

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

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

COMMENTS OF AT&T

AT&T Services, Inc., on behalf of its affiliates (collectively, “AT&T”), submits these comments in response to the Federal Communications Commission’s (“Commission” or “FCC”) *Public Notice* seeking comment on stakeholders’ readiness, preparation, and response with respect to Hurricane Michael.¹

Again in 2018, hurricane season produced significant, deadly storms that caused extensive damage to telecommunications infrastructure in the hard hit areas, including Bay County and Gulf County, Florida, where the most intense wind and water of Hurricane Michael made landfall. Hurricane Michael attained peak winds of 155 mph (250 km/h) as it came ashore near Mexico Beach, Florida, on October 10, as a Category 4 hurricane. Hurricane Michael’s massive wind, storm surge, sustained rainfall, and severe flooding devastated these communities, and destroyed telecommunications and commercial power infrastructure. Estimates are that the cost of Hurricane Michael alone could be as high at \$25 billion² – and that cannot fully account for the loss of lives, homes, and livelihoods of families in the most devastated areas. AT&T

¹ *Public Safety and Homeland Security Bureau Seeks Comment on Hurricane Michael Preparation and Response*, PS Docket No. 18-339, Public Notice (PSHSB 2018) (Public Notice).

² See Brian K. Sullivan, Bloomberg, *Hurricane Michael’s Price Tag Could Reach \$25 Billion* (Oct. 11, 2018), available at <https://www.bloomberg.com/news/articles/2018-10-11/hurricane-michael-s-price-tag-could-reach-25-billion> (last visited Dec. 10, 2018).

shares the Commission's commitment to examining the preparation and response efforts undertaken by both government and industry, and to identifying lessons learned with the goal of improving disaster response when the next emergency strikes.

AT&T's Response to Hurricane Michael. Like all disasters, Hurricane Michael presented unique challenges due to the specific characteristics of the weather event and the location. The response to each hurricane is necessarily driven by the specific attributes of the storm and the post-disaster environment. No two disasters are exactly alike—and no two recovery efforts will be exactly the same. Hurricane Michael affirmed AT&T's long-held conviction that each wireless carrier must continue to have the flexibility to adapt unique solutions to the specific challenges impacting its network so that it can restore services as efficiently and effectively as possible under the different and frequently changing circumstances presented by individual disasters.

In Hurricane Michael, AT&T's industry-leading Network Disaster Recovery (NDR) program performed well under difficult conditions to restore service to AT&T commercial customers and FirstNet subscribers.³ In addition to restoring AT&T service, its timely restoration of AT&T's network facilitated roaming under disaster pursuant to the Wireless Resiliency Cooperative Framework (Framework), to restore service to other wireless customers as well. As the Commission is aware, AT&T has made all-threats, disaster recovery a priority since the formation of its NDR program in 1991, and AT&T has been an industry leader in planning for and recovering from catastrophic events.⁴ In any disaster, AT&T's first priority,

³ See also Letter from Joseph P. Marx, AT&T Services, Inc. to Lisa M. Fowlkes, Chief, Public Safety and Homeland Security Bureau, FCC, PS Docket No. 11-60 (filed Nov. 26, 2018) (erratum filed Dec. 6, 2018) (AT&T Framework Response) (providing detailed information about the AT&T response to Hurricane Michael and other hurricanes, subject to a request for confidential treatment).

⁴ See AT&T, *Network Disaster Recovery*, <https://www.corp.att.com/ndr/> (last visited Dec. 10, 2018).

while working safely, is keeping its customers and FirstNet subscribers connected. The NDR program establishes a plan for action both before disaster strikes, by setting the stage for rapid response, and after disaster hits, by expeditiously restoring networks. Like the tip of iceberg, a strength of AT&T is the *depth* of its disaster response capability; for every resource—whether a piece of equipment, expertise, or personnel in-theater—there are backups that have been and can be brought to bear on the disaster until it yields to restoration and rebuilding. AT&T’s response to Hurricane Michael proved again that AT&T’s preparation, training, and commitment are second to none.⁵

As Hurricane Michael developed in the Gulf of Mexico and set its sights on the Florida Panhandle, AT&T went to work, pre-staging needed equipment, and virtually and physically mobilizing personnel to ensure a rapid response. To respond to Hurricane Michael, among other things, AT&T deployed:

- 32 Cell on Wheels (COWs) and Cell on Light Trucks (COLTs);
- 1 Flying COW in Mexico Beach;
- 7 Emergency Communications Vehicles and Emergency Communications Portables;
- 1 Hazmat and Mobile Command Center; and
- 4 device charging sites.⁶

After the storm, AT&T worked tirelessly to address any network failures and restore service, including deploying generators, as quickly and as safely possible. In one particular instance, communications service was disrupted to county law enforcement. A FirstNet

⁵ See also Reply Comments of AT&T, PS Docket No. 17-344 at 3 (filed Feb. 21, 2018) (AT&T 2017 Hurricane Reply) (describing in detail AT&T’s pre-planning and immediate response procedures).

⁶ See AT&T, *AT&T Response to Hurricane Michael*, available at https://about.att.com/pages/hurricane_michael (last visited Dec. 10, 2018).

deployable satellite unit was requested by a FirstNet subscriber to assist local public safety officials in the aftermath of the storm. The FirstNet satellite COLT (SatCOLT) arrived on site on October 12, 2018. It supported communications for the County's emergency operations center, 9-1-1 call center, and dispatch. In addition, the AT&T FirstNet team provided smartphones, equipped with FirstNet Band Class 14, to local law enforcement and other public safety personnel to facilitate communication during this time of emergency. AT&T worked with local officials to transfer incoming 9-1-1 calls to a cell phone equipped with FirstNet service operating on the SatCOLT for more than seven hours. AT&T's FirstNet team was there to provide the reliable communications and unique solutions that first responders needed in the wake of this devastating storm. First responders said it best:

- “FirstNet was there when we needed communications the most with our campus and community partners. During an emergency or natural disaster the ability to communicate is paramount and based on the support we’ve received from the FirstNet team at AT&T during Hurricane Michael, we know they are a partner we can trust,” said Florida State University Police Chief David Perry.
- “When it comes to natural disasters like Hurricane Michael, we’re all in this together. And when everything else was down, FirstNet was working. It’s helping keep our officers across the state stay safe and connected during their lifesaving missions,” said Steve Casey, Executive Director of the Florida Sheriffs Association.⁷

As in previous major storms, AT&T found that there are three main causes of communications outage due to hurricanes: (1) loss of commercial power; (2) loss of backhaul transport communications; and to a much lesser extent, (3) total tower loss.⁸ AT&T addresses loss of commercial power with a combination of fixed and portable generators. Loss of backhaul

⁷ AT&T, *Public Safety Spotlight: FirstNet Delivers for Agencies Responding to Hurricane Michael*, available at https://about.att.com/newsroom/2018/firstnet_hurricane_michael.html (last visited Dec. 10, 2018).

⁸ Overall, the empirical experience from hurricanes on the mainland and Puerto Rico has evidenced that cell towers are robustly engineered, constructed and conservatively operated to achieve an extremely high survivability rate in real-world experience.

can arise from a disruption to either the fiber optic or microwave connection to the network, sometimes after the storm due to fiber cuts as other infrastructure is being repaired. AT&T addresses loss of backhaul and total tower loss by deploying portable assets, such as COWs, Flying COWs, and COLTs – equipped with satellite backhaul as needed – as quickly as possible to the affected areas. As AT&T has previously suggested, the first two causes potentially could be, at least partially, mitigated through greater collaboration between electric companies and wireless carriers, and perhaps the Commission could perform a valuable role in facilitating communication among the industry stakeholders and regulators.⁹ In addition, the FCC could work with its counterparts in the Federal Energy Regulatory Commission to improve resiliency of commercial power provided to carriers, which would significantly reduce the loss of communications services during hurricanes.

In all cases, there is a complexity of road access, tree trimming and electric lines; when trees and branches fall across roadways taking down electric lines, they can block passage, and because of the electrical hazard, only the electric utility and its qualified contractors can “cut and toss” the downed trees safely to open road access. Road access, from employee homes, from out-of-theater sources, to work centers, to outside plant locations, and to cell sites can delay the most expeditious response activities and this was the case here. Additionally, there were significant delays due to limited access and road congestion to the barrier islands in the wake of Hurricane Michael’s landfall.

AT&T’s Implementation of the Framework. In 2018, the Framework again proved extremely effective by facilitating various collaborative efforts across the wireless industry. During the two years in which the Framework has been in place, it has been thoroughly tested

⁹ See AT&T 2017 Hurricane Reply at 13.

due to an exceptional number of devastating natural disasters during that period. AT&T, and the industry more broadly, now have valuable experience that demonstrates that the Framework performs well, even under the most difficult circumstances. During Hurricane Michael, AT&T followed the Framework and there were no deviations from our normal procedures, as AT&T stood ready to render aid when it could and was needed, or accept aid if necessary.¹⁰ Among other things, the Framework provides for reasonable roaming among wireless providers under disaster arrangements when technically feasible. For Hurricane Michael, AT&T received one request for roaming under disaster, on AT&T's 3G network. After evaluating AT&T's network status and receiving forecast demand data from the requesting wireless carrier, AT&T determined it had the capacity to carry the expected increased traffic load without adverse impact on AT&T customers, and thus could honor the request, and opened roaming on the same day of the request.¹¹

As the experience of AT&T and others has demonstrated, the Framework has been a success and the Commission should continue to support it in its current, voluntary form. The Framework incorporates best practices and gives providers the ability to adapt to diverse and changing circumstances on the ground and to develop innovative responses as events unfold. The continued availability of mobile wireless services during disasters has been partially due to the flexibility inherent in the Framework. One action the Commission could take to advance the goals of the Framework is to implement the recent U.S. Government Accountability Office recommendation that the FCC promote awareness of the Framework.¹² But rethinking the

¹⁰ See generally AT&T Framework Response, App. at 45-49 (public version).

¹¹ See *id.* at 45. AT&T made no requests for roaming under disaster or mutual aid for Hurricane Michael. See *id.*

¹² See U.S. Government Accountability Office, GAO-18-198, Report to the Ranking Member, Committee on Energy and Commerce, House of Representatives, *Telecommunications: FCC Should Improve Monitoring of Industry*

Framework itself risks taking a step backward with respect to disaster response. The existing Framework works well because it represents a true “meeting of the minds” of wireless industry stakeholders who all share the same goals.

In conclusion, AT&T strives to efficiently deliver the highest levels of service, quality, and reliability under all circumstances. In the 2018 hurricane season, AT&T’s industry-leading NDR program and its participation in the Framework again enabled AT&T to maintain and restore service safely and efficiently even under the most difficult conditions. AT&T looks forward to working with the Commission to improve disaster response among all wireless carriers by incorporating lessons learned into industry practices and the voluntary Framework.

Respectfully submitted,

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Efforts to Strengthen Wireless Network Resiliency at 35 (Dec. 2017), available at <https://www.gao.gov/assets/690/688927.pdf> (last visited Dec. 10, 2018).