication must be two way: without sharing the list, other units would not know which other problem areas have been identified by Enforcement, increasing the risk that BCC and Enforcement may duplicate efforts to respond to these areas.
5. Our audit findings do not include the closing out of 311 requests. As shown in Table 3, we observed 189 dirty conditions that were often not documented by DSNY monitoring tools. For example, we identified 64 blockfaces that were dirty before and after scheduled street cleanings. However, despite DSNY's requirement that sweeper staff identify such areas in their DS350B forms, these conditions were not identified.
6. Our audit sample was selected based on areas with recurring 311 requests that were confirmed to be dirty by DSNY for the three FYs ended June 30, 2018. While DSNY responded to those 311 requests, our observations in 2019 showed many of these locations were still routinely dirty after cleaning and yet these recurring conditions were not identified by DSNY staff. Moreover, the existence of a list is not evidence that DSNY is using it. Enforcement officials could not provide details on how the Areas of Concern watch list is used to establish enforcement routes.
7. As discussed, because the existing monitoring tools did not adequately capture the conditions identified by auditors, DSNY must take steps to improve its monitoring. Throughout our audit, we identified underused DSNY data sets that could be used more effectively.
8. While DSNY maintains data regarding street and sidewalk cleanliness, such data is not aggregated or analyzed, continually reported on, or set against a benchmark or goal that would be considered a performance measure. For example, cleaning condition logs are maintained at the district garage level; however, the information in the logs is

not compiled or tested against a metric. Furthermore, the 311 reports from the Oracle Business Intelligence platform, which DSNY presented to the auditors, were significantly limited in scope. As discussed in the audit report, one of DSNY's 311 reports focused only on complaints regarding overflowing litter baskets, despite the fact that service requests regarding dirty sidewalks were 11 times more frequent.

- 9.** As discussed in the audit report, DSNY may not be able to address all root causes. However, DSNY, as the agency with most direct knowledge of cleanliness issues, is the key agency to bring forth these issues to appropriate entities who may be unaware such conditions are ongoing.
- 10.** The report was modified to acknowledge Operations' efforts. See page 15.
- 11.** The report was modified for clarity.
- 12.** As discussed in the report, without adequately defined blockface segment lengths, each inspection may vary from a prior inspection in regard to the number and length of segments. Such variances, as shown by OSC and Operations' examples, can in fact impact the blockface score. We are encouraged by Operations' plans to standardize blockface segments to address this risk.

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