



# **NYPIRG** **Straphangers Campaign**

A project of the New York Public Interest Research Group Fund

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## **News Release**

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### **Subway Car Cleanliness Declined Between 2011 and 2013, “Shmutz” Survey Finds**

#### **Cars on D Line the Dirtiest**

#### **L is the Cleanest Line Amid Wide Disparities For All 20 Lines**

(New York, New York) – The number of clean subway cars declined between 2011 and 2013, according to the thirteenth and fourteenth annual "subway shmutz" surveys released today by the Straphangers Campaign.

Campaign surveyors rated 52% of subway cars as "clean" in a survey conducted in the fall of 2011. But this fell to 42% in an identical survey in the fall of 2013 – a statistically significant decline. This continues a general trend of a decrease in the number of clean subway cars since 2008. Cleanliness dropped from 56% in 2008 to 51% in 2009, then again to 47% in 2010. There was a modest improvement in cleanliness to 52% in 2011, but a significant decrease to 42% in 2013.

The worst performing line in our most recent 2013 survey was the D, with the smallest number of clean cars at 17% in this survey, down from 49% back in 2011. The best performing line in our 2013 survey was the L with 63% of its cars rated clean, up from 58% in 2011. (See Tables One and Two.)

Nine of the twenty subway lines grew significantly worse, while none improved and eleven stayed largely the same.

The number of budgeted cleaning staff has remained largely the same with 1030 car cleaners and 141 supervisors in 2012 and 2013.

"Transit officials are losing the war against dirty subway cars," said Jason Chin-Fatt, field organizer for the Straphangers Campaign.

–more, more, more–

The 2011 car cleanliness survey is based on 2,000 observations of subway cars by the Straphangers Campaign between September 8 and December 22, 2011. The 2013 survey covered a nearly identical period from September 4 to December 30, 2013. (See methodology.)

Cars were rated on 20 lines for cleanliness of floors and seats, following MTA New York City Transit's official standards for measuring car cleanliness. Cars were rated as clean if they were "basically dirt free" or had "light dirt" ("occasional 'ground-in' spots but generally clean").

Cars were rated not clean if they were "moderately" dirty ("dingy floor, one or two sticky dry spots") or heavily dirty ("Heavy dirt; any opened or spilled food, hazardous (e.g. rolling bottles), or malodorous conditions, sticky wet spots, any seats unusable due to unclean conditions").

**The survey did not rate litter.** Since 1997, the campaign has conducted twelve largely similar studies for similar periods. (See methodology.)

Other key findings of the survey included:

1. The nine subway lines that experienced statistically significant deterioration between 2011 and 2013 were the 1, 2, 3, A, B, D, F, N and Q.
2. None of the lines in the most recent 2013 survey showed statistically significant improvement. Eleven lines remained statistically unchanged: (4, 5, 6, 7, C, E, G, J, L, M, and R).
3. The most deteriorated line in our survey was the D. The D fell from 49% in 2011 to 17% in 2013 – a 65 percent of change.
4. The survey found major disparities in cleanliness among the lines, ranging in our 2013 survey from a low of 17% clean cars on the D line to a high of 63% on the L.

"Will subway cleanliness continue to suffer as budgets grow tighter? We will do another survey next year, compare and find out," said Cate Contino, the coordinator for the Straphangers Campaign.

MTA New York City Transit conducts its own semi-annual subway car cleanliness survey.

The average percentage of clean cars in the Campaign's 2013 survey was 42% compared to New York City Transit's 92% for clean cars in service in the second half of 2013.<sup>i</sup>

The Campaign acknowledged the different findings, but said that it was not able to point to factors that come to these results.

The car cleanliness surveys by Transit and the Straphangers Campaign's surveys use similar although not-identical methodology. For example, we rate throughout the day and night and on weekends. New York City Transit rates on weekdays between 8 a.m. and 10 p.m.

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<sup>i</sup> The document can be found at [http://web.mta.info/mta/news/books/pdf/140224\\_1030\\_transit-bus.pdf](http://web.mta.info/mta/news/books/pdf/140224_1030_transit-bus.pdf).

**TABLE ONE:  
Percentage of Clean Cars by Line\***

Line	2011	2013	Significant Improvement? **	Significant Deterioration? **
1	59	44		x
2	63	29		x
3	63	45		x
4	50	46		
5	38	38		
6	51	47		
7	49	55		
A	55	26		x
B	53	40		x
C	36	31		
D	49	17		x
E	42	52		
F	69	31		x
G	54	52		
J	62	56		
L	58	63		
M	50	48		
N	51	37		x
Q	59	39		x
R	36	36		
System Average	52	42		x

\*Surveys based on 2,000 observations of subway cars by NYPIRG Straphangers Campaign, September–December 2011 and 2013. A car was rated “clean” if surveyor found no more than 'light' interior dirt. (See methodology.)

\*\* .05 level used for tests of significance.

## TABLE TWO

### Best to Worst: Percentage of Clean Cars by Line\*

Line	Percent Clean Cars
1	44
2	29
3	45
4	46
5	38
6	47
7	55
A	26
B	40
C	31
D	17
E	52
F	31
G	52
J	56
L	63
M	48
N	37
Q	39
R	36
System Average	42

\* R line results taken as the average of fifty observations from the "R-Queens" and fifty observations from the "R-Brooklyn" portions of the route.

# Methodology:

## “Shmutz” Subway Cleanliness Survey, 2011 and 2013

### Background

This report is intended as a follow-up to the April 1998, February 1999, January 2000, February 2001, March 2003, March 2004, April 2005, May 2006, March 2008, June 2009 and May 2011 NYPIRG Straphangers Campaign surveys, *Subway Shmutz: Cleanliness in New York City Subway Cars*. The methodology followed in this survey is identical to that used in the 2000-2011 reports. One adjustment to the methodology of the 1998 and 1999 surveys is noted below.

### Preparation

In July 1997, August 1999, September 2002, and again in March 2013 our project directors accompanied members of the New York City Transit Passenger Environment Survey (PES) staff on an in-field mock rating of cars on various subway lines. These sessions included clarification of New York City Transit’s own rating system. PES looks at several measurements of the subway car environment, including car and seat cleanliness. Our survey is an in-depth measurement of car floor and seat cleanliness only.

### Rating System

PES surveyors evaluate the cleanliness of subway car floors and seats with a four-level rating system in which a score of 1 represents the highest cleanliness rating and a score of 4 represents the lowest. The following definitions are from the New York City Transit’s Passenger Environment Survey, 1st Quarter 1997 and are still in use:

<u>Score</u>	<u>PES terminology</u>	<u>PES definition</u>
1	None	Basically dirt free.
2	Light	Occasional “ground-in” spots but generally clean.
3	Moderate	Dingy floor, one or two sticky dry spots.
4	Heavy	Heavy dirt; <u>any</u> opened or spilled food, hazardous (e.g. rolling bottles), or malodorous conditions, sticky wet spots, any seats unusable due to unclean conditions.

The PES notes that “the nature of the dirt (e.g. spilled food, malodorous floor/seat condition, etc.) is also considered in addition to just the volume.”<sup>1</sup>

We believe our definitions more accurately reflect the meaning behind each score:

<u>Score</u>	<u>PES terminology</u>	<u>Straphangers Campaign terminology</u>
1	None	Extraordinarily Clean
2	Light	Clean
3	Moderate	Dirty
4	Heavy	Heavily Dirty

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<sup>1</sup> Passenger Environment Survey, New York City Transit, First Quarter 1997, p. 11.

In our study, we used a numerical system identical to the one listed above. However, we modified the terms to describe each rating.

## **Survey**

For the 2011 survey, our project directors trained 28 surveyors. Between September 9 and December 22, 2011, surveyors rated exactly 100 subway cars on each of 20 lines.<sup>2</sup> We did not survey the Grand Central-Times Square, Rockaway and Franklin Avenue Shuttles because of the short length of these routes. Measurements were taken both on weekdays and weekends, during rush, evening and overnight hours.

For the 2013 survey, our project directors trained 54 surveyors. Surveyors rated exactly 100 subway cars on each of 20 lines<sup>3</sup> between September 4 and December 30, 2013. Again, we did not survey the Grand Central-Times Square, Rockaway and Franklin Avenue Shuttles because of the short length of these routes. Measurements were taken both on weekdays and weekends, during rush, evening and overnight hours.

## **Analysis of Survey Data**

All survey data submitted was visually inspected for error and then coded for entry into a spreadsheet format. After entering the data, we calculated both by-line and systemwide totals. The percentage of cars rated “dirty” and “heavily dirty” were combined to give a measurement of the proportion of cars with an unacceptable level of interior dirt. Similarly, “extraordinarily clean” and “clean” rating totals were combined to reflect the proportion of subway cars with an acceptable level of dirt. Systemwide car cleanliness proportion is significant at the .05 confidence level within plus or minus 3%. By-line cleanliness levels are significant at the .05 confidence level within plus or minus 11%.

Table One notes that in the period between the 2011 and 2013 surveys, car conditions deteriorated significantly systemwide. By-line car conditions significantly deteriorated on nine lines, and remained statistically unchanged on eleven. On no line did car conditions improve significantly.

## **Comparison with PES Survey Data**

The survey’s finding of deterioration stands in contrast to the trend reported in MTA New York City Transit *Passenger Environment Surveys* (PES), which claim an improvement in subway car cleanliness between the second half of 2011 and the second half of 2013. The number of clean car floors and seats (those with no or light dirt) “measured throughout the day while in service” rose from 90% in the second half of 2011 to 92% in the second half of 2013. (The PES used to be issued on a quarterly basis, but now only comes out twice a year. Reduced PES were part of the 2005 budget’s “Program to Eliminate the Gap.”) In past surveys, New York City Transit has rated subway cars as considerably more clean than has the Campaign’s surveys.

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<sup>2</sup> The sample size per line is identical to that used in the 2000-2010 surveys. In 2002, two new lines—the V and W—were included in our analysis. In 1999 and 1998 Straphangers Campaign surveyors rated *approximately* 100 cars on each line measured.

<sup>3</sup> Due to the long-term closure of the Montague tunnel that serves the R line between Brooklyn and Manhattan during the 2013 survey period, our surveyors rated the R line in two parts: the portion between Queens and Manhattan, and the portion in Brooklyn. Surveyors rated exactly 50 cars on each portion of the route. These results were averaged to report an overall R line percentage of clean cars.

## **Credits**

The NYPIRG Straphangers Campaign wishes to thank the 28 volunteers and staff who assisted in the 2011 survey. They are: Carolyn Aquino, Nicole Avento, Marcus Ayala, Shadae Blair, Hortensia Bonilla, Emelyn Carpio, Mariah Chaudry, Jason Chin-Fatt, Raphael Colon, Rosemaira Delacruz, Demian Fernandez, Stanley Fritz, Shawn Hall, Osama Harruti, Ryan Hutson, Kathleen Jordan, Enrico Purita, Dylan Olbrich, Andrew Oppenheimer, Luciano Ortiz, Lea Rivera, Tassia Rosa, Vanessa Rodriguez, Adam Southerland, Kevin Stump, Brett Vetterlein, Dana Willbanks, and Amelia Zaino.

The NYPIRG Straphangers Campaign also wishes to thank the 54 volunteers and staff who assisted in the 2013 survey. They are: Robert Abitbol, Isolda Aliyeva, Maxine Armstrong, Amara Auguste, Will Belanger, Clifford P. Bias, Yashell Brooks, Tiffany Brown, Kevin Bueno, Sebastian Bullock, Deidra Chambers, Armando Chapelliquen, Jason Chin-Fatt, Cynthia Dupoux, Jack Feinberg, Orah Fields, Ben Fraimow, Daquan Gabbidon, Adam Garfield, Samantha Ghanie, Stefanie Gray, Daniel Goldstein, Shawn Hall, Robert Kornblum, Simon Lebovits, Mikolaj Lis, Leonel Lopez, Avery Loya, Cheryl-ann MacDonald, Juan Martinez, Alanis McAlmont, DiJon McLeish, Christine Merceron, Morganne Montana, Robert Noonan, Enitan Onaboly, Precious Patterson, Miguel Peña, Sean-Luc Prince, Pedro Valdez Rivera Jr., Brandon Robinson, Tassia Rosa, Mariela Rosales, Annusha Salman, Kirty Singh, Zulfiqar Ali Soomro, Monica Soto, Milda Stanislauskas, Marisol Torralba, Kateri Turner, Lawrence Vulis, Matt Zheleznyak, Sebastian Yumiseba, and Danny Zhou.

Lastly, we would like to thank the volunteers and staff who participated in the survey we began in the fall of 2012. Due to the significant impact Superstorm Sandy had on the subway system, no report was released for that time period. However, the Straphangers Campaign felt it appropriate to acknowledge the hard work of the surveyors. They are: Danny Cadiz, Mike Carlino, Daniel David, Shawn Hall, Malcolm Hamilton, Michael Harris, Mikolaj Lis, Areli Luna, Ruben Martinez, Earik Middleton, Christian Pino, Pedro Valdez Rivera Jr., Tassia Rosa, Monica Soto, Marisol Torralba, Andre Williams, Robbie Williams, Danny Zhou, Leila Yang, and Andy Zias.