



**Information
Technology &
Telecommunications**

**DEPARTMENT OF INFORMATION TECHNOLOGY AND
TELECOMMUNICATIONS TESTIMONY BEFORE THE CITY COUNCIL
COMMITTEES ON TECHNOLOGY AND FIRE & EMERGENCY SERVICES**

**OVERSIGHT HEARING: FAILURE OF THE CITY'S 311/911 SYSTEMS DURING
TROPICAL STORM ISAIAS**

TUESDAY, SEPTEMBER 8, 2020

Good morning, Chairs Holden and Borelli, and members of the committees on Technology and Fire and Emergency Management. My name is Jessica Tisch, and I am the Commissioner of the New York City Department of Information Technology and Telecommunications (DoITT) and the Citywide Chief Information Officer.

As Commissioner of DoITT, I oversee the largest municipal IT organization in the country. In this role, I am responsible for many of the City's critical systems, chief among them, 911 and 311. Additionally, at the height of the pandemic, Mayor de Blasio tasked me with overseeing and turning around 311 operations, which was both an honor and a privilege, for two main reasons:

- Because 311 is an absolute gem – the connective tissue between New Yorkers and nearly every local government service; and the centralized depot for information about City programs.
- And because optimizing call center operations happens to be a passion of mine, which I came to somewhat late in life, in my former job as Deputy Commissioner at the NYPD overseeing 911 operations. The thing I miss most about that job is working with the City's Police Communications Technicians, who literally serve as a lifeline for New Yorkers in need.

With that context, I want to thank you for the opportunity to discuss the 311 call center response to Isaias, as well as the performance, from a technology perspective, of the 911 system during the Tropical Storm. My colleagues from the NYPD will address 911 operations on the day of the storm.

Let's hit the 911 system from a technology perspective first. I can say categorically that there was absolutely no outage of the 911 system during the Tropical Storm. The technology performed as designed, with no bugs, disruptions, or errors. However, persistent problems with the carriers continue to undermine overall service, and this is exacerbated during major weather events.

In particular, I expect that some New Yorkers had difficulty connecting to 911 because the storm knocked out power to telecom carrier infrastructure, including cell phone towers, meaning some mobile phones lost service or had degraded or unstable service, depending on location and service provider; and in the case of home phones or landlines, we heard that certain carriers'

trunks got overwhelmed as a result of volume. To be clear: these issues would have affected all of the customer's calls, not just calls to 911.

The telecom carriers must harden their infrastructure. Sandy should have taught them that. It's been 8 years. And I'm not telling you anything I haven't already told the leaders of each of the major carriers themselves.

Finally, as Chief Napolitano will tell you in greater detail, at the height of the storm, 911 call volume was incredibly high. And in particular, for a sustained period of time, there were more calls than there were call-takers to answer them simultaneously. But the 911 system was built to handle exactly this type of situation by queuing calls. When all the call takers were busy, 911 callers got queued up, and connected to the next available Police Communications Technician in order.

Now let me move on to 311. I think the best way to understand the 311 response to the storm is in the context of the changes we put in place for COVID.

During COVID, the role of 311 changed in an important way: much like 911, 311 became a lifeline of sorts for New Yorkers – the number to call when you needed to be connected to a physician, a meal, assistance with unemployment, help applying for small business loans, the list goes on and on; in essence, so much more than what you'd traditionally think to call 311 for.

So how did we bring down wait times, which had spiked to almost an hour at the end of March based on increased volumes, to virtually zero by mid-April? We did it by adding hundreds of additional temporary call-takers, including NYPD cadets; building out several new 311 call centers to accommodate the additional staff; taking a data-driven approach to optimizing call center operations; and creating “express lanes” for certain types of calls.

So when it became clear that Tropical Storm Isaias might be making its way to New York City, we turned to this very playbook:

- 1) First, we surged our staffing to 900 call takers on the day of the storm. This was the largest number of call takers 311 has ever had in a single day.
- 2) Second, during the height of the storm, we had 600 call takers simultaneously taking calls – the largest number of concurrent call takers ever answering the phones at 311 by a factor of 5 pre-COVID.
- 3) Third, we ensured our telephone system had enough capacity to accommodate the simultaneous call load and transfers.
- 4) Fourth, we created an express lane for callers calling about Tropical Storm-related issues, so that these callers wouldn't have to wait in queue behind people calling, for example, about property tax questions.

- 5) And fifth, we added a voice recording up front, with contact information for ConEd and PSE&G, so that New Yorkers calling about power outages wouldn't have to wait on the line to get connected to the electric companies.

In our planning, 311 pulled out all of the stops and then some to make sure the 311 call center was as prepared as it could be to meet New Yorkers needs. And to be clear, all of these preparations were made 36 hours in advance.

In the end, the volume was enormous, driven by tree and branch-related service requests, as well as calls about power outages. For context, on the first Tuesday in August last year, 311 received approximately 38,000 calls. The full day total for August 4, 2020 was a whopping 160,000 calls, and 120,000 of them had already come in by 3:30 in the afternoon, when the worst of the storm began to pass. To get even more granular, 311 received approximately 45,000 calls between noon and 3:30 p.m. That's a rate of more than 12,000 calls per hour, or 200 calls per minute...for 3.5 hours!

Using wait times as an important metric, the results for August 4 were quite good, and I'd venture to say, extraordinary, given the volume:

Callers who followed the prompts to get to the express lane for storm-related calls experienced wait times that were under 5 minutes for the vast majority of the day, with max average wait time of 7 minutes during the one-hour period between 1 p.m. and 2 p.m.

Importantly, storm-related volume did not affect wait times for COVID-related calls. New Yorkers using the standard express lane for things like food deliveries or to get connected to a primary care provider experienced de minimus wait times all day.

And Spanish-speaking callers who followed the Spanish prompts saw no wait times at all.

Callers who did not follow any of the express lane prompts saw an average 12-minute wait time at 2pm, which quickly dropped off to 5 minutes at 4 p.m., through the rest of the day.

Now let's talk about two things that didn't go according to plan on the day of the storm:

First, some callers who submitted complaints about trees or branches did not get an initial confirmation email that their service request was made. However, these requests did make it to the Parks Department, and the New Yorkers who submitted them did receive email updates on the status of their service requests. To be perfectly clear, all that was missing was the initial confirmation email. But I will be the first to say that that is unacceptable. We have already put in a fix to the 311 system to ensure that confirmation emails for tree and branch-related service requests are sent every time.

Second, I understand the Parks Department's site for reporting down trees or branches was hit with a high volume in a short amount of time. This meant that when 311 call takers used the Parks website on the day of the storm to input these service requests, intermittently they received a notice that they should retry at a later time. In certain cases, 311 asked callers to call back or

attempt the service request entry themselves through the website. As I'll explain in a moment, these instances did not ultimately prevent 311 and the Parks Department from taking tree or branch service requests related to the storm, either on the day of the storm or thereafter. We made the Parks Department aware that 311 call takers experienced this issue, and the Parks Department notified us that they had a fix in place by August 7th. Because I am a proponent of belt and suspenders, we are also building this form into the 311 portal itself.

To put the effects of this issue in perspective, I want to make sure it's clear that 311 took the majority of storm-related service requests about downed trees and branches on the day of the storm – over 15,000 of them. To put this volume in context, through August 9, which represents a four-day post-storm grace period, 311 received a total of 20,520 tree-related service requests deduped to represent unique locations.

Now I'd like to take a moment to address Intro 1775. It is very clear to me that the general feedback I've received from the Council highlights some of the most pressing issues associated with 311; and geo-location services, which is the subject of your legislation, is certainly chief among them. I look forward to discussing this with you and continuing to work to improve the 311 system.

I hope this presentation has given you a good sense of the 911 system's performance during Tropical Storm Isaias and what I like to call "311 2.0" – a service that doesn't just respond to New Yorkers' needs, but anticipates them; that is agile and proactive, and striving to be more so every day.