

Playbook: Hurricane

Audience: Government
Issue: Safety and Security



Effective and Efficient Communication Strategies

Did you know that hurricanes . . .

- ▶ Produce wind speeds approaching 190 mph ¹
- ▶ Generate gale-force winds extending over 600 miles from the eye ²
- ▶ Maintain hurricane-force winds for up to 28 days ³
- ▶ Create storm surges over 20 feet above normal tide levels ⁴

What, when and how you communicate before, during and after a hurricane is critical.

BEFORE A HURRICANE

Develop a communication plan in advance

While the typical hurricane can be spotted and tracked before landfall occurs, there are many variables to



consider, such as the storm's intensity, sudden changes in the storm's track, and landfall predictions. With these things in mind, it is extremely important to have a communica-

tions plan prepared and ready to implement. To prepare your community for hurricane season, there are several proactive measures that can help ensure seamless communications in the event of a storm, and help coordinate a quick recovery and restoration effort if necessary.

Review and revise your crisis communication plan well in advance of a hurricane. Determine the length of time for specific actions as detailed in the plan. Set a timeline for the order in which actions need to be put into effect. Establish protocols to test all procedures and equipment on a regular basis. Periodically test the readiness of your mass notification system.

Ensure that your communications plan is widely available by storing electronic and printed copies in multiple locations. Along with the plan itself, store operating instructions for any communications equipment or

mass notification system that may be used in carrying out the plan.

Coordinate with other agencies

Coordinate efforts with other officials in your region for effective, efficient messaging. On a quarterly basis, publicize and jointly conduct sign-up drives to gather citizen contact information for use with your mass notification system. Work with other agencies, such as local fire departments, police and sheriff's departments, and Emergency Medical Services to streamline messages and reduce duplicate notifications.

When appropriate, coordinate with neighboring jurisdictions to provide redundancy in communication systems. Formal mutual aid agreements can include details regarding communications assistance.⁵ Sources such as amateur radio operators, the Civil Air Patrol, local hospitals and the American Red Cross may also have the capability to assist with communications during a hurricane.⁵

Establish a single point of contact

During and immediately after a hurricane, there won't be time to determine a spokesperson. Designate an Emergency Communications Director, who will rapidly assess the need for communications support and identify, acquire and deploy resources to support critical emergency operations. This person should also have primary responsibility for communicating with the public, other agencies, and the media.

Publicize the fact that this office/person will be the primary point of contact during a hurricane or other emergency. Doing so in advance will enable emergency responders to focus on their work with minimal distraction.

Develop backups & contingency plans

During a hurricane, communication networks may be disrupted, key officials and staff members may be unavailable, and resources may be in use or otherwise unable to assist as the hurricane develops. For each communication task, assign a backup who can assume the task if the primary communicator is unable to perform it.

Develop alternate means of creating documentation in the event that electronic systems are unavailable. Documenting emergency actions with event

logs and communications traffic records will provide key information for post-emergency investigations or after-action reports. If claims for reimbursement under Presidential disaster declarations are to be made, documentation will be needed to indicate the number of people, paid and volunteer, involved in communication efforts.⁶

If you use a mass notification system, conduct a public registration drive at least annually, in order to develop the widest possible reach. Before a hurricane, or at least once a year, send messages to remind your community to develop a disaster preparedness kit and other supplies. When a hurricane is approaching, let your community know where they can get equipment and supplies, including plywood, generators and sandbags.

HOW HURRICANES FORM

Hurricanes typically form in the summer or early autumn when a number of atmospheric factors come together.

- ▶ **A Pre-existing Disturbance** or low-pressure area will have formed in the low levels of the atmosphere. Winds will begin to converge and uplift.
- ▶ **Deep Warm Water** to provide the energy that a hurricane will need. The water temperature needs to be about 80° to a depth of about 150 feet.
- ▶ **Instability**, which permits deep convection (cumulonimbus) clouds to build to great heights in the atmosphere. Stable air masses will reduce cloud development and inhibit cloud growth sufficient to provide deep convection required for a hurricane to develop.
- ▶ **The Earth's rotational factor** or Coriolis Force. The area of weather instability must be at least 4-5° away from the equator to achieve sufficient gradient wind balance to sustain the low-pressure area.
- ▶ **Moist Mid Level** of the atmosphere. Dry air at mid-levels will weaken or cut off updrafts in cumulus clouds.
- ▶ **Low Vertical Wind Shear** from the surface to upper troposphere. Such wind shear can spawn thunderstorm clouds of great heights. Increases in wind speed or directional changes with height will disrupt the cumulonimbus clouds, preventing them from sustaining the hurricane heat engine.
- ▶ **Upper Atmospheric Divergence** allows mass to be moved away from the hurricane.

Having all of the ingredients in place doesn't necessarily mean that a hurricane will form. Many hurricane formation factors are present in tropical areas, particularly during hurricane season. Even so, relatively few disturbances actually become hurricanes.

Source: Adapted from How Do Hurricanes Form? by TropicalWeather.net

DURING A HURRICANE

What to communicate

Shelter-in-place orders and evacuations: When a hurricane may affect your area, issue a hurricane watch with your mass notification system and notify community members in mobile homes, modular buildings or cars to evacuate to a pre-designated hurricane shelter area.



As a hurricane develops, issue staged evacuations for your community. For special-needs populations, including seniors and people with disabilities, it is important to evacuate these residents early, with as much advance notice as possible, to ensure their safety and a smooth transition overall. Create and maintain a separate list of those with special needs. Your mass notification system

can be used to create this list and send specifically crafted messages to this population.

Share evacuation plans and strategies with neighboring localities. Actions taken in one region have effects on other regions. Additional efforts may be required to control traffic, ensure adequate supplies of gasoline, supplies, and hotel rooms, and address police concerns.⁷

Transportation changes: Inform your community of special road conditions in advance of a hurricane. Road closures, specific evacuation routes and procedures, altered traffic patterns, affected lights and detours are all important to note in advance, if possible. If public transportation systems are closing, share that information as well.

Status changes: Hurricanes are frequently accompanied by other concerns, such as heavy rains, storm surge or flooding. Notify those in affected areas, as well as those

HURRICANE SAFETY RULES

Create an evacuation plan if you . . .

- ▶ **Live in a mobile or manufactured home.** No matter how securely they are anchored, they are unsafe in tropical-force high winds.
- ▶ **Live along a river or flood plain,** on the coastline, or on an offshore island. Flooding and storm surge cause many hurricane deaths, along with the effects of high winds.
- ▶ **Live in a high-rise building.** Hurricane-force winds can shatter windows and cause power failures, cutting electricity to elevators.

When strong winds occur . . .

- ▶ **Avoid windows and doors,** even when covered. Take shelter in a closet, hallway, or small interior room.
- ▶ **Close, lock, and provide bracing** for all exterior doors. Close all interior doors.

- ▶ **If you are in a two-story house** or building, seek shelter in an interior first-floor room.
- ▶ **If you are in a multi-story building** and are away from water, go to the first or second floor. Stay in hallways or windowless interior rooms.
- ▶ **Lie on the floor.** Seek protection under a table or other sturdy object.

Be alert for . . .

- ▶ **Tornadoes:** They can be generated during hurricanes.
- ▶ **The “eye” of the hurricane.** As the eye passes, the calm weather may seem to indicate that the storm is over, but after it passes, winds will change direction and reach hurricane force again quickly.
- ▶ **Failed or fallen gas, water or electric lines,** and weakened bridges or washed-out roads after the storm passes.

Source: Adapted from NOAA Weather Safety: Hurricanes – Safety and Preparedness Fact Sheet by NOAA/FEMA/American Red Cross

which may become affected.

Send daily status reports regarding evacuation notices, important safety directions, changes to activity schedules, and utility outages via your mass notification system.

Send daily status reports to emergency response teams, if prescribed by your emergency communication plan.

When to communicate

The Atlantic hurricane season begins June 1st and ends November 30th, while the Eastern Pacific hurricane season begins May 15th and also ends November 30th.⁸ When your community is located within the possible path of an oncoming hurricane, monitor for severe weather watches and warnings by listening to NOAA Weather Radio, logging onto weather.gov or monitoring local television or radio for weather information. Understand the terms used by the National Weather Service to describe hurricane risk:

- ▶ **Hurricane Watch** — A Hurricane Watch is issued when a tropical cyclone containing winds of 64 knots (74 mph) or higher poses a possible threat. Because hurricane preparedness activities become difficult once winds reach tropical storm force, the hurricane watch is issued 48 hours in advance of the anticipated onset of tropical-storm-force winds. These winds may be accompanied by storm surge, coastal flooding, and/or river flooding.
- ▶ **Hurricane Wind Watch** — A Hurricane Wind Watch is issued for inland counties when there is a possibility that hurricane force winds (64 kt / 74 mph or higher) will move inland from the coast beyond areas that are covered by a Hurricane Watch. The watch does not mean that the hurricane force winds will occur, only that they are possible.
- ▶ **Hurricane Warning** — A Hurricane Warning is issued when sustained winds of 64 kt (74 mph) or higher associated with a tropical cyclone are expected. Hurricane warnings are issued 36 hours in advance of the anticipated onset of tropical-storm-force winds. A hurricane warning can remain in effect when dangerously high water or a combination of dangerously high water and exceptionally high waves continue, even though winds may be less than hurricane force.
- ▶ **Hurricane Wind Warning** — A Hurricane Wind

Warning is issued when hurricane force winds (64 kt / 74 mph or higher) are expected to move inland from the coast beyond areas that are covered by a Hurricane Warning.

- ▶ **Tropical Storm Watch** — A Tropical Storm Watch is issued when a tropical cyclone containing winds of 34 to 63 kt (39 to 73 mph) or higher poses a possible threat, generally within 48 hours. These winds may be accompanied by storm surge, coastal flooding, and/or river flooding.
- ▶ **Tropical Storm Warning** — A Tropical Storm Warning is issued when sustained winds of 34 to 63 kt (39 to 73 mph) or higher associated with a tropical cyclone are expected in 36 hours or less. These winds may be accompanied by storm surge, coastal flooding, and/or river flooding.⁹

Your communication plan should provide details about what messages should be delivered at each stage of risk, based on your emergency action plans.

How to communicate

Set up a point of contact for individuals to speak with about specific questions or concerns. Use a public social network, like Facebook or Twitter, to share information publicly and address common questions in one place. A mass notification service can enable you to distribute messages rapidly by phone, email, or SMS (text messaging). Such messages can be widely delivered to the general public, or can be tailored for and distributed to specific audiences.



Develop templates in advance which allow for details to be added quickly, saving time when a hurricane occurs.

Maintain a complete and up-to-date list of media contacts to ensure all media receive information and updates throughout a hurricane.

AFTER A HURRICANE

Declaring an end to the crisis

Once the hurricane has passed, issue all-clear messages, announce curfews or issue boil-water notices. If an evacuation notice has been issued, send a message announcing when it's safe to return to homes, businesses or campuses. Include any additional important information and/or direction.

Distribute these announcements as widely as possible with your mass notification system in order to preempt calls, allowing emergency management staff to stay on task. If roads are impassable, warn citizens, students, parents and staff to stay off the road until it is safe.

Recovery efforts

After the hurricane, let your community know about downed trees, utility service restoration and debris removal. Share insurance claim contact information and announce recovery assistance programs and workshops. If your community is eligible for FEMA assistance,

let residents know about the application process.

Recruit and coordinate volunteers, organize community clean-up events, and collect supply donations. Let your community know where they can get items, such as a three-day supply of water and food, first-aid kit, battery-powered NOAA Weather Radio, batteries, ice and fuel.

Protect your community from con artists and price gouging in the wake of hurricanes. If scammers or criminal activities become evident, issue community alerts to raise awareness among citizens.

During critical events, including hurricanes, misinformation can quickly spread, both in the media and via word-of-mouth. Disseminate accurate information to your community about the hurricane and recovery efforts to provide reassurance. Send up-to-date information and alerts to local media outlets, through known spokespersons, and using an established and trusted method, to deter gossip and misinformation.

WHAT TO BRING TO THE SHELTER

In advance of an evacuation order, citizens should locate the following items and bring the items with them to the shelter if evacuated:

- ▶ First aid kit
- ▶ Prescriptions or other medicines
- ▶ Baby food/formula and diapers
- ▶ Games, books, music players with headphones
- ▶ Personal toiletries
- ▶ Battery-powered radio
- ▶ Cell phone with fully charged battery and/or spare batteries
- ▶ Flashlights
- ▶ Standard-size batteries
- ▶ Blanket and/or sleeping bag for each family member
- ▶ Driver's license or other identification
- ▶ Copies of key documents (insurance policies, wills, etc.)
- ▶ Cash & credit cards

If an evacuation order is given, there will not be time to gather all these items. They should be assembled as soon as a Hurricane Watch has been issued.

Source: Adapted from NOAA Weather Safety: Hurricanes – Safety and Preparedness Fact Sheet by NOAA/FEMA/American Red Cross

Recap of actions taken

Release a media advisory announcing how the city/county has been communicating with citizens and staff, what kinds of messages have been sent and encouraging everyone to stay tuned for more information.

Invite community residents, students, and staff members to public meetings and encourage participation in discussions of the hurricane's effect on the county or local communities. Be sure to announce the time, date and location of such meetings. Provide as much

advance notice as possible, and send regular reminders using your mass notification system. Email can also be used to share the meeting agenda and various subjects to be discussed.

Reach out to key reporters in the area and let them know how officials have been providing direction and updates to the community, what kinds of messages have been sent and that more information will follow, including when it will be safe to return (if evacuated).

BEFORE, DURING AND AFTER CHECKLIST

Keys to successful communication if a hurricane strikes:

Before

- ☐ Review and revise your crisis communication plan well in advance of hurricane season
- ☐ Build alliances with other agencies and municipalities
- ☐ Designate a single point of contact for all communications & develop an up-to-date media list
- ☐ Develop backups and contingency plans

During

- ☐ Issue hurricane watches and warnings when appropriate, including evacuation and other instructions
- ☐ Issue updates and status reports as appropriate
- ☐ Use a mass notification service to deliver important messages quickly

After

Distribute announcements widely and quickly to:

- ☐ Preempt calls and allow recovery efforts to continue unimpeded
- ☐ Minimize misinformation and rumors
- ☐ Alert citizens about available assistance and relief efforts
- ☐ Recruit volunteers to assist with recovery efforts
- ☐ Update local media about response and recovery

ANATOMY OF A SUCCESSFUL HURRICANE MESSAGE

Identify yourself immediately by name and by agency to set an authoritative tone.

Sample message - Before the hurricane

This is **Jane Smith with the Oaktown Fire Department**. The National Weather Service predicts that Hurricane John will make landfall sometime **Saturday night**. It is likely to be a Category 4 storm, which means that **winds could reach 130 miles per hour or more**.

Get right to the point.

Take steps now to protect your home or business from a hurricane. For more information on how to prepare, **visit www.NOAA.gov**.

Succinctly convey exactly what's at stake.

Many residents have special needs that require early evacuation.

We will decide whether to issue an evacuation order by tomorrow morning. **If you are a senior citizen, or a person with disabilities, please dial 311 for immediate assistance.**

Give people resources they need to take immediate action.

Repeat your key message in one short sentence before closing.

I repeat, a Hurricane Warning has been issued with an expected landfall of Saturday night, please take all necessary precautions. Thank you, and stay safe.

Sample message - Evacuation order

Use the same person wherever possible.

This is **Jane Smith with the Oaktown Fire Department**. The National Weather Service predicts that Hurricane John will make landfall in our community around 8 PM tonight. **This is a powerful and dangerous storm.**

Succinctly convey exactly what's at stake.

When ordering evacuations, be specific and authoritative.

We have issued a mandatory evacuation for all residents by 12 noon today. Please begin to prepare your family to leave for higher ground immediately. **To learn about shelter locations, or for other assistance, please dial 311 right away.**

Give people resources they need to take immediate action.

Repeat your key message in one short sentence before closing.

I repeat, a mandatory evacuation has been issued for all Oaktown residents by 12 noon today. **Thank you, and stay safe.**

Repeating your sign-off in every message is one way to set a calming, reassuring tone.

Sample message - After the hurricane (safety message)

Use the same person wherever possible.

Hello. This is **Jane Smith with the Oaktown Fire Department**, with important information in the wake of Hurricane John.

Boil-water orders, curfews and debris warnings are all important safety issues in the immediate wake of the storm.

A boil water order is in effect for all Oaktown municipal water customers until officials give the all-clear that water supplies are safe to drink. Likewise, there is a street curfew in place every night at 7 PM through Tuesday.

Give people resources they need to take immediate action.

If it is not safe to return to your home yet, Washington High School, located at 1234 Main Street in downtown Oaktown, has been designated as a Red Cross emergency shelter.

Set expectations about when you will contact residents next.

Additional updates will be provided every 2 days or when new information becomes available, until the situation returns to normal. Thank you, and stay safe.

SUCCESSFUL HURRICANE MESSAGE CONTINUED

Sample message – After the hurricane (community volunteers)

Use the same person wherever possible.

→ **Hello.** This is **Jane Smith with the Oaktown Fire Department**, with important information in the wake of Hurricane John.

Blood drives, supply donations and volunteer requests are all great ways of using Blackboard Connect in the wake of a disaster.

In the days since the storm, the outpouring of concern you have shown for your neighbors has been overwhelming. **According to Red Cross officials, donations are still being accepted.** Adequate amounts of toys, shoes and school supplies have already been collected. However, there is an immediate need for the following items:

- ▶ Non-perishable food items
- ▶ Infant clothing, baby wipes and diapers
- ▶ Work gloves

Town halls and relief information are vital information for residents hoping to return to normal.

There will be a Red Cross blood drive at Mercy Hospital on Saturday, August 20th, between 8 AM and 4 PM, and all blood types are needed.

→ **FEMA officials will hold a town hall meeting** at All Saints church on Monday, August 22nd, at 7 PM, to introduce residents to the relief aid application process. Insurance companies will also be on hand to assist residents with submitting claims.

Additional updates will be provided every 2 days or when new information becomes available, until the situation returns to normal.
Thank you, and stay safe.

← Because the imminent danger has passed, you can send messages that are longer and have a higher comprehension level.

← Set expectations about when you will contact residents next.

KEY HURRICANE MESSAGE CREATION TIPS

- ▶ Speak with a strong, authoritative voice. A wavering, hesitant tone will undermine the intent of your message.
- ▶ Keep your message short. 30-45 seconds is just right. A minute is probably too long.
- ▶ Every second counts. Pre-record a hurricane message for using Blackboard Connect's message templates so that you can get word out in a click or two.
- ▶ Remember in a crisis situation, that your audience will have a lower-than usual ability to comprehend your message. You should draft hurricane messages accordingly. The sample message on page 6 reads at a sixth-grade level. It's easy to measure the readability of your message using the built-in tools in Microsoft Word: <http://ow.ly/6bMPB>.
- ▶ Where possible, use the same person to record each message related to an event. Continuity breeds assurance in your community. You'll build a personal brand as the "storm guy" or "hurricane lady" – which will serve you well in future incidents.
- ▶ Consider sending hurricane alerts with zero retries. The time lapse between second and third attempts usually results in warnings being delivered long after the danger has passed.
- ▶ Educate citizens to seek cover if they already know a hurricane warning has been issued. There's no need to run to the phone to answer an alert if they know of the immediate threat - instead they need to seek shelter right away.
- ▶ Don't program a caller ID that is dispatch or public safety number. The last thing you want to do is tie-up these lines and bring down 911.

REFERENCES

Resources

National Weather Service – National Hurricane Center

<http://www.nhc.noaa.gov/>

Home page of the National Hurricane Center. Offers current news, maps, and updates.

NOAA Weather Radio

<http://www.weather.gov/nwr>

Home page of the nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office.

The Saffir-Simpson Hurricane Wind Scale

<http://www.nhc.noaa.gov/aboutsshs.shtml>

This scale rates hurricane intensity, from Categories 1 through 5. The widely-used scale was updated in 2010.

FEMA: Hurricane

<http://www.fema.gov/hazard/hurricane/index.shtm>

Hurricane information from the Federal Emergency Management Agency.

FEMA: Social Media Tools

http://www.fema.gov/pdf/hazard/hurricane/2010/hurricane_week_social_media.pdf

This page provides links to Facebook pages, YouTube videos, Twitter feeds, and other sites which provide hurricane-related information.

SLOSH Model

http://www.nhc.noaa.gov/ssurge/ssurge_slosh.shtml

The Sea, Lake and Overland Surges from Hurricanes (SLOSH) model is a computerized numerical model developed by the National Weather Service (NWS) to estimate storm surge heights.

Best Practices for Hurricane-Related Communication:

Recommendations from Interviews with Decision-Makers

<http://www.lsu.edu/hipip/whitepaper.pdf>

A compilation of best practices for use when responding to a hurricane, prepared by Louisiana State University.

Seal Beach Case Study

http://www.blackboard.com/resources/Connect/BbConnect_Case_GOV_SealBeachCS.pdf

Learn how Seal Beach, CA used Blackboard Connect to keep residents safe during hurricanes and floods.

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<http://www.aoml.noaa.gov/hrd/tcfaq/E6.html>
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<http://www.nhc.noaa.gov/surge/>
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- 7 Best Practices for Hurricane-Related Communication: Recommendations from Interviews with Decision-Makers
<http://www.lsu.edu/hipip/whitepaper.pdf>
- 8 National Weather Service – National Hurricane Center
<http://www.nhc.noaa.gov/>
- 9 National Weather Service Watch, Warning, and Advisory Definitions
<http://www.erh.noaa.gov/lwx/Defined/index.htm>

NOAA Weather Safety: Hurricanes – Safety and Preparedness Fact Sheet
NOAA/FEMA/American Red Cross
How Do Hurricanes Form?
http://www.tropicalweather.net/how_do_hurricanes_form.htm

ABOUT

Why a Playbook?

When a natural disaster or other urgent event develops, there isn't much time to plan how your city or county will react, and even less time to communicate these actions to a concerned public.

The Blackboard Connect™ Playbooks for Local and State Government series provides you with a blueprint for how to communicate with constituents before, during, and after such events.

Blackboard Connect for Government

Blackboard Connect has been the go-to mass notification service provider for local communities and has proven its reliability time and again during hurricanes and severe storms. With Weather Alerts from Blackboard Connect, Emergency Management Personnel can send severe-weather notifications from the National Weather Service/NOAA directly to citizens. Messages can be sent automatically to all constituents, or targeted to reach predefined groups, via phone, email or SMS, providing you with quicker message delivery and increased public safety.

The Blackboard Connect platform allows officials to send thousands of messages in minutes, requires no additional hardware, and can be used from any computer with Internet access or telephone. This ensures that administrators can send vital messages from wherever they are located—even if they are evacuated. Additionally, officials receive detailed reports on contacts that did not receive a message, enabling them to follow up through alternative means as needed.

Ask your Blackboard representative about additional Playbooks, containing communication strategies and information to use when responding to other types of emergencies.

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