

# THE EMERGENCY Manager



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## More Rain, More Problems

### It Takes a Team to Protect the Public and Communities from Floods, Tornadoes

BY JAMES WHEELER / TEMA COORDINATOR, PSATS

**W**ith extreme weather blanketing parts of the state, township emergency management coordinators (EMCs) have been busy addressing flooding and tornadoes, the likes of which have not been seen here for decades.

Pennsylvania usually averages three tornadoes in a typical May. This year, it had 13. In Harrisburg, it also rained 21 out of 31 days in May, which ties a record.

Recently, most of the commonwealth was under back-to-back tornado watches. Over those two days, at least five tornadoes were confirmed, including two EF-1s with reported wind speeds between 100 and 105 mph. To date, there have been at least 28 tornadoes in Pennsylvania, according to the National Weather Service, which makes 2019 Pennsylvania's sixth highest year for such outbreaks since 1950.



When weather emergencies happen, township EMCs are among those tasked with helping residents. Below are some actions that you can take to improve your community's ability to recover.

#### Flooding

The Pennsylvania Emergency Management Agency (PEMA) has called flooding "the most frequent and damaging natural disaster that occurs throughout the commonwealth," and it will likely keep getting

It's still early in 2019, and Pennsylvania has already seen a slew of severe weather, including heavy rainfall and destructive tornadoes. During an average May, three tornadoes occur. This past May, 13 were confirmed in the commonwealth and created even more challenges for communities and their emergency responders.

#### WHAT'S INSIDE?

Questions and Answers ..... 2

Legislative Update ..... 3

A Message from the  
Executive Director ..... 3

(See 'More Rain, More Problems' on Page 4)

## MORE RAIN, MORE PROBLEMS (continued from front page)

worse. Recent National Climate Assessment reports noted that the northeast region of the U.S. has already seen a 71% increase in “very heavy precipitation.”

In fact, the projected increase in rainfall intensity will likely be greater in the Northeast and Pennsylvania than the rest of the United States, with most of the increase coming in winter and spring.

A 2015 Penn State study reported that of Pennsylvania’s 12.8 million residents, 831,000 live in floodplains, which is about 7% of the state’s population. The study also indicated that roughly 374,000 housing units, or about 6.7%, are in floodplains.

Of the citizens affected by flooding, the state Department of Community and Economic Development said in 2014 that many are older and less financially able to absorb increased flood insurance premiums.

While more property owners are purchasing supplemental private flood insurance and municipalities are enforcing their floodplain ordinances, which has reduced development in these areas, additional measures are needed. These include:

- ***A multi-agency educational effort —***

The good news is, a new work group headed up by PEMA and the state Department of Insurance is developing additional measures to support the flood resiliency of townships.

While PEMA has been working on flood management since its inception, the Insurance Department recently joined the effort by posting educational information on its website about flood insurance, including frequently asked questions and advice on coverage, private insurers, and the National Flood Insurance Program (NFIP).

Furthermore, the Federal Emergency Management Agency (FEMA) has been meeting with people who have received federal disaster funds to explain the importance of having insurance that’s at least equal to their property’s replacement value.

- ***A focus on new areas of flooding —***

Flooding also is occurring in areas that haven’t flooded before. This happens when rain falls for an extended period and the ground and local waterways can’t absorb all of the precipitation. EMCs should advise residents who live outside of traditional flood hazard areas to consider purchasing supplemental insurance if they are near an area that flood waters could reach during extended periods of rain.

Township road crews also need to ensure that local road drainage can safely handle increased rainfall. Three valuable drainage resources from PennDOT are Chapter 10 of Publication 13M, which can help workers estimate peak discharges for drainage facilities; Publication 584, which is the agency’s drainage manual; and Publication 70M, which offers design guidelines for local roads.

### **Tornadoes**

EMCs should also educate township employees and the public about tornado safety. This includes identifying secure areas where they can retreat.

Underground areas, such as a basement or storm cellar, provide the best protection. However, if an underground shelter is not available, they should seek a small interior room or hallway on the lowest floor possible. They should be advised to stay away from doors, windows, and outside walls, move to the center of the room, and avoid corners because they attract debris.

Another good option is a room constructed with reinforced concrete, brick, or block that has a heavy concrete floor, a roof, and no windows. Those trying to seek safety during a tornado should avoid auditoriums, cafeterias, and gymnasiums that have flat, wide roofs.

If they are outside when a tornado is forecast, they should seek shelter in a basement or a sturdy building. If one is not within walking distance, they should try to drive to the nearest shelter. If they encounter

flying debris while in the vehicle, they have two options: 1) stay in the car with the seat belt on, keep their head below the windows, and cover it with their hands or a blanket; or 2) if there is an area that is noticeably lower than the road, go there, lie down, and cover their head with their hands.

Someone in the township, possibly the safety officer, should monitor weather conditions and alert personnel on duty when a tornado watch is issued. Employees should be prepared to move quickly to a safe shelter if the watch changes to a warning, which is issued when a tornado is imminent.

Before a tornado strikes, the EMC should also take the following actions to prepare a local tornado warning system:

- Develop a method so you know where township employees are, whether on the road or in municipal buildings, and can alert them about impending warnings.
- Establish an alarm system to warn employees. Be sure to test warning systems and tornado drills frequently and develop plans to communicate warnings.
- Establish procedures to account for employees and visitors to township buildings and parks as they report to identified shelters.
- Assign specific duties to employees in advance and create checklists for other responsibilities assigned to the EMC, elected officials, police, and public works departments.
- Involve all employees in your tornado response plan training in case they need to fill in for an assigned person.

### **Ready for anything**

Township EMCs are tasked with overseeing the continuing improvement and effective implementation of their community’s emergency operations plan.

Keeping municipal employees and residents safe from hazards requires constant attention, including being aware of existing and changing weather conditions. ♦

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