

# Hurricane Maria Project

## Information Providers Interview Guide for:

### National Weather Service & Weather Forecast Office Representatives

OMB Control #0693-0078

Expiration Date: 07-31-2022

#### Script for Introduction:

“Thank you for taking the time to meet with us today. We are interested in your perspective on information and communications related to Hurricane Maria in Puerto Rico on September 20, 2017. We would like to better understand this hurricane because it impacted a non-continental and Spanish-speaking U.S. island. Ideally, these interviews will lead to beneficial recommendations to policy, procedures, and codes. We realize that the hurricane was a few years ago, and some details may not readily come to mind. We will try to walk you through different topics and events to aid your memory, but let us know if you need any clarifications. Please know that there are no right or wrong answers to any of these questions, we just want to understand your perspectives and experience. Your responses will never be linked to your individual identity, instead, findings will be attributed to a “Hurricane Information Provider” at the national, commonwealth, regional, or local level, and will only be shared in aggregate detail. Are you ready to begin?”

#### Required Script for Paperwork Reduction Act:

“A Federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with an information collection subject to the requirements of the Paperwork Reduction Act of 1995 unless the information collection has a currently valid OMB Control Number. The approved OMB Control Number for this information collection is 0693-0078. Without this approval, we could not conduct this information collection. Public reporting for this information collection is estimated to be approximately 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection. All responses to this information collection are voluntary. Send comments regarding this burden estimate or any other aspect of this information collection, including suggestions for reducing this burden to the National Institute of Standards and Technology at: Katherine Johnson, Social Scientist and National Construction Safety Team Member, NIST Engineering Laboratory; or contact at [katherine.johnson@nist.gov](mailto:katherine.johnson@nist.gov).”

### Section A: Background Questions

1. Please describe to us the position you held in the days prior to Hurricane Maria.
  - a. How long had you held that position?
2. What were your primary roles and duties in your position with regard to informing or communicating about hurricanes?
3. Who are the groups or individuals you are responsible for communicating too? We will refer to these people in further questions as your “stakeholders”.
4. Before Hurricanes Irma and Maria, can you briefly describe any previous experiences you’ve had with hurricanes?

### Section B. Pre-hurricane Preparation and Plans

5. Prior to Hurricanes Irma and Maria, can you please describe any plans your station or office had to communicate with stakeholders regarding the approach of a hurricane?
  - a. In addition, what training (if any) was provided to you by the NHC or others for communications related to hurricanes?
  - b. *Follow-up* (if any are discussed): Would it be possible for you to share any of these communication plans with NIST?

### Section C. Hurricane Data and Products

6. Leading up to Hurricane Maria’s landfall in Puerto Rico, could you summarize, in general, the information, data, and products you and or your office received related to Hurricane Maria’s potential impact on Puerto Rico?
7. Can you give 2-3 examples of specific outputs or information you obtained from key sources?
  - a. How did you obtain this information? (i.e., channel)
  - b. *Follow-up* (if not mentioned): In your opinion, how did NHC or other products and information perform (based upon what you know after the disaster)? Were any in particular most helpful? Are there any ways you could have had your information needs better met?
8. Did your office produce any of your own products related to Hurricane Maria, or use other tools to increase your knowledge of the storm?
  - a. *Follow-up* (if not mentioned): How did you feel those were helpful/needed?
9. Do you remember a point at which you thought this hurricane would be different or significant in any way?
  - a. What led you to that conclusion?
  - b. And, do you remember at what point (if at any) you felt confident enough in forecasts that action should be taken (e.g., evacuation notices)?

#### Section D. Communication

The next set of questions is about how you communicated information about the hurricane to your stakeholders.

10. Please walk us through how you/ your office coordinated with and communicated the above-mentioned information, data, and products about Hurricane Maria in Puerto Rico with your core partners.
  - a. And, which information/products were shared with whom?
  - b. Please describe the timeline of these updates and information.
    - i. *Follow-up* (if not discussed): To whom did you provide information about the hurricane before it hit? What products or information were provided to each stakeholder?
    - ii. *Follow-up* (if not discussed): By what means did you provide updates/information about the hurricane to your different stakeholders? (i.e., NWChat, Social Media (FB, Twitter), webinars, phone, etc.)
11. How did your communication strategies differ, if at all, for other entities not discussed for the last question such as: emergency managers, government officials, administrators of schools/hospitals, the media, or other stakeholders (but not including the general public)?
12. Next, please walk us through how you/ your office coordinated with and communicated the above-mentioned information, data, and products about Hurricane Maria in Puerto Rico with the public. Please describe the timeline of these updates and information.
  - a. Related to communication with the public, how were websites, social media, or other media types (i.e. TV stations, phone) used to provide information before, during, or after Hurricane Maria?
  - b. Over time, what were the items, threats, or themes you chose to emphasize most to the public or other stakeholders, and how did you do so (i.e. using what products and channels)?
  - c. What made you decide to emphasize particular threats at certain times? Did the threats you chose to emphasize, or your means of communicating them change over time?
  - d. What were some particular attributes of Hurricane Maria that caused difficulty for forecasting, if any? How did you decide to message around those hazards or communicate uncertainties? (e.g. key messages, graphics). Did this approach change due to the confidence in the forecast and as the time from hurricane impacts neared?

- e. In comparison, were there particular aspects of the forecast in which you were quite confident? How did you message around those more certain aspects?
13. Was any decision-support assistance provided by yourself or the liaison team to emergency managers and other decision-makers?
- a. Do you remember any common questions or points of confusion you received related to certain products or information?

*[FOR PR OFFICES ONLY] (not Miami/other backup):*

14. Next, please describe the timeline of events for the NWS WFO in San Juan that led to the following events, and if they occurred what you did in response to these?
- a. Loss of radar
  - b. Loss of satellite
  - c. Loss of communications
    - i. When communications failed, please explain how you communicated with your stakeholders within the following time frames.
      - 1. During or immediately after the hurricane;
      - 2. within 72 hours after the hurricane;
      - 3. 1 to 2 weeks;
      - 4. and up to 1 month?
15. When did these technologies (radar, satellite, other communications) come back online?
16. What pre-event planning (if any) had you completed prior to Hurricane Maria to review procedures or prepare for loss in infrastructure?
- a. Do you feel this training was adequate?
  - b. And have new processes or procedures been implemented since 2017?

#### Section E. Inter-agency Coordination

17. Reflecting back on the hurricane, how well do you think communication and inter-agency coordination (if any) worked between the NHC and different information-providers involved (e.g. WFOs, SERFC, WPC, and OPC, EM's, the media, and the public)?
18. Can you please describe one or two specific examples of communication success between particular organizations, describing what worked well and why?
19. Can you think of one to two examples when communications did not work well, or difficulties that you or coworkers/staff/ or colleagues encountered? Please identify what did not work well (e.g. procedures, systems, personnel, etc.).
- a. What do you think could be done to improve on these problems?

20. In your perspective, how consistent was information related to Hurricane Maria as it was disseminated throughout the weather community (i.e. NHC, WFOs, meteorologists)?
- a. Do any key issues seem important to improve effective communication?

#### Section F. Ending Questions

We're almost finished with the interview. We just have a few last questions.

21. Since Hurricane Maria, were there any new procedures, guidelines, or policy changes that have been developed and/or implemented relating to hurricane products, communication, and/or interagency coordination?
  - a. Can you describe these changes or share with us any updated products?
22. If you were to go through an experience like Hurricane Maria again, is there anything you would suggest for yourself or others do differently? Can you explain why and how?
  - a. Are there any new products, rules, or services that would aid in the changes you would suggest? If so, which ones (and how would they be used)?
23. Before we go, is there anyone else whom you think we should reach out to for an interview on these topics? (e.g., someone influential in communicating hurricane risks, forecasts, etc. to the public)
24. Thank you for your time. Is there anything else that you would like to share with us that we didn't already discuss?