



Messages for Manufacturing Personnel http://www.aiche.org/CCPS/Publications/Beacon/index.aspx This Issue Sponsored by

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## Is Your Plant Prepared for a Natural Disaster?

Natural disasters can significantly impact or threaten process plants. In recent years, many events have been in the news because of their impacts:

*Images 1 and 2* — Satellite and ground photos of wildfires near Fort McMurray, Alberta, Canada, taken in May 2016, show the location of nearby oil processing facilities and the extent of the fire.

Images 3 and 4 — Hurricane Harvey, at near maximum strength in August 2017, caused widespread flooding and damage along the Texas coast.

*Image 5* — Trailers containing organic peroxides at a process plant exploded because refrigeration systems were out of commission due to loss of electric power following Hurricane Harvey.

*Image 6* — The Fukushima Daiichi nuclear power plant in Japan lost power in March 2011 as a result of a major earthquake and subsequent tsunami. Insufficient cooling caused three nuclear reactor meltdowns, hydrogen-air explosions, and the release of radioactive material.



## What can you do?

• Know your plant's emergency procedures for natural disasters and understand your role in preparing for, responding to, and recovering from the event. The kind of disaster that can impact your plant depends on the location of your plant.

• Check that your emergency procedures consider the potential for natural events with little or no warning, such as earthquakes and tornadoes.

• Understand how areas of the plant you are responsible for could be impacted by a natural event, especially where there are specific process hazards. Review disaster response plans and check that they are thorough and complete for your work area.

• If you identify gaps in the existing plans, tale your concerns to the attention of management so the plans can be improved.

· Recognize that employees may not be able to report to work

after a natural disaster, and that workers at the site may not be able to go home. Be sure your plans consider these possibilities, as well as the potential for limited staffing.

• Confirm that emergency response plans consider workers who remain at the site during and immediately after a natural event. Personnel will need food, shelter, and communication methods, and roads and other public infrastructure may be out of service.

• Develop a personal emergency plan for yourself and your family for the kinds of disasters that can occur where you live and work. You will not be able to work effectively if you are worried about your family.

• Read the November 2005 and June 2011 Beacons for more advice on natural disaster preparation.

## Be ready for natural disasters!

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