

Emergency Managers and Social Media: A Case Study of Superstorm Sandy

*Holly Lussenden (lussendenh12@students.ecu.edu), Christopher Zarzar, Robbie Munroe, and Bill Pace
Department of Geography, Planning, and the Environment, East Carolina University, Greenville, North Carolina*

Introduction

The use of social media in emergency management is increasing, in large part because of the speed with which many people can be reached. Yet, to date, there has not been much research on the extent of its use or effectiveness. As a first step in understanding its importance, we examined the use of Facebook and Twitter to determine the communication between emergency managers and the general public during the evolution of Superstorm Sandy. This provided information about how many people used social media during the event and if Sandy's changing track forecasts over time influenced social media activity.

Methods

We investigated the number of posts of official state emergency management agencies by day on either their Facebook or Twitter pages through the progression of Superstorm Sandy. Also, we calculated the responses (i.e. likes, comments, shares, or retweets) for each Sandy-related post. This gave us a general idea about risk perception among the followers of emergency management agencies on social media outlets.

State	Social Media	Name of EM Organization	Followers/Likes*
MD	Twitter	Maryland Emergency Management	15195
DE	Facebook	Delaware Emergency Management	8335
NJ	Facebook	New Jersey Emergency Management	46158
NY	Facebook	NYC Office of Emergency Management	22762
RI	Twitter	Rhode Island Emergency Management	6071
MA	Twitter	Massachusetts Emergency Management	26055

*As of July 18, 2013

Table 1. List of social media used in the study for each state

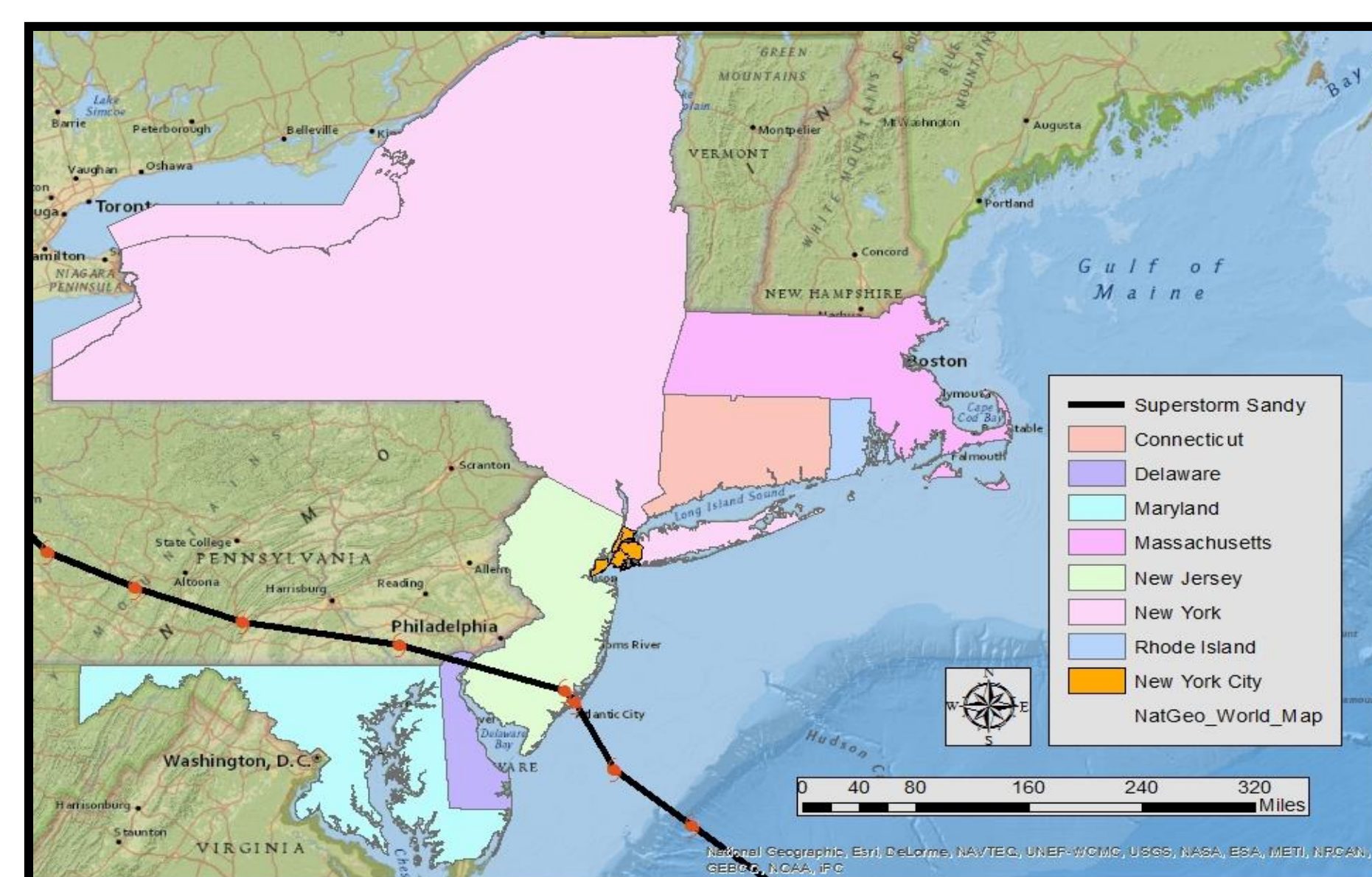


Figure 1. Study area with Sandy's storm track

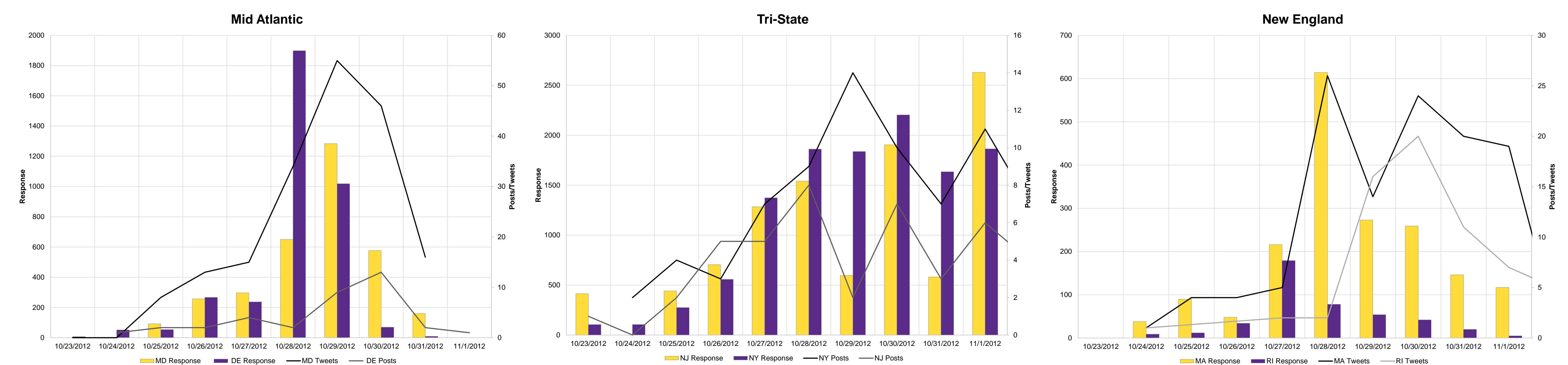


Figure 2. Social media by region. Response values are the total number of follower responses.

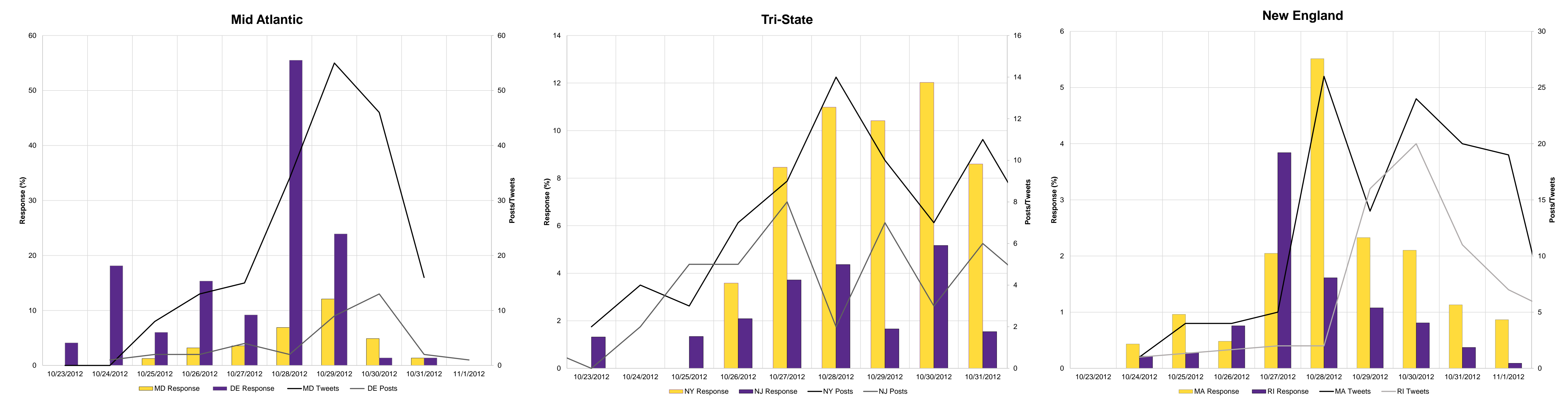


Figure 3. Social media by region. Response values are reported as the percentage of those followers who were active.

Results and Conclusions

- Upon first acknowledgement of Sandy, both posts by emergency managers and response from the public remain relatively low.
- As landfall nears, social media activity increases.
- The Mid-Atlantic states have a greater response rate of total followers, possibly due to a relatively low number of social media followers and highly effective social media use.
- While general trends in social media activity are still visible between actual count (Figure 2) and percentage of active followers (Figure 3), the graphs show that the total response is not an absolute reflection of the total population's utilization of social media by state.
- The amount of people that not only get information from emergency management agencies on social media outlets, but respond and calculate impending threats from various outlets is increasing dramatically (Table 1 and Figures 2-3). Emergency Managers now have the added responsibility of keeping people informed on social media outlets during severe weather.