



Hurricane Maria

Activation: Hurricane Maria, Puerto Rico

Communications Situation Report 2 - October 6, 2017

Glide Number: TC-2017-000136-ATG

Prepared by: Humanity Road / Animals in Disaster

Situation Overview

Communications Report No. 2 provides updates from Puerto Rico as of October 6, 2017 for status of communications in 34 specific municipalities in Puerto Rico. The report includes municipalities most impacted by cell towers down. It is not an all inclusive list for impacted municipalities in Puerto Rico. Information stems from social media and public domain sources. Humanity Road first activated its Digital Disaster Response Team on Tuesday, September 18, 2017 to monitor Maria and published Situation Report No 1 on September 20. Situation Report No. 2 on September 22, and Communications report No. 1 on October 4, 2017.

Hurricane Maria made landfall at 6:15am on September 20 in Yabucoa, in southeastern Puerto Rico, as a Category 4 storm with winds of 155mph [source](#). The island suffered significant structural damage and widespread loss of power and communications. Power and communications are only beginning to be restored.

Twitter handles

[@Humanityroad](#)

[@Disasteranimals](#)

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About Humanity Road: Founded in 2010 as a 501(c)3 non-profit corporation, [Humanity Road](#) is a leader in the field of online disaster response. Through skilled and self-directed work teams, Humanity Road and its network of global volunteers aim to provide the public and disaster responders worldwide with timely and accurate aid information. Providing such information helps individuals survive, sustain, and reunite with loved ones. For more information, please visit www.humanityroad.org.

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Significant Updates (most recent first)

Oct 6

- [CMRC](#) is coordinating with Alison Thompson Third Wave Volunteers and arriving today in Puerto Rico with a mobile solar-electric system hub powered by solar panels, electrical inverters and generator to the solar hubs will address the basic needs to charge up devices and tools, boost communications, filter water, and connect with neighbors in a space that is bright throughout the day and night [source](#)
- Fort Drum New York team providing telecommunications support in Puerto Rico. The team engineered and installed a Land Mobile Radio System and established a 911 telecommunication service, which is used to connect local first responders to their Fort Buchanan counterparts [source](#)

Oct 5

- FCC update as of Oct 5th - the main PSAP remains offline. 911 calls continue to be sent to other (back-up) PSAP in Puerto Rico. A number of cell towers have been deployed to various locations including Aguadilla, Arroyo, Barranquitas, Ceiba, Guayanilla, Hormigueros, Rincon and Santa Isabel [FCC report](#)
- ITDRC volunteers and [DISHcares](#) satellite technicians are installing Voice and WiFi networks in some of the most remote locations on the island to connect first responders and help families with reunification. [source](#)
- Amateur Relay Radio League (ARRL) has dispatched large amounts of communications equipment and fifty trained amateur radio operators to Puerto Rico to conduct disaster relief communications (via FCC)
http://transition.fcc.gov/Daily_Releases/Daily_Business/2017/db1005/DA-17-974A1.pdf

Oct 4

- “Amateur Radio volunteers deployed as American Red Cross volunteers to Puerto Rico, as part of the “Force of 50” last weekend, have been focusing their efforts where their help is most needed.” [source](#)

- Two weeks after landfall, only 5.4 percent of citizens on the island have electricity, while 12.1 percent have cell service, the Department of Defense said on Wednesday. As of Wednesday, only 14 of Puerto Rico's hospitals had electricity, while 51 were "degraded" and in need of generators for power. [source](#)
- Gov of Puerto Rico Dashboard Communications statistics <http://status.pr/Home>
 - 43.32% Telecommunications Services - includes wired and wireless
 - 11.6% Cellular Towers - 312 of 2,671
 - 22.5% Mobile Phones - 365 of 1,619
- Map of WiFi hotspots available in Puerto Rico. [source](#)

Oct 3

- Univision Noticias published a crowdsourced searchable list of status by municipality based on open sources. The effort concluded on Oct 3rd. [source](#)
- FCC http://transition.fcc.gov/Daily_Releases/Daily_Business/2017/db1003/DOC-347055A1.pdf
 - Overall, 87.9% (virtually no change from 88.3% yesterday) of cell sites are out of service. All counties in Puerto Rico, except Bayamon, Guaynabo, and San Juan, have greater than 75% of their cell sites out of service. 33 (up from 27 yesterday) out of the 78 counties in Puerto Rico have 100% of their cell sites out of service.
 - The main PSAP in Puerto Rico is offline. 911 calls are being sent to the other (back-up) PSAP in Puerto Rico, according to the primary service provider.
 - In Puerto Rico, there are at least 10 (same as yesterday) switches that are out of service due to either SS7 or toll isolation.
- The Military Sealift Command hospital ship USNS Comfort has berthed at a pier in downtown San Juan, bringing 750 Navy medical personnel, 12 operating rooms and 250 hospital beds to storm-ravaged Puerto Rico. [source](#)

Oct 1

- The Puerto Rico Electric Power Authority certified that 80 percent of the island's transmission and distribution lines are down [source](#)

Sep 30

- The emergency plan was as follows: There is no way to fix the nature of the grid," [Governor] Rossello said." [source](#)

Communications Service Providers and Status Reports

- **AT&T:** [website](#), [@att](#), [facebook](#)
 - Status updates. [source](#)
 - Oct 4: AT&T has established temporary cell sites providing connectivity to Ponce, Arecibo, Humacao, Rio Grande, Mayagüez Mesa, Manati and Aguadilla. In addition to 8 million calls, these sites have carried more than 100,000 calls and 500,000 texts per day for the last 3 days. They plan to deploy temporary sites in additional cities,

including in Fajardo and Guavate. A ship arrived Sunday in San Juan with 3 more temporary cell sites, trucks, Emergency Communications Portable satellite units, generators and restoration equipment. An additional ship and cargo flight arrived yesterday with more equipment, temporary cell sites, vehicles, and personnel. [source](#)

- Oct 4: Customer stores open for services. [source](#)

- **Claro:** [website](#), [@clarotodo](#), [facebook](#)

- Oct 4: Open customer service centers. [source](#)
- Oct 3: Service centers that will help people apply for FEMA assistance. [source](#)
- Oct 1: They are continuing to restore cell service and have now reached 325,000 people across the island and 42% of customers in San Juan. [source](#)

- **Open Mobile:** [website](#), [@openmobilepr](#), [facebook](#)

- Sep 29: Areas with restored service. [source](#)

- **Sprint:** [website](#), [@spring_pr](#), [facebook](#)

- Status updates from Sprint in English and Spanish: [source](#)
- Oct 3: 8 Sprint and Boost mobile stores are open to serve as charging stations. [source](#)
- Oct 2: Network equipment has been arriving through multiple air cargo shipments. Equipment includes portable generators, satellite VSAT equipment, and microwave backhaul sets. [source](#)
- Oct 2: Sprint is still unable to contact 14 employees and is asking them to contact their supervisors by any means to let them know they are safe. [source](#)
- Oct 1: For anyone trying to reach relatives in Puerto Rico who are Sprint customers, please fill out this [form](#). [source](#)
- Sep 29: Sprint's towers are still standing and largely intact, and they are working to restore backhaul and power. They are focusing first on restoring the most populous areas and then building out from there. [source](#)

- **T-Mobile:** [website](#), [@tmobilepr](#), [facebook](#)

- Status updates in Spanish. [source](#)
- Status updates in English. [source](#)
- Oct 3: List of areas where cell service has been reestablished. [source](#)
- Oct 3: 9 cargo airplanes have been deployed to bring in needed equipment and personnel. 2 barges loaded with additional trucks, Cell On Wheels (COWs), Cells on Light Trucks (CoLTS), RVs, fuel and diesel trucks, and other vehicles have been deployed. 130 portable generators are currently on the island and in use. [source](#)

Civilian Teams on the Ground Providing Communications Support

- **American Red Cross:** [website](#), [@RedCross](#), [facebook](#)

- Oct 4: The Red Cross is setting up mobile satellites to help people in Puerto Rico communicate with loved ones. [source](#)

- **Coastal Marine Resource Center - Resilient Power PR** <http://resilientpowerpr.org/>

- **Oct 6:** [CMRC](#) is coordinating with Alison Thompson Third Wave Volunteers and deploying a mobile solar-electric system hub powered by solar panels, electrical inverters and generator to the solar hubs will address the basic needs to charge up devices and tools, boost communications, filter water, and connect with neighbors in a space that is bright throughout the day and night [source](#)
- **Disaster Tech Lab:** [website](#), [@DisasterTechLab](#), [facebook](#)
 - Oct 4: Deployed to Puerto Rico and bringing in solar arrays.
- **Facebook:** [facebook](#)
 - Sep 27: Facebook is sending a connectivity team to Puerto Rico to deliver emergency telecommunications assistance to get systems up and running. [source](#)
- **Google:**
 - Project Loon, the initiative of Alphabet's X lab to deliver internet using air balloons, is looking into deploying Wi-Fi balloons to help alleviate the crisis in Puerto Rico [Source](#)
- **Global DIRT:** [website](#), [@globalDIRT](#), [facebook](#)
 - Oct 1: The team made it to the roof of the Mayor's office in Vieques and put up a 1.8 meter GATR inflatable satellite terminal and a Vanu cellular terminal to bring wifi and a 5km radius of cellular GSM connectivity. [source](#)
- **Information Technology Disaster Resource Center (ITDRC):** [website](#), [@ITDRC](#), [facebook](#)
 - Oct 4: ITDRC volunteers and [DISH](#)cares satellite technicians are installing Voice and WiFi networks in some of the most remote locations on the island to connect first responders and help families with reunification. [source](#)
 - Oct 3: The team traveled to Utuado to bring voice and data online for the local responders. Information is now flowing quickly to San Juan. [source](#)
- **NetHope:** [website](#), [@NetHope_org](#), [facebook](#)

Oct 6

- **NetHope is currently working on providing communication support in Utuado and Aibonita - two hard hit mountainous areas**

Oct 4:

- NetHope is working closely with its members from the humanitarian community and partners from the private sector on providing connectivity to response organizations and communities affected. There is good coordination across the different organizations providing connectivity services in Puerto Rico to ensure there is no duplication of efforts.
- NetHope has identified 20 locations where they are planning to provide connectivity services, both to the response community as well as to the affected community. First installation is happening today. The number of locations is expected to rise over the coming days as response organizations reach more isolated communities and overall response effort grows.

- **OnSIP:** [website](#), [@onsip](#), [facebook](#)
 - OnSIP has been working closely with ITDRC volunteers to provide temporary, on-the-ground communications in Puerto Rico. The OnSIP Support team is currently assisting technicians with finding creative solutions to establish network connectivity, including phone service, across the island. Technicians have been using the OnSIP app and testing other free mobile softphone applications to help volunteers stay connected in face of ongoing challenges with network configurations on satellite internet connections. In addition, OnSIP has provided ITDRC with local phone numbers for the Miami area, and will be sending 20 Panasonic KX-UT248-B SIP phones to the team shortly.

Amateur Radio Communications Status

High Frequency and Very High Frequency radio networks continue to function in the Caribbean.

Oct 6:

- Volunteer NV9L, and a FEMA team member were tasked with calling 68 hospitals and medical facilities. They asked a series of 12 questions geared toward obtaining a better understanding of each facility's communication capabilities, and to see if urgent care supplies and needs were being met. [source](#)
- KC5QCN, the Amateur Radio liaison to the ESF-2 Communications Task Force, coordinated the installation of a VHF Amateur Radio repeater on a mountain peak in El Yunque National Forest. The repeater now gives radio coverage to approximately 60% of Puerto Rico, and also extends radio coverage into the US Virgin Islands. [source](#)

Oct 4:

- "Amateur Radio volunteers deployed as American Red Cross volunteers to Puerto Rico, as part of the "Force of 50" last weekend, have been focusing their efforts where their help is most needed." [source](#)
- "The Salvation Army is developing a list of SATERN / Amateur Radio Operators who are interested in being on standby for a possible deployment to Puerto Rico or the Virgin Islands in support of that Caribbean Division." [source](#)
- "The EOC has released the Amateur Operators of full time duty, allowing us to now provide full two way comms into Dominica via Echolink onto UHF repeater." <https://buff.ly/2xgLkGg>
- [Automatic Packet Reporting System](#) stations are slowly being restored to service.
- "Automatic Link Establishment Operators in North and South America are mobilizing to provide HF support for the Dominica Airlift - "Angels To Eden" flights. HF ALE net reported yesterday that the first plane in the airlift had arrived in Dominica.. Several ALE HF portable base stations are being set up at areas where all the other land communications have failed. ALE Operators who want to help with the airlift can check in at the [HFLINK.NET](https://buff.ly/2ylezhn) chat room." <https://buff.ly/2ylezhn>
- The [Hurricane Watch Net](#) is currently standing by with a potential activation for Hurricane Nate

- The [Voice Over IP Skywarn Net](#) will be announcing activation plans for Hurricane Nate.

- From ARRL Puerto Rico Section:

The Puerto Rico Section of the ARRL and the ARES group are following frequencies: 3,803, 3,808 and 7,188 Mhz in HF and VHF / UHF through the repeater systems of the Movimiento Amateur de PR WP4MR. Also in 2 meters in the 146,520 Mhz the national frequency in simplex. Additional it has been announced that the Hurrican Watch Net-HWN sw will activate the 5 markers at the frequency of 14,325 Mhz by day and 7,268 Mhz at night. Any additional information can be communicated to the Section Emergency Coordinator Juan Sepúlveda at kp3cr@yahoo.com

Note: The information immediately above is dated but the frequencies listed may still be in use.

- Frequencies to monitor but avoid causing interference are:
 - 3.815 mHz (Caribbean Emergency Weather Net)
 - 7.188 mHz (Caribbean Emergency Weather Net)
 - 14.265 mHz (Salvation Army Net)
 - [Frequencies in the 40, 60, 20 meter bands](#) may be used by ALE stations.
 - Any VHF or UHF repeater system and 146.52 mHz
- Sep 28
 - FCC has issued Special Temporary Authorizations (STAs) granting authority for out-of-area first responders, during recovery operations, to use land mobile radios licensed to their home areas. source: http://transition.fcc.gov/Daily_Releases/Daily_Business/2017/db0928/DA-17-944A1.pdf
 - FCC anticipates additional out-of-area first responders will deploy to Puerto Rico and the USVI with radios equipped with the VHF interoperability channels. Waiving the restriction against public safety use of VTAC11 and VTAC12 will make all five interoperability channels available for use and obviate the need for these out-of-area first responders to obtain individual STAs to operate mobiles on VTAC11 and VTAC12. This will save valuable time in deploying assets as well as increase the capacity for interoperable communications traffic among first responders assisting in recovery efforts. source: http://transition.fcc.gov/Daily_Releases/Daily_Business/2017/db0928/DA-17-944A1.pdf

Regional Situation Reports

A TOTAL OF 33 MUNICIPALITIES IN PUERTO RICO REPORTED 100% OF CELL TOWERS DOWN AS OF OCTOBER 3, 2017

Aguadilla (pop. 60,949) (18.43, -67.154444) www.aguadilla.gobierno.pr

Located in the northwestern tip of Puerto Rico (U.S.) bordered by the Atlantic Ocean to the north and west, north of Aguada, and Moca and west of Isabela. Aguadilla is spread over 15 wards and Aguadilla Pueblo, the administrative center of the city. It is a principal city of Aguadilla-Isabela-San Sebastián Metropolitan Statistical Area.

- Oct 5
 - Update - 45 of 47 cell sites are down [FCC report](#)
- Oct 3
 - 47 of 47 cell sites down via [FCC report](#)
 - Aguadilla airport is open <http://aguadilla.airport-authority.com/airlines> [source](#)

Aguas Buenas (pop. 28,649) (18.256944, -66.103056)

Located in the Central Mountain Range, north of Cidra, south of Bayamón, Guaynabo and San Juan; east of Comerio; and north-west of Caguas. Aguas Buenas is spread over 9 wards and Aguas Buenas pueblo (The downtown area and the administrative center of the city). It is part of the San Juan-Caguas-Guaynabo Metropolitan Statistical Area.

- Oct 4
 - No change - 20 of 20 cell towers down via [FCC report](#)
- Oct 3
 - 20 of 20 cell towers down via [FCC report](#)
 - Several transmission towers collapsed, comms problems continue [source](#)

Arroyo (pop. 19,117) (17.965833, -66.061389)

Located along the southern coast of Puerto Rico (U.S.) and bordered by the Caribbean Sea, east of the municipality of Guayama and northwest of the municipality of Patillas. Arroyo is spread over 5 wards and Arroyo Pueblo (The downtown area and the administrative center of the city). It is part of the Guayama Metropolitan Statistical Area.

- Oct 5
 - Update - 9 of 10 cell towers down via [FCC report](#)
- Oct 3
 - 10 of 10 cell towers down via [FCC report](#)
 - 3,000 homes lost. The municipality recovered connectivity to cell service in some areas Saturday. A cargo of water and food arrived that day to be distributed in Guayama and Arroyo. Mayor reports may take 6 months for electricity to return [source](#)

Barranquitas (pop. 30,318) (18.186667, -66.306389) <http://barranquitaspr.net/pueblo/>

A small mountain municipality located in the central region of Puerto Rico (U.S.), south of Corozal and Naranjito; north of Coamo and Aibonito. It is part of the San Juan-Caguas-Guaynabo Metropolitan Statistical Area. Barranquitas is about one hour by winding roads

from San Juan, the capital. It is nestled amid hills and mountains, and nearby, the "cañón de San Cristóbal" (Canyon of Saint Christopher); one of the deepest canyons in the Indies.

- Oct 5
 - 16 of 17 cell towers down via [FCC report](#)
- Oct 3
 - 17 of 17 cell towers down via [FCC report](#)
 - 500 families lost homes, electric lines on street, need food and water [source](#)

Ceiba (pop. 30,631) (18.186667, -66.306389) <http://www.ceiba-pr.com/>

Located on the eastern coastal plain. To the north limits with Rio Grande, Luquillo, Fajardo and the Atlantic Ocean; to the south it borders with Naguabo, to the west with Rio Grande and Naguabo and to the east with the Atlantic Ocean

- Oct 5
 - 10 of 12 cell towers down via [FCC report](#)
- Oct 3
 - 12 of 12 cell towers down via [FCC report](#)
 - Ceiba airport is open [source](#)

Cidra (pop. 43,480) (18.175833, -66.161389)

Located in the central region of the island, north of Cayey; south of Comerío and Aguas Buenas; east of Aibonito and Barranquitas; and west of Caguas. Cidra is spread over 12 wards and Cidra Pueblo (The downtown area and the administrative center of the city). It is part of the San Juan-Caguas-Guaynabo Metropolitan Statistical Area.

- Oct 6
 - No new updates online from or about the community of Cidra
 - No reports from any aid agencies regarding aid provided to Cidra
- Oct 5
 - No change - all 27 cell towers remain down via [FCC report](#)
- Oct 3
 - Donation center in Cidra - interview with local official on process for local citizens to receive aid /emergency food/water rations per family [via Facebook Post News Story](#)
 - Second news story from Noticias 24/7 regarding wait time in line for ATM machine [Noticias 24/7 News Story in Facebook](#)
- Oct 3
 - 27 of 27 cell towers down via [FCC report](#)
- Oct 1
 - AT&T is reportedly working to install a COW in Cidra [source](#)

Comerío (pop. 20,778) (18.218056, -66.226111)

Located in the center-eastern region of island, north of Aibonito; south of Naranjito and [Bayamón](#); east of Barranquitas; and west of Cidra and Aguas Buenas. Comerío is spread over 7 wards and Comerío Pueblo (The downtown area and the administrative center of the city). It is part of the San Juan-Caguas-Guaynabo Metropolitan Statistical Area.

- Oct 5
 - no change - all 18 cell towers remain down via [FCC report](#)

- Oct 3
 - 18 of 18 cell towers down via [FCC report](#)
- Sep 28
 - 1,200 houses devastated. No water, no fuel and food is scarce, According to the mayor, Josian Santiago hospital has a diesel plant, but without fuel. At least 1,000 vaccinations have already been lost. [source](#)

Florida (pop. 12,680) (18.363611, -66.571389)

<https://www.facebook.com/Municipio-de-Florida-384035695305235/>

Located north of Ciales, south of Barceloneta, east of Arecibo, and west of Manatí in the coastal plains. Florida is spread over one ward and Florida Pueblo (The downtown area and the administrative center of the city). It is part of the San Juan-Caguas-Guaynabo Metropolitan Statistical Area.

- Oct 5
 - No change - all 6 cell towers remain down via [FCC report](#)
 - Supplies of food and drinking water have arrived and mayor has arranged installation of a generator at the well in Pajonal to supply drinking water - via [Municipio De Florida facebook post](#)
- Oct 4
 - Food bank of Puerto Rico donated food - via [Municipio De Florida facebook post](#)
- Oct 3
 - 6 of 6 cell towers down via [FCC report](#)
- Oct 2
 - Images of arrivals of trucks and delivery of drinking water in the municipality this weekend. [source](#)
- Sep 30
 - Mayor Jose Gerena, indicated that on Saturday federal aid had not yet arrived. He also reported that fortunately there were no human losses in the area. [source](#)
- Sep 21
 - No power since Sep 19th [source](#)

Guanica (pop. 19,427) (17.971667, -66.908056)

Located on the south coast, territory mostly flat. It borders with Sabana Grande on the north, the Caribbean Sea on the south, Yauco on the east and Lajas on the west.

- Oct 5
 - No change - all 17 cell towers still down via [FCC report](#)
- Oct 3
 - 17 of 17 cell towers down via [FCC report](#)

Guayama (pop 84,214) (17.974167, -66.11)

Located on the Southern Coastal Valley region, bordering the Caribbean Sea, south of Cayey; east of Salinas; and west of Patillas and Arroyo. Guayama municipal territory reaches the central mountain range to the north and the Caribbean Sea to the south. The mountain systems Sierra de Jajome (2,395 feet or 730 meters) and Sierra de Cayey cover some of the municipality area. The highest points are the Cerro de la Tabla (2,834 feet or 863 meters) and Cerro Tumbado (2,450 feet or 746 meters), which are part of the Sierra de Cayey mountain system.

- Oct 5
 - Update - 29 of 30 cell towers down via [FCC report](#)
- Oct 3
 - 30 of 30 cell towers down via [FCC report](#)

Guayanilla (pop. 21,581) (18.019167, -66.791944)

Located on the south coast. To the west it borders Yauco, Adjuntas to the north, the Caribbean Sea to the south and Peñuelas to the east. Central mountain range borders its North. In the Pasto and Jagua Pasto neighborhoods, it has heights that reach up to 1,000 meters (3,280 feet) above sea level. Towards its central part the relief descends remarkably.

- Oct 5
 - Update - 9 of 10 cell towers down via [FCC report](#)
- Oct 3
 - 10 of 10 cell towers down via [FCC report](#)

Hormigueros (pop. 17,250) (18.139722, -67.1275)

Located in southernwest portion of Puerto Rico, the northern mountainous region covers one fourth of the town, with hills of relative height; a semi-mountainous region that extends from east to west covering downtown Hormigueros; and the flat, valley-like region that extends towards the south covering 5.6 square miles.

- Oct 5
 - Update - 9 of 10 cell towers down via [FCC report](#)
- Oct 3
 - 10 of 10 cell towers down via [FCC report](#)

Jayuya (pop. 16,642) (18.218611, -66.591667) <http://www.jayuya.puertorico.pr/>

Located in one of the highest parts of the Central Cordillera its relief is very steep, and in it are presented some of the highest hills among which is the Cerro Puntas, the highest mountain of Puerto Rico

- Oct 5
 - No change - all 7 cell towers down via [FCC report](#)
- Oct 3
 - 7 of 7 cell towers down via [FCC report](#)

Juncos (pop. 40,290) (18.2275, -65.921111)

Located in the eastern central region of the island, south of Canóvanas and Carolina; southeast of Gurabo; east of San Lorenzo; and west of Las Piedras. Juncos is spread over 9 wards and Juncos Pueblo (the downtown area and the administrative center of the city). It is part of the San Juan-Caguas-Guaynabo Metropolitan Statistical Area.

- Oct 5
 - No change - all 22 cell towers down via [FCC report](#)
- Oct 3
 - 22 of 22 cell towers down via [FCC report](#)

Lares (pop. 30,753) (18.295, -66.878611)

Located in Cordillera Central area at 1,200 meters above sea level, territory is mostly mountainous

- Oct 5
 - No change - all 15 cell towers down via [FCC report](#)
- Oct 4

- Amateur radio message was relayed on WinLink via VHF repeater from volunteer team members in Mayagüez on behalf of the mayor in Lares, Roberto Pagán, who had put out an urgent call for water for the town of some 5,000. [source](#)
- Oct 3
 - 15 of 15 cell towers down via [FCC report](#)

Las Marias (pop. 9,881) (18.251389, -66.993333)

Located in the west region of island in the foothills of the Cordillera Central. Its limits are: By the north Añasco and San Sebastián; By the south Maricao. For the east Lares and for the West, Añasco and Mayagüez.

- Oct 5
 - No change - all 9 cell towers down via [FCC report](#)
- Oct 3
 - 9 of 9 cell towers down via [FCC report](#)

Las Piedras (pop. 38,675) (18.183056, -65.866389)

Located in the center region of the island, north of Yabucoa ; south of Canóvanas and Río Grande ; east of Juncos and San Lorenzo ; and west of Naguabo and Humacao.

- Oct 5
 - No change - all 18 cell towers down via [FCC report](#)
- Oct 3
 - 18 of 18 cell towers down via [FCC report](#)

Loiza (pop. 30,060) (18.419722, -65.873056)

Located in the coastal plains of the north, northeast area of the island. It has limits to the Atlantic Ocean by the north; Canóvanas to the south, Río Grande to the east and Carolina to the west

- Oct 5
 - No change - all 11 cell towers down via [FCC report](#)
- Oct 3
 - 11 of 11 cell towers down via [FCC report](#)

Maricao (pop. 6,276) (18.180833, -66.98)

Located in the central region of the Island. It borders to the north with Las Marias and Lares; to the south with Sabana Grande and San Germán, to the west with Mayagüez and to the east with Yauco. Very bumpy, belongs to the region of the Rainy Mountains of the Western Cordillera Central

- Oct 5
 - No change - all 5 cell towers down via [FCC report](#)
- Oct 3
 - 5 of 5 cell towers down via [FCC report](#)
 - Municipality of Maricao remains incommunicado, without electricity, there is little comity, gas and water in the zone. There is no organization in the Emergency Management Center and the COE (Emergency Operations Center) has never met in Maricao," said Vicente Bayrón, representative of the Department of the Family, who indicated that, in

the middle of the hurricane, the mayor dismissed the director of Emergency Management. [source](#)

Maunabo (pop. 12,225) (18.006944, -65.899167)

Located in the southeastern end of Puerto Rico. It is bordered by the municipality of Yabucoa in the north; Patillas and the Caribbean Sea on the south and west. Panduras Blade and hills to the north, otherwise flat.

- Oct 5
 - No change - all 11 cell towers down via [FCC report](#)
- Oct 3
 - 11 of 11 cell towers down via [FCC report](#)

Moca (pop. 40,109) (18.394722, -67.113333)

Located in the western area of the island. The municipality of Moca borders on the north with the municipality of Aguadilla and Isabela; by the south with Añasco, by the west with the municipalities Aguada and Aguadilla and by the east with the municipalities of Isabela.

- Oct 5
 - No change - all 19 cell towers down via [FCC report](#)
- Oct 3
 - 19 of 19 cell towers down via [FCC report](#)

Morovis (pop. 32,610) (18.333333, -66.416667)

Located in the north of the island in the humid hills of the north. It limits with Manatí, Vega Baja and Vega Alta by the north; with Orocovis on the south, with Corozal on the east, and with Ciales on the west.

- Oct 5
 - No change - all 21 cell towers down via [FCC report](#)
- Oct 3
 - 21 of 21 cell towers down via [FCC report](#)

Naguabo (pop. 26,720) (18.219444, -65.736667)

Located on the east side of the island. It limits by the north with Rio Grande and Ceiba; by the south with Humacao and the passage of Vieques; by the west with Las Piedras and by the east with Ceiba and the passage of Vieques. The northern part is located within the mountains of Luquillo. Among some of its hills are two of the highest peaks of this mountain range, the peaks of the East and the West. Respectively of 1,051 and 1,020 meters (3,448 and 3,346) feet) of height above the level of the sea. The rest of the territory of this municipality is flat.

- Oct 5
 - No change - all 23 cell towers down via [FCC report](#)
- Oct 4
 - AT&T service still down in Naguabo [source](#)
- Oct 3
 - 23 of 23 cell towers down via [FCC report](#)

Naranjito (pop. 30,402) (18.300833, -66.245)

Located in the central area of the island of Puerto Rico in the region of the hills of the north. It borders to the north with Toa Alta; to the east with Bayamón, to the west with Corozal and to the south with Comerío and Barranquitas.

- Oct 5
 - No change - all 23 cell towers down via [FCC report](#)
- Oct 3

- 23 of 23 cell towers down via [FCC report](#)

Patillas (pop. 19,277) (18.006389, -66.015833)

Located in the southeastern coast, south of San Lorenzo; west of Yabucoa and Maunabo. Part of the town is mountainous. The Sierra de Cayey borders the town's territory through the northern region, and the Sierra de Guardarraya through the east. There are several rivers and creeks that flow through the town. There is also the Patillas Reservoir which was built in 1914. The Patillas and Marín Rivers flow into the reservoir which is also used for fishing.

- Oct 5
 - No change - all 15 cell towers down via [FCC report](#)
- Oct 3
 - 15 of 15 cell towers down via [FCC report](#)
 - The village is without electricity, although some people have power plants. There are fallen light poles, cables on the floor and crossing the roads, some blocking the passage. Fallen trees and other broken trees and branches and debris on the sidewalks of the streets. [source](#)

Rincon (pop. 15,200) (18.340278, -67.251667)

Located in the Western Coastal Valley, west of Añasco and Aguada. It is part of the Aguadilla-Isabela-San Sebastián Metropolitan Statistical Area. It is home to many of the surfing beaches in Puerto Rico, including Domes, Marias, Tres Palmas, Sandy Beach, Pools Beach, and Rincon Town Beach Plaza. It is also home to Caribbean beaches including Córcega Beach.

- Oct 5
 - Update - 14 of 15 cell towers down via [FCC report](#)
- Oct 3
 - 15 of 15 cell towers down via [FCC report](#)

Sabana Grande (pop. 25,265) (18.079722, -66.960833)

located north of Lajas and Guánica; south of Maricao; east of San Germán; and west of Yauco. Sabana Grande is spread over seven wards and Sabana Grande Pueblo (The downtown area and the administrative center of the city). It is part of the San Germán-Cabo Rojo Metropolitan Statistical Area.

- Oct 5
 - No change - all 12 cell towers down via [FCC report](#)
- Oct 3
 - 12 of 12 cell towers down via [FCC report](#)

San Lorenzo (pop. 41,947) (18.19, -65.968611)

Located in the southeast area of the island. It is bordered by Gurabo and Juncos by the north; Yabucoa and Patillas to the south; Juncos and Las Piedras on the east and Caguas on the west.

- Oct 5
 - No change - all 22 cell towers down via [FCC report](#)
- Oct 3
 - 22 of 22 cell towers down via [FCC report](#)

Santa Isabel (pop. 23,274) (17.966111, -66.405)

Located in the southern coast, south of Coamo; east of Juana Díaz; and west of Salinas.

- Oct 5

- Update - 17 of 18 cell towers down via [FCC report](#)
- Oct 3
 - 18 of 18 cell towers down via [FCC report](#)

Utuaado (pop. 33,149) (18.265556, -66.700556)

Located in the central mountainous region of the island known as La Cordillera Central. It is located north of Adjuntas and Ponce; south of Hatillo and Arecibo; east of Lares; and west of Ciales and Jayuya. In land area it is the third-largest municipality in Puerto Rico

- Oct 5
 - NetHope is currently working on providing communication support in Utuaado and Aibonita - two hard hit mountainous areas
 - No change - all 21 cell towers down via [FCC report](#)
- Oct 4
 - @ITDRC has provided voice and data online for the local responders in Utuaado. [Source](#)
- Oct 3
 - 21 of 21 cell towers down via [FCC report](#)
 - On Tuesday, October 3, there were still sectors of Utuaado incommunicado. FEMA local director Alejandro de la Campa said a plan was designed to transport food and water to incommunicado locations in towns such as Utuaado, Naranjito, Las Marías and Maricao, El Nuevo Día said.
 - In Utuaado, the Ángel L. Cuevas indoor arena and the Ramón Cabañas stadium became FEMA aid centers, according to a list published by [Noticel](#) .
- Oct 1
 - On Monday, October 1, El Nuevo Día reported that there are 287 refugees in Utuaado. In the shelter of the Efraín González Tejera School they have water for about two hours a day. [source](#)

Vieques (pop. 9,301) (18.116667, -65.416667)

An island–municipality of Puerto Rico (U.S.) in the northeastern Caribbean, part of an island grouping sometimes known as the Spanish Virgin Islands. Vieques is part of the Commonwealth of Puerto Rico. Vieques lies about 8 miles (13 km) east of the Puerto Rican mainland, and measures about 21 miles (34 km) long by 4 miles (6 km) wide. Its most populated barrio is Isabel Segunda (sometimes written "Isabel II"), the administrative center on the northern side of the island.

- Oct 5
 - No change - all 12 cell towers down via [FCC report](#)
- Oct 3
 - 12 of 12 cell towers down via [FCC report](#)
 - Senator Warren said as of Thursday 28 residents of Vieques had no water, electricity, gas and communications services
 - Between Monday and Tuesday, the Federal Emergency Management Agency (FEMA) would bring fuel to Vieques and Culebra to have them in reserve as well as power generators, said the local director of that agency, Alejandro de la Campa, in statements that the newspaper said. [source](#)
- Oct 1

- A Coast Guard vessel distributed fuel, ice and water in the municipality of Vieques The supplies were taken to the area aboard the ship "Venturous", according to an Inter News Service report and were distributed during the day on Saturday. [source](#)

Villalba (pop. 26,073) (18.127222, -66.492222)

located in the central region, northeast of Juana Díaz; south of Orocovis; and west of Coamo. Villalba is spread over 6 wards and Villalba Pueblo (The downtown area and the administrative center of the city). It is part of the Ponce Metropolitan Statistical Area.

- Oct 5
 - No change - all 9 cell towers down via [FCC report](#)
- Oct 3
 - 9 of 9 cell towers down via [FCC report](#)
 - The Mayor of Villalba, Luis Javier Hernández Ortiz, said on Monday October 1 that the town urgently needed water and oxygen. "We are still clearing the way in the neighborhood Céspedes, taking people who had not eaten for four days, people who needed to be dialyzed, people without oxygen, aging. This has been something that has no comparison", he said. 4 people died in the municipality, according to the mayor "Two people were patients on dialysis, one died of a heart attack and another did not receive the oxygen in time and died in the hospital." [Primera Hora](#)
 - Hernández Ortiz said they need oxygen equipment for some people who are still refugees in Villalba. "We have patients in the shelter, about 10 patients in the city, whose oxygen supply has run out, or is in danger of ending." The mayor said they need oxygen supply for 10 people for two weeks.
 - Also, the mayor said that they need water, not only bottled but the service of the Authority of Aqueducts and Sewers (AAA), since in much of the island is reported the restoration of up to 45% of the service in Villalba only 25% have water. [source](#)

Yabucoa (pop. 37,941) (18.050556, -65.879444)

Located in the eastern region, close to Piro house, north of Maunabo; south of San Lorenzo, Las Piedras and Humacao; and east of Patillas. Yabucoa is spread over 9 wards and Yabucoa Pueblo (The downtown area and the administrative center of the city). It is part of the San Juan-Caguas-Guaynabo Metropolitan Statistical Area.

- Oct 5
 - No change - all 31 cell towers down via [FCC report](#)
- Oct 3
 - 31 of 31 cell towers down via [FCC report](#)

Yauco (pop 42,043) (18.036944, -66.850278)

Located south of Maricao, Lares and Adjuntas; east of Sabana Grande and Guánica; and west of Guayanilla. The municipality has 20 wards

- Oct 5
 - 17 of 19 cell towers down via [FCC report](#)
 -
- Oct 3
 - ARRL volunteers deployed and provided radio gear for fire department in Yauco [source](#)