



**NYPIRG**

# **Straphangers Campaign**

A project of the New York Public Interest Research Group Fund

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## **News Release**

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### **MTA Alerts of Delay-Generating “Incidents” in the Subways Jumped 35% Between 2011 and 2013, Finds Straphangers Campaign**

**Alerts Are Sent in Real Time to Thousands of Subway Riders;  
Warn of Incidents That Can Result in Serious Service Impacts**

**“Troubling Sign That Subway Service Is Deteriorating”  
Says Transit Group, Pointing to Leap in Alerts**

**F Had Most Incidents in 2013; J/Z the Fewest  
Leading Reason for Delay Incidents? Mechanical Problems**

The NYPIRG Straphangers Campaign today released its third annual analysis of thousands of MTA “electronic alerts.” It showed that the number of alerts of delay-generating incidents had increased by 35% in two years – from 2,967 alerts in 2011 to 3,998 in 2013. (See Table One.)

The MTA issues alerts electronically in real time to more than 90,000 subway subscribers, warning these riders of incidents that result in significant service impacts. Transit officials wrote to us, saying: “Email alerts are issued for any incidents reported to [MTA] that will result in a significant service impact that is expected to last 8 to 10 minutes or more.” (See attachments.)

The group solely analyzed alerts of “controllable” delays deemed under MTA New York City Transit’s control. For example, all incidents of sick passengers and police activity were eliminated.

“The increase in alerts is a troubling sign that subway service is deteriorating,” said Gene Russianoff, staff attorney for the NYPIRG Straphangers Campaign, a transit riders group.

–more, more, more–

We compared alerts in 2013 to those in 2011 because 2012’s numbers were greatly affected by superstorm Sandy, which struck in October 2012.

The group’s findings for alerts of delay-generating incidents include, as shown in Tables One to Five:

- The F had had the most MTA electronic alerts of delay-generating incidents of the 20 subway lines reviewed in 2013. Alerts for delays on the F comprised 8% of 3,998 controllable MTA alerts. (See Table Two.)
- The J/Z had the fewest MTA delay alerts with 53 — approximately 1% of a total of 3,998.
- The most improved line was also the J/Z, which had 9% fewer delay alerts between 2011 and 2013. It was the only one of the 20 subway lines to experience a reduction in delay alerts (See Table Three.)
- The L worsened the most — by 91% — from 96 MTA alerts of delays in 2011 to 183 alerts in 2013. (See Table Three.)
- Manhattan was the borough with the most MTA alerts with 1,778 out of 3,998 in 2013, near half of all total alerts. The Bronx had the fewest in 2013 with 10%. (See Table Four-A.)
- The four boroughs served by the subways all grew substantially worse between 2011 and 2013: Bronx (up 25%), Brooklyn (up 39%) Manhattan (up 39%) and Queens (up 24%). (See Table Four-B.)
- “Mechanical problems” generated the most alerts — 35% — or 1,411 out of 3,998 alerts in 2013, followed by “signals” (1,230). (See Table Five-A.)
- The number of mechanical delay alerts increased 51% between 2011 and 2013; the number of track delay alerts increased 101%, from 254 in 2011 to 510. (See Table Five-B.)

The MTA does not report the duration of a delay, so it is not possible to determine how long it lasted or its severity.

The MTA deems an incident “significant” and instructs its personnel to send an alert to riders “for any incidents that will result in a significant service impact that is expected to last 8 to 10 minutes or more,” according to transit officials.

The Campaign analyzed thousands of real-time alerts the MTA sent to riders who subscribe to the agency’s “Email and Text Message Alert System.” The alerts are intended to provide up-to-the-minute information about whether a subway line is experiencing a significant delay-generating incident — and whether riders should consider taking an alternate route.<sup>1</sup>

The Campaign used MTA alerts for 20 subway lines, but not any of the shuttles. The Straphangers Campaign also removed irrelevant data, leaving 5,957 alerts. (See methodology.)

The group then classified the electronic alert incidents into two categories.

The first was “controllable,” including such things as signal or mechanical problems. The second was “uncontrollable,” such as police activity or a sick passenger.

The Campaign concluded it was not fair to hold transit officials accountable for many of these uncontrollable incidents. As a result, the Campaign eliminated all 1,958 alerts of uncontrollable incidents, leaving a total of 3,998 alerts for controllable incidents.

“The MTA’s electronic alerts paint a picture of the problems that affect riders, but they also raise further questions,” said Cate Contino, the coordinator for the Straphangers Campaign. Contino said questions included:

1. Is there a relationship between the number of significant incidents and the amount of service provided by line?
2. What explains why signal and mechanical problems constitute more than two-thirds of all significant controllable incidents?
3. Is there a relationship between the number of significant incidents and whether a line shares part of its right-of-way?
4. Are the number of alerts greater on lines undergoing major rebuilding, due to related service problems?

The MTA launched its “Text Messaging and Email Alert System” in late November of 2008. The service is free. Riders can sign up to receive these alerts by going to <http://www.mymtaalerts.com>.

More than 104,755 individuals currently subscribe to the MTA’s alerts for subway and bus delays as of December 2013. More than 90,000 of these are subway users.

The Straphangers Campaign is posting the spreadsheet containing the data for alerts on our website in the hope that other researchers and application developers make good use of the data.

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<sup>1</sup> Transit officials explained that while many significant incidents lead to sizeable delays, not all do. For example, some sick passenger incidents are lengthy, some are not. MTA alerts do not measure the duration of an incident. (See attachments.)

## **TABLE ONE**

Controllable Significant Incident Alerts Sent by MTA to  
Subscribers via Text Message and Email, 2011 and 2013

<u>Year</u>	<u>Controllable Significant Incidents</u>
2011	2967
2013	3998

**Percent of Change from 2011 to 2013: 35%**

**TABLE TWO**  
**Most to Least: Controllable Significant**  
**Incidents by Line, 2013\***

Line	Controllable Significant Incidents	Percent of Total
F	326	8%
4	298	7%
2	289	7%
N	268	7%
5	267	7%
D	264	7%
R	242	6%
Q	233	6%
6	227	6%
A	224	6%
E	198	5%
L	183	5%
7	165	4%
B	148	4%
3	147	4%
1	139	3%
M	123	3%
C	120	3%
G	84	2%
J/Z	53	1%
<b>System Total</b>	<b>3998</b>	

\* Controllable alerts January 1 - December 31, 2013. See methodology.

### TABLE THREE

#### Most to Least Improved Significant Controllable Incidents by Line, Comparing 2013 to 2011\*

Line	2011	2013	Percent Change
J/Z	58	53	-9%
C	116	120	3%
7	157	165	5%
5	247	267	8%
3	129	147	14%
2	251	289	15%
A	193	224	16%
M	101	123	22%
N	215	268	25%
1	102	139	36%
Q	170	233	37%
4	204	298	46%
E	132	198	50%
6	150	227	51%
F	213	326	53%
D	170	264	55%
R	140	242	73%
G	45	84	87%
B	78	148	90%
L	96	183	91%
System Total	2967	3998	35%

\*Controllable alerts January 1 - December 31, 2011 vs. January 1 - December 31, 2013. See methodology.

**TABLE FOUR-A**  
**Most to Least: Significant Controllable Incidents**  
**by Borough, 2013\***

Borough	Number of Significant Incidents	Percent of Total
Manhattan	1778	44%
Brooklyn	1200	30%
Queens	604	15%
Bronx	416	10%
System Total	3998	

**TABLE FOUR-B**  
**Most to Least Improved Significant Controllable**  
**Incidents by Borough, Comparing 2013 to 2011\*\***

	2011	2013	Percent Change
Queens	489	604	24%
Bronx	333	416	25%
Brooklyn	866	1200	39%
Manhattan	1279	1778	39%
System Total	2967	3998	35%

\* Controllable alerts January 1 - December 31, 2013. See methodology.

\*\* Controllable alerts January 1 - December 31, 2011 vs. January 1 - December 31, 2013.

**TABLE FIVE-A**  
**Most to Least: Types of Significant Controllable Incidents, 2013\***

Type	Number of Significant Incidents	Percent of Total
mechanical	1411	35%
signal	1230	31%
track	510	13%
switch	438	11%
rail	374	9%
power	30	1%
maintenance	5	0%
System Total	3998	

**TABLE FIVE-B**  
**Most to Least Improved Significant Controllable Incidents by Type, Comparing 2013 to 2011\*\***

Type	2011	2013	Percent Change
switch	408	438	7%
signal	1062	1230	16%
rail	291	374	29%
mechanical	934	1411	51%
maintenance	3	5	67%
power	15	30	100%
track	254	510	101%
System Total	2967	3998	35%

\* Controllable alerts January 1 - December 31, 2013. See methodology.

\*\* Controllable alerts January 1 - December 31, 2011 vs. January 1 - December 31, 2013.

# **Methodology: Straphangers Campaign Analysis of MTA Alerts of Subway Incidents/Delays in 2011 and 2013**

## **Overview**

This is the third annual NYPIRG Straphangers Campaign analysis of Metropolitan Transportation Authority service alerts of delay-generating incidents.

The MTA sends these alerts by text or email to riders who subscribe through its “Email and Text Message Alert System.” They are intended to provide up-to-the-minute information about whether a line or lines are experiencing a significant incident(s) that could lead to a delay – and whether riders should consider taking an alternate route. The alerts do not include a record of the length of the delay.

By subscribing to alerts for all 20 major subway lines (excepting the shuttles), the Straphangers Campaign obtained all incident alert data for 2011 and 2013. The Campaign was therefore able to analyze the information for that time period, including alerts of incidents/delays by subway line, by type of incident, and by borough.

We compared alerts in 2013 to those in 2011, because 2012’s numbers were greatly affected by superstorm Sandy, which struck in October 2012.

## **Background**

Since November 2008, the MTA has sent subway service alerts to those who subscribe to the MTA Email and Text Message Alert System. Announcing the alert system, the then MTA CEO Elliot G. Sander said:

“This is a revolutionary step that has the potential to transform the experience our customers have with us. If you know about a service disruption before you leave your home, or now, even as you are making your way to a subway or rail station or a bus stop, you can avoid the frustration of delays by seeking an alternate route.”<sup>1</sup>

Riders can sign up to receive these alerts at <http://www.mymtaalerts.com>.

The service is free, but a carrier’s standard text messaging rates may apply. About 105,000 individuals currently subscribe to the MTA’s alerts for subways and buses.

## **The Process**

In June 2011, the Straphangers Campaign wrote to New York City Transit requesting information on near real-time email and text alerts sent to riders. New York City Transit

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<sup>1</sup> “MTA Launches Text Messaging and Email Alert System, November 25, 2008.” <http://www.mta.info/press-release/mta-headquarters/mta-launches-text-messaging-and-email-alert-system>

responded that “Email alerts are issued for any incidents reported to Corporate Communications by Rapid Transit Operations (RTO) that will result in a significant service impact that is expected to last 8 to 10 minutes or more.”<sup>2</sup>

The response went on to say:

“There is nothing associated with the Rail Control Center (RCC) computer system to automatically determine which subway incidents are deemed significant, nor should there be. The decisions generated by the RCC for each incident are guided by written protocols and largely based on an assessment of the specific circumstances, the anticipated duration of the incident and the anticipated impact on service... Again, the email alerts that Corporate Communications issues are for any and all incidents with an anticipated duration of 8 to 10 minutes or longer.”

The Campaign followed up by requesting a copy of the referenced protocol. In December 2011, we received a New York City Transit directive further explaining the process for generating texts or emails to the public involves several steps.<sup>3</sup>

The process starts at New York City Transit’s Rail Control Center. The “Rapid Transit Operations Incident Notifications Board” must be updated whenever the following occurs:

- delays of 10 minutes or more during weekday rush hours;
- delays of 30 minutes or more or incidents causing “20 or more delays” during non-rush hours;
- significant incidents (collision, derailment, person hit by a train); and
- all inclement weather conditions.

Texts then are generated for these events – and also for “unusual incidents affecting service, such as a building collapse or off property fire.”

Second, personnel in Corporate Communications will “update the MTA Service Alerts website and generate a text message to the general public” for the following:

- significant service delays and alternate travel choices;
- police investigations causing delays to service;
- unscheduled service diversions;
- suspensions in service with alternate service choices; and
- resuming service after an incident.

Third, both notifications and texts must be approved the General Superintendent or Superintendent-in-Charge “to ensure accuracy and appropriateness of text messages.”

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<sup>2</sup> Letter from New York City Transit President Thomas Prendergast to Straphangers Campaign attorney Gene Russianoff, August 12, 2011.

<sup>3</sup> New York City Transit Rail Control Center, “Communication Desk Criteria for Internal/External Messages,” Directive 22-11, December 6, 2011.

New York City Transit provided the Campaign with an additional one-page undated memo from “Corporate Communications” entitled “Rail Control Center Protocols.” In several cases, that memo fleshes out what should be done for some incidents, although in no way contradicting Directive 22-11. For example:

- a confirmed person struck by a train (12-9) should be posted immediately as a “police investigation.” Updates should be made periodically as changes in service occur; and
- confirmed rail conditions (broken rail, signal/switch problems, AC power failures) should be posted as soon as it is apparent that a lengthy delay will occur.

Transit officials explained that while many significant incidents lead to sizeable delays, not all do. For example, some sick passenger incidents are lengthy, some are not. MTA alerts do not measure the duration of the incident. The letters/memos can be found at: <http://straphangers.org/alerts/attachments.pdf>

### **Organizing the Data**

As noted above, this analysis includes alerts of incidents for 20 subway lines sent by the MTA to subscribers between the dates January 1, 2013, 12:01 a.m. and December 31, 2013, 11:59 p.m.

We began with a total of 6,089 alerts for the period. Every alert was visually checked for accuracy and entered into an electronic spreadsheet for analysis.

Alerts were eliminated if they:

- made reference to bus service including local, express, and Select Bus Service;
- affect one of the three shuttles but not other subway services (Franklin Ave, 42nd Street, or Rockaway Shuttles); or
- only said that service had resumed.<sup>4</sup>

The remaining alerts were put into one of twelve categories of reasons for the delay. These included:

- **Signal:** Signal Problems, Signal Trouble
- **Switch:** Switch Problems, Switch Trouble
- **Rail:** Rail Condition
- **Track:** Track Problems, Debris on Tracks, Track Work, Track Maintenance, Emergency Track Work
- **Mechanical:** Mechanical Problems
- **Maintenance:** Maintenance, Station Maintenance, Emergency Work (without specifying what kind)

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<sup>4</sup> Alerts in the “other” category were eliminated from consideration. Examples of these alerts include: resumption of normal service, announcements of NYC events, planned service alerts and cancellation of planned service, debris on train, congestion, marine traffic, road construction, hanging wires/cables, and alerts pertaining to buses or the shuttles.

- **Power:** Loss of Power, Power Outage, Loss of Electrical Power, Electrical, Power Condition
- **Water:** Water Condition, Water Main Break
- **Smoke/Fire:** Smoke Conditions, Fire Department Activity, FDNY Activity, FDNY Activity at Street Level, Man Hole Fire, Track Fire
- **Medical:** Sick Customer or Passenger, Medical Assistance
- **Police:** Police Investigation, Police Activity, NYPD Activity
- **Weather:** Weather Conditions, such as "inclement weather," "winter weather advisory," "cold weather preparation," "snow related conditions," "winter storm watch," "cold weather conditions"

## Analyzing the Data

Our cleaning and organizing the data left us with 5,957 alerts of significant incidents to analyze.

First, we broke down the reasons for significant incidents into two groups, “controllable” and “uncontrollable.”<sup>5</sup> The Campaign decided that eliminating the incidents that were beyond the control of New York City Transit would hold subway officials to a fair level of accountability. Uncontrollable delays – such as police investigation are largely random and arbitrary in nature, while controllable delays are not.

We determined that seven of the twelve categories of significant incidents were largely under the control of transit officials. These “controllable” incidents were for: signals, switches, rail conditions, track conditions, mechanical problems, maintenance, and power.

Because the alerts are brief we could not make individual determinations within categories.

Five of the twelve incidents were determined not to be under the control of transit officials. These “uncontrollable” incidents were for: water conditions, smoke/fire, sick customers, police investigations, and weather conditions.

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<sup>5</sup> Prior to mid-2010, New York City Transit reported “on-time performance” (OTP) at its terminals in two ways, using the categories of “controllable” and “absolute.” The first was “absolute OTP.” That compared actual terminal arrivals to the “base” schedule for all trips – and took into account all delays for any reason. The second was “controllable OTP.” That compared actual terminal arrivals to the schedule in effect and excluded “delays charge to customers, police, etc.” New York City Transit concluded that these two different ways of reporting OTP were confusing. It is important to note that the Straphangers Campaign is reporting only controllable incidents in this analysis. In addition, according to the August 2011 New York City Transit letter, “There is no direct relationship between email alerts and the terminal on-time performance (OTP) figures reported publicly. The OTP that that is reported to the MTA Board is based on the tabulation of all the trains that arrive at the terminal more than five minutes late.... The MTA email alert system, by contrast, is based on incidents that are expected to have a significant passenger impact.”

Our cleaning and organizing the data left us with 3,998 alerts of significant controllable incidents/delays to analyze.

Second, we analyzed the data to calculate which of the city's 20 subway lines had the most and least total controllable significant incidents – and which lines fell in between – in 2013.

The Straphangers Campaign is posting a spreadsheet containing the data for alerts on our website in the hope that other researchers and application developers make good use of the data.

The Straphangers Campaign wishes to thank the following staff that assisted in the analysis: Jason Chin-Fatt, Cate Contino, Ben Fraimow, Matt Glomski, and Nikhil Goyal.