



City of Cambridge

Executive Department

YI-AN HUANG
City Manager

December 4, 2023

To the Honorable, the City Council:

I am hereby submitting this report on the **Evaluation of the 2023 Street Cleaning Pilot**. In response to the Council Order requesting a report on the feasibility of eliminating regular towing as part of the street cleaning process, the Department of Public Works (DPW) implemented the Pilot Program in 2023. City staff from DPW and the Traffic, Parking and Transportation Department have evaluated the Pilot over the 2023 season and report the following on the effectiveness of the Pilot and recommendations for additional modifications to the Pilot for the City's 2024 street cleaning season.

REPORT INCLUDES:

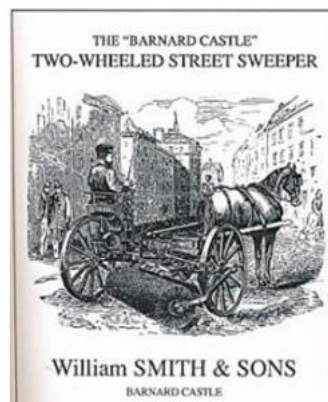
1. History of the program – How and why do we do street sweeping?
2. Key Elements of the Pilot 2023 Street Sweeping Program
3. Public Outreach
4. Evaluation of the Pilot
5. Recommendations for 2024 Street Sweeping Program

1. HISTORY OF THE PROGRAM – HOW AND WHY DO WE DO STREET SWEEPING?

The street sweeping program goes back to 1885 and is focused on keeping the streets clean, free of leaves, rubbish and debris, and improving the water quality of storm water that is discharged to the Charles River and Alewife Brooke.

Brief History of Street-Cleaning

- ~1885: Annual cleaning of paved streets manually by "section men"
- 1895: First horse-drawn mechanical sweepers purchased
- 1923: First gasoline-powered sweepers purchased
- 1945: Mechanical street sweeping twice a year
- 1970: Tickets were \$5 (\$30 in 2023 \$) for street-cleaning and \$1 (\$6 in 2023 \$) for other tickets
- 1973: Pilot tag-and-tow street-cleaning introduced in Wellington-Harrington
- 1974: City-wide tag-and-tow street-cleaning introduced, April to Nov
- 1998: Street-cleaning extended through December



The program evolved over the years to include towing. The ticketing alone system was not working. The streets were not able to be properly cleared due to too many vehicles blocking the operation. In 1969 City Manager Jim Sullivan called the condition of the streets “deplorable” and the current towing program went into effect five years later. In 1998, when the City Council discussed the extension of street cleaning to December, Councillor Davis observed that “street cleaning is like eating your vegetables; you may not like it, but it’s good for you.”

While towing improves the effectiveness of street cleaning, the inconvenience of having a vehicle towed can be significant for residents. Other communities have eliminated towing as part of the street cleaning program, with somewhat mixed results. Both **Somerville** and the **Charlestown** neighborhood of Boston do not tow for street cleaning and are reasonably satisfied with the results. Boston increased the tickets associated with street cleaning and both communities provide **twice monthly street sweeping vs. Cambridge’s once a month** program. The **remainder of Boston** continues to have a ticket and tow program. **New York City** has alternating street cleaning for 90-minute periods and does not typically tow. They report that 50% of drivers have stopped moving vehicles, decreasing the effectiveness of the program.

Current Program – How is the program implemented?

The residential street sweeping program sweeps **both sides of every residential street once per month April through December** using mechanical brooms. During the months of April, July, and November regenerative air (vacuum) sweepers are used in addition to the mechanical sweepers. The City also sweeps plazas/arteries/squares (daily), bike lanes, and parking lots. Certain **main streets** with primarily meter parking are swept overnight more frequently than monthly (no towing on overnight routes).

The street sweeping program has benefits for both general **cleanliness and storm water**.

- a) **1,500-2,000 tons of material** (litter, debris, leaves, and sediment) are removed from Cambridge streets during a typical year.
- b) **Accessing the curb** is critical for effective street sweeping, as a USGS street sweeping study in Cambridge found that 57% of solids are within 3ft of the curb and 95% of solids are within 9ft of the curb.
- c) Street sweeping **decreases storm water pollution** by reducing the amount of suspended sediment, nutrients, and other pollutants that reach the Charles River and the Alewife Brooke. For this reason, street sweeping is a requirement of the City’s storm water discharge permit with EPA/DEP.
- d) Street sweeping **decreases the amount of phosphorus** that reaches the Charles River and the Alewife Brooke on an annual basis and will be included in our Phosphorus

Control Plan as one of the strategies to meet our required target of reducing 700 pounds of Phosphorous per year to the Charles River.

- e) Street sweeping **reduces the risk of localized flooding** by keeping storm drains clear of leaves and debris.
- f) City staff coordinate **catch basin inspections and cleanings** with street cleaning to reduce additional parking disruptions and simplify this maintenance work.

2. KEY ELEMENTS OF THE 2023 STREET SWEEPING PILOT

- a) No enforcement of towing.
- b) **Increased street cleaning violation from \$30 ticket to \$50 ticket** for each violation.
- c) Modified the street cleaning contract to **provide additional handwork and leaf blowers** to clean around parked vehicles, particularly in **months when the leaves and debris are the heaviest**. This increased the existing \$500,000 annual street sweeping contract by 25% to include an additional \$125,000 for hand crews. Hand crews were used during the month of April and October 15 through December 7.
- d) **Outreach to the community** introducing the Pilot and reminding residents of the importance of continuing to move vehicles.

3. PUBLIC OUTREACH

Numerous efforts were made to widely advertise the 2023 Street Cleaning Pilot.

Outreach focused on the **following messages**:

- a) **Announcing the Pilot Program** and increase to \$50 tickets for parking violations.
- b) Emphasizing residents should **continue to move vehicles** for street cleaning.
- c) Encouraging residents to **sign up for automatic street cleaning notifications** at cambridgema.gov/StreetCleaningReminders. At the beginning of the Pilot, there were 15,000 people signed up for automatic street cleaning notifications. Currently there are 16,100 (7.3% increase).
- d) Distributing the **street cleaning schedule** (attached at the end of this report). All residents that receive a residential parking permit or visitor pass receive this information, but additional means of distributing this information was completed during the Pilot.
- e) Asking residents for feedback on the Pilot through a **public survey**.

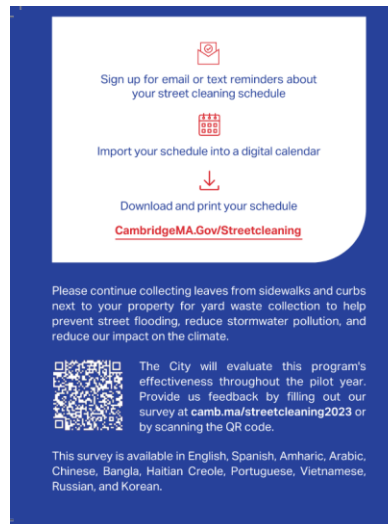
The following is a summary of **outreach completed**:

- a) **Public SurveyMonkey** ([Street Cleaning Pilot Survey](#)) open 3/21/2023 until 12/30/2023. Through 11/13/2023, 181 responses have been received.

- b) The **City's 2023 Resident Opinion Survey** included the question below on the street cleaning pilot.

"As you may know, the City implemented a street cleaning pilot program that replaced towing associated with street cleaning with a \$50 fine. Thinking about the current level of cleanliness of our streets, **do you favor or oppose this pilot program becoming permanent?**"

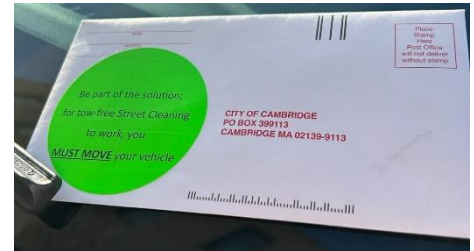
- c) Street cleaning web page (cambridgema.gov/streetcleaning) updated on 3/21/2023 to include information about the Pilot. This webpage typically has 15,000 views annually.
- d) 52,966 Post Card Mailers sent on 3/22/2023 (mailed to every household in the City), as shown below.



Cambridge DPW
147 Hampshire St.
Cambridge MA 02139

- e) Eight (8) 24" x 36" **sign holders placed throughout the City**
- f) Press Release 3/21/2023
- g) [News story](#) published to the DPW homepage on 3/21/2023 and featured in the City's Daily Email (sent to ~15,500 subscribers) on 3/21, 3/23, 3/24, 3/25, 4/2, 4/3, and 4/4/2023.

- h) Inclusion in the **City Managers Digest** on 3/24/2023 and 5/5/2023
- i) [Second news story](#) published to the DPW homepage on 10/30/2023 and featured in the City's Daily Email (sent to ~15,500 subscribers) on 11/2/2023 through 11/8/2023.
- j) **NBC10 Boston Interview** aired on 4/20/2023
- k) **Social media posts:** Facebook and Twitter – 3 times in the spring and 5 times in the fall.
- l) Green **high visibility stickers on ticket envelopes** issued for street cleaning violations in November and December. Tickets include the slogan, **“Be a part of the solution. In order to keep street cleaning tow-free, you must move your vehicle!”**
- m) **CodeRED message** issued 11/19/2023 (123,000 recipients)
- n) Article in DPW's **Recycling E-Newsletter** 12/4/2023 (10,084 recipients) and DPW's new **Forest Friends E-Newsletter** 11/22/2023 (504 recipients) stressing the importance of moving vehicles for the last month of street cleaning.



4. EVALUATION OF THE PILOT

Throughout 2023 staff evaluated the effectiveness of the Pilot Program based on the following factors:

- a) **Volume of material** being collected.
- b) **Number of tickets** issued for street cleaning violations.
- c) Number of **multiple violations** issued for street cleaning.
- d) **Street cleanliness**, particularly in areas with higher number of vehicles ticketed for street cleaning.
- e) **Survey of residents** asking for feedback on the Pilot.

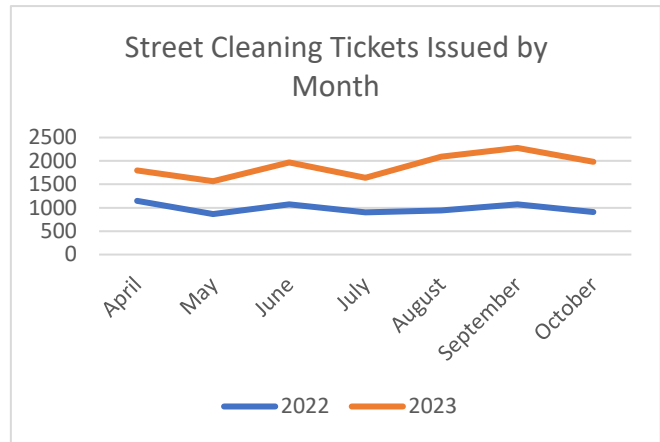
a) Volume of Material Collected

Currently 1,500 to 2,000 tons of material (litter, debris, leaves and sediment) are removed in a typical year. DPW is monitoring the street sweeping volume of material, which is currently down approximately 10% compared to 2022 through the end of October but will complete a final evaluation at the end of December once the 2023 street cleaning season is complete.

b) Number of Tickets

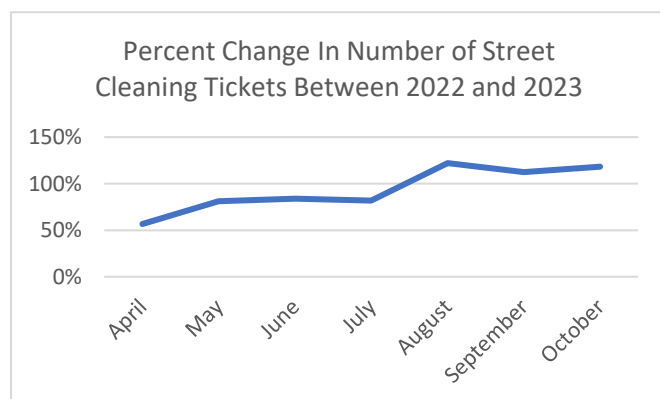
During the 2023 Pilot, the number of tickets issued for street cleaning parking violations increased by an average of 93%. In April through October 2022, 6,905 tickets were issued for street cleaning and 5,749 vehicles were towed. In 2023, the number of tickets issued rose to 13,322.

Street Cleaning Tickets Issued by Month		
	2022	2023
April	1147	1797
May	865	1567
June	1071	1971
July	903	1641
August	940	2088
September	1072	2278
October	907	1980
Total	6905	13322



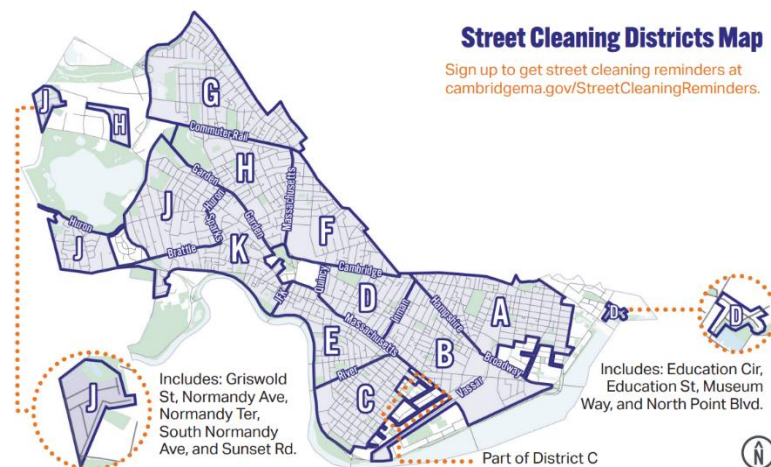
The percent change in number of tickets issued generally increased throughout the pilot. In the months of August, September and October 2023, the number of tickets issued was more than double those same months in 2022.

Street Cleaning Tickets Issued by Month	
	% Change
April	57%
May	81%
June	84%
July	82%
August	122%
September	113%
October	118%
Average	93%



The number of tickets varies by district, but the highest numbers in both 2022 and 2023 were East Cambridge and the Port.

Street Cleaning Tickets By District (April through October)			
District	2022	2023	% Change
A	1098	2425	121%
B	910	1710	88%
C	754	1632	116%
D	766	1247	63%
E	601	1187	98%
F	503	920	83%
G	654	1159	77%
H	610	1200	97%
J	502	1082	116%
K	507	760	50%
Total	6905	13322	93%



c) Number of Multiple Violations

During the 2023 Pilot, the number of vehicles receiving multiple tickets also increased. In 2022 6,905 parking tickets were issued for street cleaning to 6,159 unique vehicles (80% of vehicles ticketed for street cleaning only received one ticket). In 2023 13,322 parking tickets were issued for street cleaning to 10,675 unique vehicles (66% of vehicles ticketed for street cleaning only received one ticket).

Vehicles Receiving Street Cleaning Tickets (April through October)						
	2022			2023		
	Tickets Issued	Number of Vehicles	% of Tickets Issued	Tickets Issued	Number of Vehicles	% of Tickets Issued
Vehicles with 1 ticket	5527	5527	80%	8792	8792	66%
Vehicles with 2 tickets	1084	542	16%	2770	1385	21%
Vehicles with 3+ tickets	294	90	4%	1760	498	13%
Total	6905	6159		13322	10675	

d) Street Cleanliness

The number of vehicles not moving for street cleaning has more than doubled in the late summer and fall, when debris is heaviest on the streets. This has made maintaining clean streets challenging during the pilot. And most concerning is that the number of tickets being issued is continuing to increase.



Photo above: Street conditions prior to cleaning during October.

When a vehicle does not move, the street cleaning crew uses a hand crew to remove as much material from underneath and around the vehicle. The hand crew is equipped with leaf blowers to help remove heavy leaf debris. The street cleaners then perform a sweep around to

collect as much material as possible. Photos of the hand crew and sweep arounds during the 2023 Pilot are included below.



Photo above: The mechanical broom truck sweeps around a parked vehicle.



Photo Above: The vacuum street cleaner waits for a hand crew to clear debris from underneath a parked vehicle. The vacuum truck follows the mechanical broom sweeper during the months of April and November.



Photo Above: Hand Crews continue to clear leaves and debris from underneath a parked vehicle and an adjacent catch basin.



Photo Above: The vacuum truck sweeps around a parked vehicle.



Photo Above: The mechanical broom truck sweeps up to the curb on a street where all vehicles moved for street cleaning.

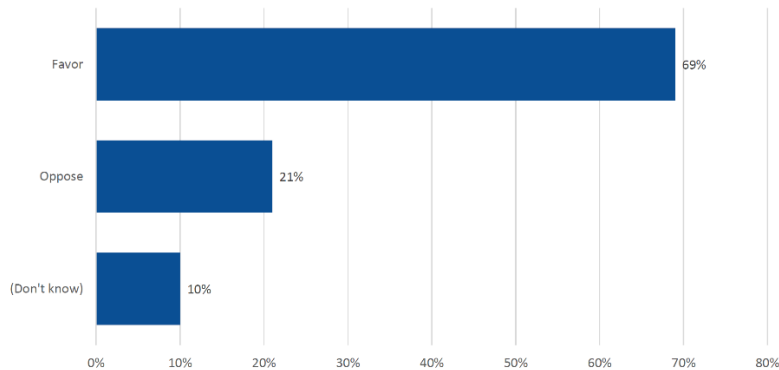


Photo Above: Cleanliness of a street after cleaning with no parked vehicles

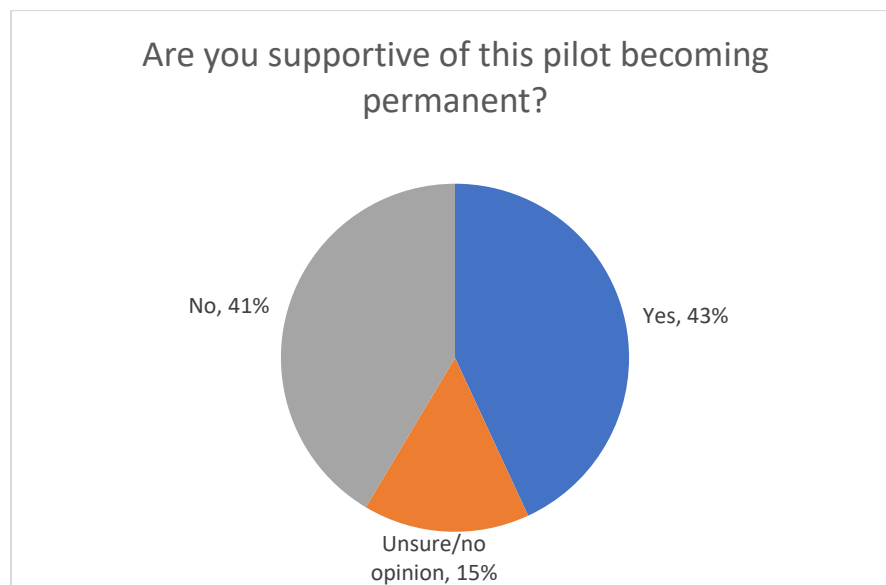
e) Survey of Residents

A question on the street cleaning pilot was included in the **City Survey**, which was conducted through a random telephone survey among 400 adult residents between September 18th and September 23rd, 2023. The sample was constructed to represent the adult population of the City and was comprised of both landline and cell-phone households.

As you may know, the City implemented a street cleaning pilot program that replaced towing associated with street cleaning with a \$50 fine. Thinking about the current level of cleanliness of our streets, do you favor or oppose this pilot program becoming permanent?



In addition, there was an open **public survey** that asked residents if they are supportive of the pilot becoming permanent. Through November 13, **181 responses** were received. These results are not from a randomized survey and likely represent residents that have stronger opinions about the pilot as opposed to the randomized City Survey. Results are summarized below.



Conclusion of Evaluation: The pilot street cleaning operation is resulting in **an appropriate level of cleanliness**; ticketing and street cleaning operations are being **completed quicker** without having to wait for the towing operations; and residents showed strong support for maintaining the program (69% vs 21%), but an **increasing number of vehicles are not moving** and that needs to **change in order to maintain the effectiveness** of the street cleaning program.

5. RECOMMENDATIONS

Based on the results of the evaluation, we recommend maintaining the Pilot Program for 2024 and making the changes below to increase the effectiveness of the program.

- a) **Increase the fine** associated with street cleaning parking violations from a \$50 ticket to \$100 ticket. We believe this will decrease the number of vehicles not moving on designated street cleaning days and increase the effectiveness of the City's program. This requires a homerule petition to the state legislature.
- b) **Continue to use hand crews** during months with heavy debris in next year's contract to ensure the operation has the labor required to remove debris under and around parked vehicles during the heavy leaf seasons.
- c) **Continue public outreach efforts** with similar outreach efforts as this year (signage, encourage residents to sign up for automatic street cleaning notifications, code red notifications during heavy leaf seasons, newsletters, etc.). In addition, include an insert on the street cleaning program focusing on the importance of moving vehicles and signing up for automatic notifications with **Residential Parking Permits**.
- d) **Conduct targeted outreach** in neighborhoods with higher number of parking violations,.
- e) **Evaluation of the Pilot January 2025.** Conduct another evaluation at the end of the 2024 season and consider if additional measures to increase the effectiveness of the Pilot are warranted. Such measures could include:
 - a. **Evaluate the feasibility and cost of increasing fines for 2nd or 3rd street cleaning ticket**, or reinstating towing for a 3rd offense. This would require significant modifications in the ticketing operation and reprogramming or replacement of the handheld ticketing system.
 - b. **Reinstating towing** for first ticket.
 - c. **Doubling the frequency of street cleaning.** This would significantly increase the cost of the program and inconvenience to residents, but may be required if the number of vehicles not moving continues to increase.