

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Public Safety and Homeland Security Bureau)	PS Docket No. 18-339
Seeks Comment on Hurricane Michael)	
Preparation and Response)	

COMMENTS OF T-MOBILE USA, INC.

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T-Mobile USA, Inc. (“T-Mobile”)¹ submits these comments in response to the *Public Notice* in the above-referenced proceeding seeking comment on readiness, preparation, and response with respect to Hurricane Michael.²

I. INTRODUCTION AND SUMMARY

T-Mobile is committed to ensuring high network reliability and competes with other wireless carriers on a daily basis to deliver on this commitment. T-Mobile is proactive in its development of a resilient network that can withstand or recover quickly from numerous types of natural disasters, including wildfires, hurricanes, and other storms. With regard to Hurricane Michael, T-Mobile engaged in substantial pre-storm preparation and responded quickly to restore service in areas severely impacted by the storm. The Company engaged in substantial pre-positioning of assets, quickly deployed temporary facilities, mobilized disaster recovery teams, and complied with industry best practices, including those related to the Wireless Network Resiliency Cooperative Framework (“Framework”).

¹ T-Mobile USA, Inc. is a wholly-owned subsidiary of T-Mobile US, Inc., a publicly traded company.

² Public Safety and Homeland Security Bureau Seeks Comment on Hurricane Michael Preparation and Response, Public Notice, DA 18-1176 (rel. Nov. 16, 2018) (“Public Notice”).

Although these efforts proved successful in the wake of Hurricane Michael, other factors, such as limited availability of commercial power and/or failures in third-party backhaul networks, often play a role in wireless network operations following major disruptive events. Thus, as T-Mobile has previously stated in FCC filings, recovery efforts in such situations would be significantly enhanced with improved coordination among all stakeholders – wireless providers, power companies, and backhaul providers – to help the efficiency of information exchanges in the wake of hurricanes and other disasters.

II. T-MOBILE’S PREPARATION FOR, AND RESPONSE TO, HURRICANE MICHAEL WAS APPROPRIATE

Hurricane Michael was the first Category 4 hurricane to make landfall in the Florida Panhandle.³ The storm was the third-most-intense continental U.S. landfall⁴ and resulted in the activation of the Disaster Information Reporting System (“DIRS”) in 110 counties throughout Alabama, Florida, and Georgia.⁵ T-Mobile provided service from cell sites located in each of these counties with the exception of Liberty County in Florida and the following counties in Georgia: Baker, Ben Hill, Calhoun, Clay, Early, Glascock, Irwin, Miller, Quitman, and Seminole. As demonstrated below, T-Mobile took appropriate steps to prepare for and recover from this historic hurricane.

³ The Weather Channel, *Hurricane Michael Recap: Historic Category 4 Florida Panhandle Landfall; Swath of Wind Damage and Flooding Into the Carolinas, Mid-Atlantic* (Oct. 13, 2018), <https://weather.com/storms/hurricane/news/2018-10-11-hurricane-michael-recap-gulf-coast-southeast>.

⁴ *Id.*

⁵ See Federal Communications Commission, Communications Status Report for Areas Impacted by Hurricane Michael, at 1 (Oct. 13, 2018), <https://docs.fcc.gov/public/attachments/DOC-354533A1.pdf>.

A. T-MOBILE ENGAGED IN SUBSTANTIAL PRE-POSITIONING OF ASSETS

In advance of Hurricane Michael, T-Mobile pre-staged assets (including mobile generators, cells-on-wheels (“COWs”), and cells-on-light-trucks (“COLTs”)), temporary microwave/satellite communications, and supplies (including more than 10,000 gallons of fuel) that likely would be necessary for rapid service restoration. These pre-staged assets were sufficient to ensure a coverage layer in the most severely damaged areas while repairs to aerial fiber and power lines, as well as some T-Mobile sites, were being completed. T-Mobile also mobilized expert recovery and restoration teams, completed internal preparedness checklists to ensure readiness, and coordinated with vendors identified as playing a role in its possible recovery efforts.

B. T-MOBILE QUICKLY RESTORED SERVICE CONSIDERING THE SCOPE OF THE HURRICANE

Despite the unprecedented impact of the storm on the Florida Panhandle, T-Mobile’s network remained largely operational throughout Hurricane Michael.⁶ As reflected in its DIRS reports, only a portion of T-Mobile’s network was rendered inoperable from the storm. Loss of service generally was not caused by damage to T-Mobile sites, but rather by damage to the extensive aerial cabling networks used to provide power and backhaul service in the area where the storm made landfall. Most of this damage was caused by the storm itself, but in some cases aerial cables were cut inadvertently during the debris clearing process unrelated to T-Mobile’s network restoration efforts.

T-Mobile deployed a mobile Command Center and nine temporary sites (COWs and COLTs) to quickly restore service in impacted areas and ensure communications capabilities at

⁶ T-Mobile did not experience any issues with the transmission of WEA messages over operational sites within its wireless networks.

local shelters and governmental Emergency Operations Centers (“EOCs”). These temporary sites – which were the most effective means for restoring connectivity while permanent network elements were being repaired – were operational by October 15, 2018, which ensured that customers in the most severely impacted areas had access to wireless service. By October 18, 2018, nearly one hundred percent of T-Mobile’s permanent sites located in the counties where DIRS was initially activated were back in service.

In addition, T-Mobile deployed more than 100 generators and provided generators to local agencies to allow them to resume operations, including operations at five voting locations. It utilized alternative backhaul methods, including satellite and microwave to restore communications in cases where fiber backhaul was disrupted for extended periods. T-Mobile also deployed temporary microwave facilities to restore communications for the Bay County Sheriff’s Office, Bay County Jail, and Jackson County Courthouse. T-Mobile supplied two portable light towers for an outdoor food kitchen that fed more than 5,000 people.

Moreover, T-Mobile deployed trucks from around the nation to deliver supplies like chargers, devices, water, blankets, baby supplies, and hygiene products, in the hardest hit areas.⁷ It also provided equipment to establish localized Wi-Fi and hotspots for:

- 6 comfort stations where people could shower, cool down in air conditioning, or get food and water;
- 1 Federal Emergency Management Agency mega shelter serving up to 2000 people;
- Various Disaster Supplemental Nutrition Assistance Program locations;
- Free community Wi-Fi at the Bay County Public Library;
- Florida Highway Patrol;
- United Way of Northwest Florida;
- Church of Jesus Christ of Latter Day Saints;
- Bay County Board of County Commission Administration;

⁷ Information regarding these efforts was made available in local papers. *See HURRICANE MICHAEL: Find T-Mobile relief truck in Bay County*, The Star (Oct. 18, 2018), <https://www.starfl.com/news/20181018/hurricane-michael-find-t-mobile-relief-truck-in-bay-county>.

- Bay County Attorney’s Office;
- Bay County Transportation;
- Bay County Volunteer & Donations Help Desk;
- University of Florida, Center for Urban Transport; and
- Good Shepard Lutheran Church.

T-Mobile also provided approximately 9,000 free phones with one month of T-Mobile service to first responders, healthcare providers, local authorities, and consumers who were having trouble obtaining wireless connectivity. Among those receiving free phones and/or service were staff at the Gulf Coast Regional Medical Center, Bay County teachers, the 14th Judicial Circuit of Florida, AmeriCorps, the National Guard, police departments and administrators in Mexico Beach, Panama City and Panama City Beach, and the State of Florida Emergency Medical Services.⁸

C. T-MOBILE COMPLIED WITH THE WIRELESS RESILIENCY COOPERATIVE FRAMEWORK AND RELATED BEST PRACTICES

The Framework is an industry-led, voluntary initiative that triggers cooperation and mutual aid commitments upon declaration of the Emergency Support Function 2 and the activation of DIRS in the wake of network impactful events.⁹ In December 2016, the

⁸ T-Mobile also continued its support for the non-profit, military veteran-led Team Rubicon hurricane recovery efforts, donating \$5,000 per home run plus \$1 per Twitter or Instagram post using #HR4HR during the Major League Baseball Postseason. T-Mobile increased this support to \$10,000 per home run and \$2 per Twitter or Instagram post using #HR4HR during the World Series. Since its inception after the devastation of hurricanes Maria, Harvey and Irma last year, T-Mobile has donated more than \$4 million to Team Rubicon’s hurricane recovery efforts. In addition to its support of Team Rubicon’s hurricane recovery efforts, T-Mobile established a “Text to Give” program enabling its customers to donate to Hurricane Michael relief efforts. *See* News Release, T-Mobile, *T-Mobile Responds To Hurricane Michael* (Oct. 8, 2018) (“T-Mobile Oct. 8 News Release”), <https://www.t-mobile.com/news/hurricane-michael>; *see also* T-Mobile TV Commercial, ‘Team Rubicon: Hurricane Michael,’ iSpot.tv (2018), <https://www.ispot.tv/ad/dxUU/t-mobile-team-rubicon-hurricane-michael>.

⁹ *See* Federal Communications Commission, Wireless Resiliency Cooperative Framework, <https://www.fcc.gov/wireless-resiliency-cooperative-framework> (last visited Dec. 17, 2018); *see also* Letter from Joan Marsh, AT&T Services, Inc.; Charles McKee, Sprint; Grant Spellmeyer,

Commission adopted an Order expressing support for the Framework¹⁰ and in December 2017 CTIA finalized and published Best Practices for Enhancing Emergency and Disaster Preparedness and Restoration (“CTIA Best Practices”).¹¹

As demonstrated in its Response to the Bureau’s recent inquiry regarding the 2017/2018 hurricane seasons,¹² T-Mobile complied with the Framework in response to this storm.¹³ For example, prior to the hurricane, T-Mobile reached out to wireless carriers serving the areas of predicted impact and coordinated regarding potential disaster recovery scenarios.¹⁴ T-Mobile also exchanged contact information with Framework signatories in advance of the storm. Thankfully, however, T-Mobile did not need assistance from other wireless carriers in the wake of Hurricane Michael.

U.S. Cellular; Scott Bergmann, CTIA; Steve Sharkey, T-Mobile USA; and William H. Johnson, Verizon, to Marlene Dortch, Secretary, Federal Communications Commission, PS Docket Nos. 11-60 & 13-239, at 1 (dated Apr. 27, 2016) (“Framework”), <https://ecfsapi.fcc.gov/file/600017-07365> (“[A] voluntary initiative that will enhance coordination and communication to advance wireless service continuity and information sharing during and after emergencies and disasters.”).

¹⁰ *Improving the Resiliency of Mobile Wireless Communications Networks*, Order, 31 FCC Rcd 13745 (2016) (“*Framework Order*”) (recommending the Framework).

¹¹ See Press Release, CTIA, *CTIA Announces New Best Practices to Help Local Governments Maintain Wireless Service During Natural Disasters* (Dec. 20, 2017), <https://www.ctia.org/news/ctia-announces-new-best-practices-to-help-local-governments-maintain-wireless-service-during-natural-disasters>; CTIA, *Best Practices for Enhancing Emergency and Disaster Preparedness and Restoration*, <https://api.ctia.org/docs/default-source/default-document-library/best-practices-for-enhancing-emergency-and-disaster-preparedness-and-restoration.pdf> (last visited Nov. 21, 2018).

¹² Letter from Lisa M. Fowlkes, Chief, Public Safety and Homeland Security Bureau, Federal Communications Commission, to Steve Sharkey, Vice President Government Affairs, Technology and Engineering Policy, T-Mobile USA, PS Docket No. 11-60 (Nov. 6, 2018).

¹³ Response of T-Mobile, USA, Inc., PS Docket No. 11-60, at 4-5 (Nov. 26, 2018) (“T-Mobile Response”).

¹⁴ T-Mobile also granted a request from a nationwide wireless carrier to share staging space after the storm, but ultimately the carrier did not need to utilize this staging space.

Consistent with the Framework, T-Mobile engaged in outreach to keep the public apprised of recovery efforts. T-Mobile issued numerous Press Releases and leveraged social media outlets to provide hurricane preparation tips to subscribers and provide them with the latest information about network restoration and other forms of relief and support (*e.g.*, extended service and billing).¹⁵ To help impacted customers focus on rebuilding, T-Mobile took several steps to provide additional relief by, among other things, waiving service and applicable charges through the end of October, suspending collections, waiving charges for SIM cards for customers who choose to come to T-Mobile, and waiving device replacement fees.¹⁶

T-Mobile followed the CTIA Best Practices.¹⁷ For example, it engaged in substantial pre-planning activity – both prior to the hurricane season generally and Hurricane Michael specifically. In May, T-Mobile’s roaming team coordinated with their AT&T counterparts – the nationwide wireless provider with the most technically compatible network – to update information that would be necessary to facilitate roaming in emergencies. T-Mobile also coordinated with its primary transport provider in Florida – AT&T – regarding potential recovery procedures in the event of damage from Hurricane Michael. Further, T-Mobile ensured that contracts were in place with vendors to assist with disaster recovery efforts.¹⁸

¹⁵ See, *e.g.*, T-Mobile Oct. 8 News Release, *supra* note 8; News Release, T-Mobile, *Hurricane Michael: Update for Customers* (Oct. 17, 2018) (“T-Mobile Oct. 17 News Release”), <https://www.t-mobile.com/news/hurricane-michael-update>; News & Updates, T-Mobile, *Hurricane Michael Updates*, <https://support.t-mobile.com/community/community/news-updates/blog/2018/10/15/hurricane-michael-update-panhandle-recovery-begins> (last visited Dec. 14, 2018); Christopher Coltrain, *Hurricane Michael Response – T-Mobile*, YouTube (Oct. 28, 2018), https://www.youtube.com/-watch?v=_V6sAcufTaQ.

¹⁶ See, *e.g.*, T-Mobile Oct. 17 News Release, *supra* note 15; John Legere (@JohnLegere), Twitter (Oct. 16, 2018, 4:14 PM), <https://twitter.com/johnlegere/status/1052336967021543-425?lang=en>.

¹⁷ T-Mobile Response at 6-9.

¹⁸ See generally *id.* at 6-9.

D. T-MOBILE FOLLOWED OTHER INDUSTRY BEST PRACTICES

The *Public Notice* notes that nationwide service providers have been instrumental in developing well-known and widely-disseminated industry best practices that address communications operations in high-risk, hurricane-prone areas and asks whether these best practices were implemented.¹⁹ As the ATIS Industry Best Practices website cited by the Commission states, more than 1,000 best practices have been established and “[a]ttempting to identify which Best Practices might be required of every participant in the communications industry would be very impractical, if not impossible.”²⁰

T-Mobile described compliance with CTIA’s Best Practices in the prior section and herein addresses the Best Practices set forth in the ATIS Disaster Roaming Guide and Resource, ATIS-0100054 (“Disaster Guide”), one of three source documents identified on the ATIS Industry Best Practices website cited by the Commission.²¹ The Disaster Guide identifies twelve best practices and T-Mobile complied with each of these best practices with regard to Hurricane Michael.

The Disaster Guide identifies Best Practice 9-9-1001 as “critical” and Best Practices 9-8-8651 and 9-9-1032 as “highly important.” Each of these best practices relates to business

¹⁹ *Public Notice* at 3 (citing “Communications Security, Reliability and Interoperability Council (CSRIC) Best Practice (BP), Alliance for Telecommunications Solutions (ATIS), <https://www.atis.org/bestpractices>” (“ATIS BP Website”)).

²⁰ ATIS BP Website (last visited Dec. 14, 2018). T-Mobile agrees with ATIS and, therefore, does not herein identify each of the Best Practices adopted over the years that could potentially apply to T-Mobile. This is especially true today because ATIS currently is revising many of its Best Practices to incorporate recommendations from CSRIC. T-Mobile is actively participating in these efforts.

²¹ The website references two additional documents, the NRSC Pandemic Checklist and the NRSC Hurricane Checklist. The NRSC Pandemic Checklist is not relevant to Hurricane Michael and, although the NRSC Hurricane Checklist does not contain any best practices, T-Mobile nevertheless follows this checklist.

continuity and disaster recovery plans. T-Mobile has established an enterprise-wide Business Continuity Recovery Program and annually seeks certification that the program satisfies the requirements of the CTIA Business Continuity/ Disaster Recovery Program. (T-Mobile is in good-standing with the requirements of the CTIA Program.) Among other things, this Business Continuity Recovery Program facilitates efforts towards gap analysis, risk assessment, mitigation and improved business resiliency during disasters and other emergency scenarios. T-Mobile has implemented a training and awareness program for its employees on business continuity requirements and has practices in place to ensure the effectiveness of the Business Continuity Recovery Program.

The Disaster Guide also identifies Best Practice 9-9-1031, which urges network operators to consider entering into mutual aid agreements, as highly important. As a signatory to the Framework, which establishes mutual aid criteria, T-Mobile complies with this best practice.

The Disaster Guide identifies Best Practices 9-7-0609 and 9-9-0513, which relate to collecting and maintaining contact information for mutual aid purposes, as highly important. T-Mobile complied with this best practice – both through coordination prior to the 2018 hurricane season and coordination prior to Hurricane Michael making landfall.

The Disaster Guide also identifies Best Practices 9-7-1045 and 9-9-1037, which relate to establishing and utilizing escalation processes in disaster situations. T-Mobile complied with this best practice by developing service level agreements and escalation paths for carriers serving the same markets.

Finally, the Disaster Guide identifies a number of best practices governing peering, fault isolation, network monitoring, and routing controls.²² These best practices were recommended by CSRIC Working Group 9, which was chaired by a T-Mobile representative,²³ and have been implemented by T-Mobile.²⁴

CONCLUSION

As discussed above, T-Mobile engaged in substantial pre-storm preparation, followed industry best practices, and responded quickly to restore service in areas severely impacted by Hurricane Michael after it made landfall on October 10, 2018.

Respectfully submitted,

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²² Specifically, the Disaster Guide identifies the following Best Practices: 9-7-0407 (NOC-NOC peering); 9-7-0607 (Inter-provider fault isolation); 9-9-0608 (network monitoring and surveillance); 9-9-0617 (Route controls).

²³ T-Mobile was well represented on this committee, with four additional representatives serving at the time the best practices were identified.

²⁴ See CSRIC Working Group 9, Infrastructure Sharing During Emergencies, Wireless Network Subcommittee: Roaming During Disasters (May 2014), https://transition.fcc.gov/pshs/advisory-/csric4/CSRIC_IV_WG-9_Report_061814.pdf.