

# Emergency Preparedness What Hurricane Sandy Taught Us

*Andrew Lleras MPH, CHT, CBNT  
Past President NANT 2009  
Group Facility Administrator  
DaVita Healthcare Partners*

# It's Hurricane Season!



## Time to Get Ready...

Hazardous weather impacts New Jersey residents on a regular basis. Many of us have experienced the long-term power outages, flooding, evacuations, property destruction, debris and other impacts to our daily lives that can result from the onset of nature's fury. We can't stop the onset of a natural hazard; but there are steps you can take to increase your safety and comfort when adverse conditions occur.

We encourage you to read through this "Hurricane Survival Guide for New Jersey," and take the actions necessary to secure your family and home. The preparations you make for hurricanes will also help you survive all types of natural disasters.

The first step is to stay informed, via traditional or social media. The second step is to discuss hurricanes and other natural hazards with family members and determine ways to stay close and connected regarding your evacuation plans and locations. Consider those in your family or community who might need extra assistance, due to age or disability, regarding emergency plans. Don't forget your pets! The third step involves gathering emergency supplies; many of these items can be found around your home.

Get ready now, be an example for others, share this information with those who need it. And thank you for being part of a more prepared New Jersey.

THE NEW JERSEY OFFICE OF EMERGENCY MANAGEMENT

### Tropical Storm Watch

A tropical storm watch is issued when tropical storm conditions, including winds from 39 to 73 mph, pose a possible threat to a specified area within 48 hours.

### Hurricane Watch

A hurricane watch is issued for a specified area when hurricane conditions, including sustained winds of 74 mph or greater, are possible within 48 hours.

### Tropical Storm Warning

A tropical storm warning is issued when tropical storm conditions are expected to affect a specified area within 36 hours.

### Hurricane Warning

A hurricane warning is issued for a specified area when hurricane conditions are expected within 36 hours. In coastal or near-coastal areas, a hurricane warning can remain in effect when dangerously high water and exceptionally high waves continue even though the winds may have subsided below hurricane intensity.

**The Atlantic hurricane season lasts from June 1 to November 30. New Jersey's tropical storm activity is typically between August and late October.**

**Most flooding deaths occur in automobiles. Always avoid driving into flooded areas! Remember to "Turn Around, Don't Drown."**



12

*NJ Hurricane Survival Guide*

At last count, officials were attributing 97 deaths to Hurricane Sandy and its aftermath within a 65-mile radius of New York City, in an area that stretched across New York, New Jersey and Connecticut, from Burlington County in New Jersey to Suffolk County on Long Island to North Salem, N.Y., in Westchester County

# ARE YOU PREPARED?

## September is National Preparedness Month & Kidney Disaster Awareness Week



September 23, 2013 to September 29, 2013

- ➔ Is your pantry stocked with foods for the Emergency Diet Plan?
- ➔ Do you know where to go for dialysis treatment during a disaster?
- ➔ Do you have a 2 week supply of **emergency medication**?
- ➔ Do you have a family emergency plan?

*What steps are you and/or your organization taking to prepare at home, in school, at work, and in your community?*

To learn how you can be prepared and maintain your health during an emergency or disaster, visit these websites:

1. **Kidney Community Emergency Response**  
[www.kcercoalition.com/resources.php](http://www.kcercoalition.com/resources.php)

2. **Ready.gov**  
English: <http://www.ready.gov>

**Make A Plan / Build a Kit / Kids / Business**  
Español: <http://www.listo.gov>

3. **National Kidney Foundation** **Emergency Plans for People with Kidney Disease**  
<http://www.kidney.org/atoz/pdf/DisasterBrochure.pdf>

4. **ASPCA** **Pet Emergency Supplies, Kits & Evacuation**  
English: <http://www.asPCA.org/pet-care/disaster-preparedness>  
Español: <http://www.asPCA.org/nyc/recursos-para-personas-que-hablan-espanol/preparacion-en-caso-de-desastres>



# **HURRICANE SANDY ISSUES**

## **1. Center closures:**

- **Disaster plan implementation**
- **Telephone tree communication sheet**
  - **Emergency Team Information**
- **Dates of unit closed**
  - **MWF/TTS**
  - **Long Term**
- **Alternate dates open**
- **Hours of operation**
  - **Water System Capacity**
  - **Back wash, volume & quality**

## **2. Loss of Power**

- **Emergency evacuation of patients**
- **Hours center closed**
  - **Disinfections incomplete d/t power outage**
- **Discussion of culture results**
- **Generator use and length of time on generator**
- **Monitoring of generator operation**
- **Refueling schedule & availability**
- **Road access**

---

### × 3. Alternate Patient Schedule

- + Copy of Dialysis orders distributed to pts
  - × 3 Day Diet plans
  - × OEM & FEMA Info
  - × Telephone lists –MD, FA, CNM, SW, RD
- + Diversion of Patients-
  - × Include Grid of patient schedule for DOH reporting
- + Transportation issues for patients
  - × Note all patients unable to treat due to transportation
- + Number of un-reachable patients
  - × Maintain a log of call time, pt & follow up
- + Hospitalizations d/t center closure
  - × NYPORT reporting
- + Missed treatments
  - × Note all alternate actions

- 
- × **4. Missed Lab draws**
  - × **Any labs not sent out d/t hurricane and transportation issues**
  - × **Stat Lab use for K levels**
  - × **Plans for redraws**
  - × **Use of back up hospital labs for cultures**



---

## 5. Teammate Schedule changes

- + Assistance from out of state teammates
  - × Determination of licensing allowance (NJ/PA/NY)
- + Who and what coverage dates
- + Teammates sent to assist patient care at other center
- + Number of unaccounted for teammates
- + Alternate teammate hours d/t closure

---

× **6. Reuse-Suspended (if applicable)**

+ **Date suspended**

- × MD order for alternate dry pack
- × Suspension was based on water availability
- × AAMI standards

+ **Plan to resume**

- × Based on Equipment Integrity Verifications

---

## × 7. Inventory

- + Address any supply/medication issues d/t storm
- + Delivery access
  - × Receiving bays flooded
- + Road closures

---

## × 8. Biomed

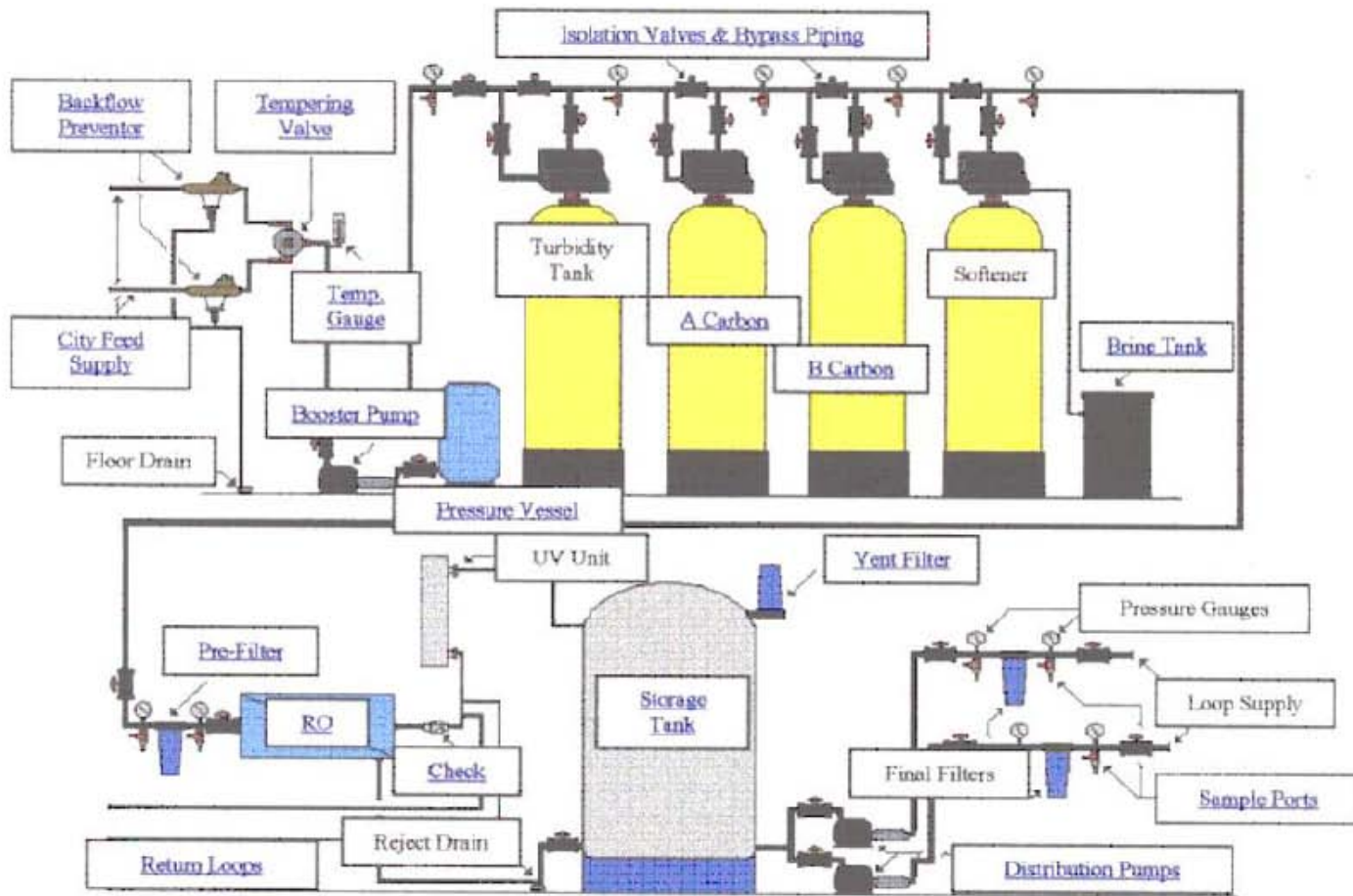
- + Culture results on any power outage timeframes
- + Resuming machine maintenance
- + Culture results upon normal operation

# *Physical Environment*

---

Incorporated by reference: NFPA 101: Life Safety Codes, 2000 edition (chapters 20 and 21)

# Water System Flow Diagram



# OCEAN COUNTY NJ



# MIDDLESEX COUNTY 11/01/12





# Our Dialysis Unit the day after 10/31/12



# MY HOUSE 10/30/12



# MY SONS AND FRIEND HELPING WITH CLEANUP



## STEP 1:

# Stay Informed



**On The Web:** Use credible websites to get information about natural hazards and emergency preparedness. The NJOEM works closely with the National Weather Service and the National Hurricane Center regarding storm predictions and forecasts.

**National Weather Service** - <http://www.erh.noaa.gov/er/phi/>

**National Hurricane Center** - <http://www.nhc.noaa.gov/>

**N.J. Office of Emergency Management** - [www.ready.nj.gov](http://www.ready.nj.gov)

**NJ 2-1-1** - NJ Residents can dial 2-1-1, toll-free, for preparedness and disaster-related info 24/7 or [www.nj211.org](http://www.nj211.org)

**American Red Cross** - <http://www.redcross.org/>

**Federal Emergency Management Agency** - [www.ready.gov](http://www.ready.gov)

**Social Media:** Social media and other advanced communications technologies are used frequently by emergency managers statewide. Find out if your community has a "reverse 9-1-1" system or if you can opt-in for email updates from municipal officials. "Like" NJOEM on Facebook: <http://www.facebook.com/READYNEWJERSEY>.

Follow us on Twitter: @NJOEM2010.

**NJ Alert:** A free, voluntary, and confidential emergency alerting system that allows the New Jersey Office of Emergency Management officials to send email or text messages to cell phones and other email during an emergency event. Sign up for NJ Alert by logging on to: [www.njalert.gov](http://www.njalert.gov).

**Nixle:** An application that allows verified government agencies to communicate with the public via text/SMS, email, and internet posts. This service is provided at no cost to the department, taxpayers, or residents. Unlike other social media applications, Nixle does not contain any third-party advertisements. New Jersey residents can register to receive messages by sending a text message with their zip code to 888777 (*data rates may apply depending on your plan*). Online registration is also available at: [www.nixle.com](http://www.nixle.com).



**NOAA Weather Radio:** A nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. They broadcast warnings, watches, forecasts, and other hazard information 24 hours a day, 7 days a week. NOAA weather radios are typically inexpensive, readily available in stores, and can often be programmed for your specific area.

[www.ready.nj.gov](http://www.ready.nj.gov)



Scan for  
NJOEM on  
Facebook



Scan for  
NJOEM on  
Twitter



## STEP 3:

# Build a Hurricane Kit

Use these suggestions as a guide for gathering your hurricane supplies. Remember these critical points:

- Stock a **2 week supply** of these emergency necessities.
- Store clean-up and repair supplies in a **safe place**.
- Make your hurricane kit **portable** in case you need to evacuate.
- Don't forget **special supplies** for babies, the elderly, and those with access or functional needs.
- Review homeowner's or renter's **insurance plan** as it relates to natural disasters.

### the basics.

- |   |  |
|---|--|
| <input type="checkbox"/> Alarm clock ( <i>battery operated</i> )              | <input type="checkbox"/> Eating & cooking utensils   |
| <input type="checkbox"/> Battery or crank-operated radio/TV                   | <input type="checkbox"/> Emergency cooking facilities ( <i>grill/camp stove</i> )                      |
| <input type="checkbox"/> NOAA All-Hazards radio                               | <input type="checkbox"/> Gas for the grill } <b>CAUTION: Store properly in approved containers.</b>    |
| <input type="checkbox"/> Flashlights (one per person)                         | <input type="checkbox"/> Cans, gas & oil   |
| <input type="checkbox"/> Batteries for radio/flashlights to last several days | <input type="checkbox"/> Butane lighter  |
| <input type="checkbox"/> Fire extinguisher                                    | <input type="checkbox"/> Work boots/shoes  |
| <input type="checkbox"/> First aid kit & manual                               | <input type="checkbox"/> Change of clothes   |
| <input type="checkbox"/> Cash, credit cards                                   | <input type="checkbox"/> Sleeping bags, sheets & towels  |
| <input type="checkbox"/> Driver's license                                     | <input type="checkbox"/> Blankets & pillows  |
| <input type="checkbox"/> Cellular phones & chargers                           | <input type="checkbox"/> Bleach without scents/additives ( <i>in a secure, well-marked container</i> ) |
| <input type="checkbox"/> Important phone numbers                              | <input type="checkbox"/> Soap, shampoo & toiletries  |
| <input type="checkbox"/> Prescriptions, including eyeglasses                  | <input type="checkbox"/> Sponges/paper towels  |
| <input type="checkbox"/> Water, 1 gallon per person per day                   | <input type="checkbox"/> Toilet paper & towelettes   |
| <input type="checkbox"/> Water purification tablets                           | <input type="checkbox"/> Feminine hygiene products   |
| <input type="checkbox"/> Coolers for food & water                             | <input type="checkbox"/> Baby food, diapers & formula  |
| <input type="checkbox"/> Canned & dried food                                  | <input type="checkbox"/> Toys ( <i>to occupy children</i> )  |
| <input type="checkbox"/> Non-electric can opener                              | <input type="checkbox"/> Pet food  |
| <input type="checkbox"/> Pots & pans  |  |



## Important Tips To Remember

- **If you are told to evacuate, GO!**
- Make sure you have your shoes on or with you at ALL times. You may need to evacuate quickly.
- Have cash on hand. If the power is out, so are the ATMs and credit card machines.
- Gas up your cars ahead of the storm. The gas pumps will not work without power or may be too damaged to open afterwards.
- Be sure to check on friends and neighbors who have access or functional needs.
- Be sure to have extra medications on hand and keep them in a water resistant container.
- Get all of your vital records and insurance papers together NOW. Keep them in a water resistant container. If you can, scan and email them to yourself so you have a copy of important numbers and policies, etc.
- Charge up your cell phones and try not to use them if the power goes out. Texting uses less power than a cell call, so use text messaging when possible to save power.
- Discuss business continuity plans now. Whether you are the boss or report to a boss, discuss your game plan for continued business operations.
- NEVER use a generator inside homes, garages, crawlspaces, sheds, or similar areas, even when using fans or opening doors and windows for ventilation. Deadly levels of carbon monoxide can quickly build up in these areas and can linger for hours, even after the generator has shut off.
- Know where your utility shut off valves (*gas, electric, water*) are and how to use them.



## People with Access & Functional Needs

Each person's needs and abilities are unique, but every individual can take important steps to prepare for all kinds of emergencies and put plans in place. By evaluating your own personal needs and making an emergency plan, you can be better prepared for any situation.

- Consider how a disaster might affect your individual needs.
- Plan to make it on your own, at least for a period of time. It's possible that you will not have access to a medical facility or even a drugstore.
- Identify what kind of resources you use on a daily basis and what you might do if they are limited or not available.
- Build a kit with your unique consideration in mind. What do you need to maintain your health, safety, and independence?

If you or someone close to you has a disability or other access or functional need, you may have to take additional steps to protect yourself and your family.

Find out about individual assistance that may be available in your community. Register in advance with the office of emergency services, the local fire department, and other government agencies or non-profit groups. Tell them of your individual needs or those of a family member and find out what assistance or services can be provided.

## Who are Individuals with Access & Functional Needs?

- Those who are deaf or hard of hearing may need to make special arrangements to receive emergency warnings.
- Single working parents and those with limited English proficiency may need help planning for disasters and emergencies. Community, faith-based, and cultural groups may be able to help keep people informed.
- People without vehicles may need to arrange for transportation.

People with special dietary needs should take precautions to have an adequate emergency food supply.

### Additional Support

The Dept. of Human Services Division of Mental Health and Addictions Services Office of Disaster and Terrorism:  
1-877-294-HELP (1-877-294-4357)  
1-877-294-4356 TTY (*voice callers use 7-1-1 NJ Relay*)

Addictions Hotline of NJ: 1-800-238-2333  
NJ SNAP/Food Stamps: 1-800-687-9512 or visit <http://www.nj.gov/humanservices/dfd/programs/njsnap/>  
Medicaid Call Center: 1-800-356-1561  
Work First NJ/General Assistance: 1-800-792-9773 or visit <http://www.state.nj.us/humanservices/dfd/programs/workfirstnj/>



**NJ's Special Needs Registry For Disasters**

For people with disabilities who need help during an evacuation or emergency.

Call 2-1-1  
[www.registerready.nj.gov](http://www.registerready.nj.gov)

**Register READY**  
[www.registerready.nj.gov](http://www.registerready.nj.gov)

Sponsored by the New Jersey Office of Emergency Management, Office of Homeland Security and Preparedness, and your County Office of Emergency Management

The advertisement features a young man in a wheelchair on the left and an elderly woman and a young boy on the right. The background is a light green color.

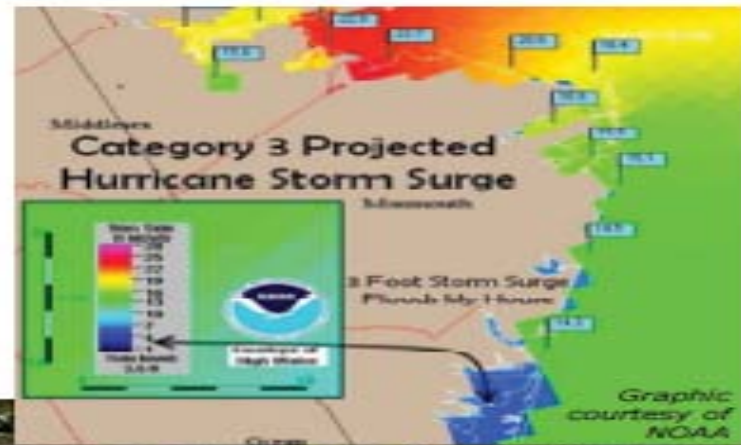
## ■ Hurricane Hazards...

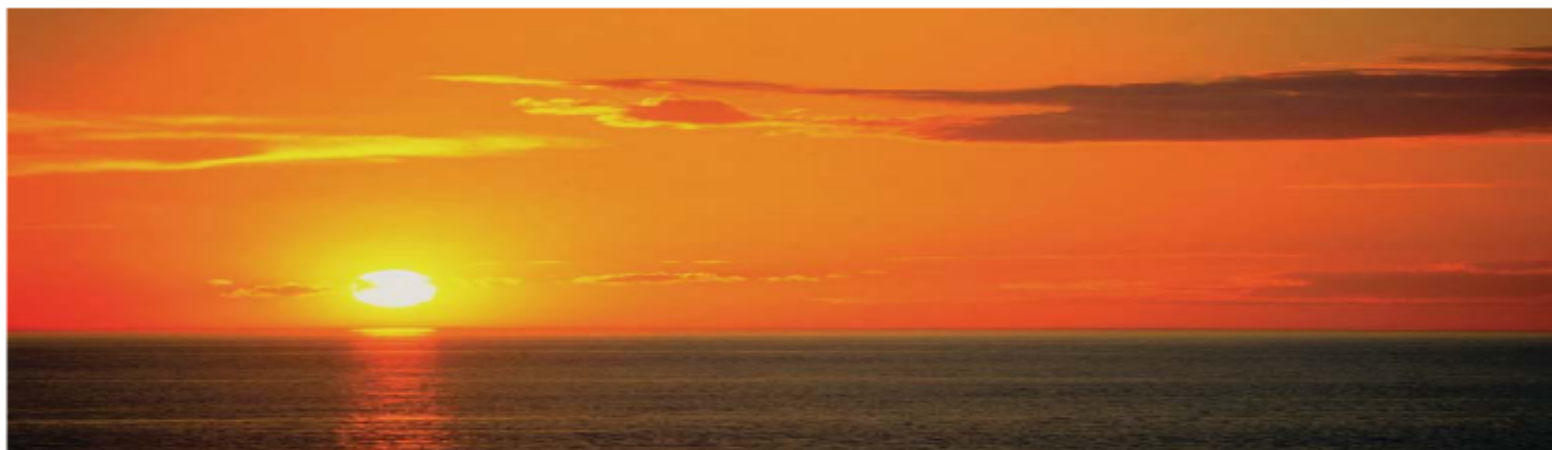
## ■ Storm Surge



Storm surge is a dome of water often 50 to 100 miles wide that sweeps across the coastline along and to the right of where the eye makes landfall. In general, the stronger the winds, the higher the storm surge. If the hurricane makes landfall during high tide, the impact is even greater.

Storm surge does not take into account wave height, which is added on the top of the storm surge, to produce even more destruction. The size, speed, and strength of a storm and the angle it approaches the coast contribute to the damage storm surge can cause.





## ***After a Hurricane...***

- Continue listening to a NOAA weather radio or the local news for the latest updates.
- Stay alert for extended rainfall and subsequent flooding even after the hurricane or tropical storm has ended.
- If you have become separated from your family, use your family communications plan or contact FEMA or the American Red Cross.  
FEMA has established the [National Emergency Family Registry and Locator System \(NEFRLS\)](#) which has been developed to help reunite families who are separated during a disaster. The NEFRLS system will enable displaced individuals the ability to enter personal information into a website database so that they can be located by others during a disaster.  
The [American Red Cross](#) also maintains a database to help you find family. Contact the local American Red Cross chapter where you are staying for information. Do not contact the chapter in the disaster area.
- If you evacuated, return home only when officials say it is safe.
- If you cannot return home and have immediate housing needs, text **SHELTER + your ZIP code to 43362 (4FEMA)** to find the nearest shelter in your area (example: shelter 12345).
- For those who have longer-term housing needs, FEMA offers several types of assistance, including services and grants to help people repair their homes and find replacement housing. Apply for assistance or search for information about housing rental resources at [www.fema.gov](http://www.fema.gov).

- Drive only if necessary and avoid flooded roads and washed-out bridges. Stay off the streets. If you must go out, watch for fallen objects, downed electrical wires, and weakened walls, bridges, roads, and sidewalks.
- Keep away from loose or dangling power lines and report them immediately to the power company.
- Walk carefully around the outside of your home and check for loose power lines, gas leaks, and structural damage before entering.
- Stay out of any building if you smell gas, if floodwaters remain around the building, or if your home was damaged by fire and the authorities have not declared it safe.
- Inspect your home for damage. Take pictures of damage, both of the building and its contents for insurance purposes. If you have any doubts about safety, have your residence inspected by a qualified building inspector or structural engineer before entering.
- Use battery-powered flashlights in the dark. Do NOT use candles. *Note:* The flashlight should be turned on outside before entering - the battery may produce a spark that could ignite leaking gas, if present.
- Watch your pets closely and keep them under your direct control. Watch out for wild animals, especially poisonous snakes. Use a stick to poke through debris.
- Avoid drinking or preparing food with tap water until you are sure it's not contaminated.
- Check refrigerated food for spoilage. If in doubt, throw it out.
- Wear protective clothing and be cautious when cleaning up to avoid injury.



## Agency Contact Information



Scan this with your smartphone to go to the [www.ready.nj.gov](http://www.ready.nj.gov) website.

### **American Red Cross**

[www.redcross.org](http://www.redcross.org)  
1-800-RED-CROS

### **New Jersey Office of Emergency Management**

[www.ready.nj.gov](http://www.ready.nj.gov)

### **New Jersey Office of Homeland Security & Preparedness**

[www.njhomelandsecurity.gov](http://www.njhomelandsecurity.gov)  
Tips & Leads: 866-4-SAFE-NJ

### **New Jersey Office of the Attorney General**

[www.state.nj.us/lps](http://www.state.nj.us/lps)  
Consumer Affairs: 800-242-5846

### **NJ Dept. of Transportation**

[www.state.nj.us/transportation](http://www.state.nj.us/transportation)

For Motor Vehicle Services, the general customer service number is 1-888-486-3339 (in-state) or 609-984-7294 (out-of-state) or, for the hearing impaired, 609-292-5120.

For maintenance issues such as malfunctioning traffic signals and potholes, direct calls to 1-800-POTHOLE. Please note: if you have a pothole damage claim you must call 609-984-7294.

Find all the necessary information regarding area road conditions by dialing 511 or toll free 1.866.511.NJDT (6538). The site offers a map indicating flooded or obstructed roads and detours. You can also log on to: [www.511nj.org](http://www.511nj.org).

### **NJ 2-1-1**

Residents can dial 2-1-1, toll-free, for preparedness & disaster-related info 24/7 or [www.nj211.org](http://www.nj211.org)

### **NJ Dept. of Environmental Protection**

If residents need to report an environmental incident impacting the state, please call the DEP 24-Hour Hotline at: 1-877-WARN-DEP.

### **NJ Dept. of Health & Senior Services**

<http://www.nj.gov/health/er/natural.shtml>

Senior Gold 1-800-792-9745

Senior Programs Information 1-800-792-8820

Senior Services and Benefits – NJ EASE 1-877-222-3737

Directory of Local Health Departments in New Jersey:

<http://nj.gov/health/lh/documents/lhdirectory.pdf>

### **Centers for Disease Control and Prevention**

Safe Clean-Up:

<http://emergency.cdc.gov/disasters/cleanup/facts.asp>

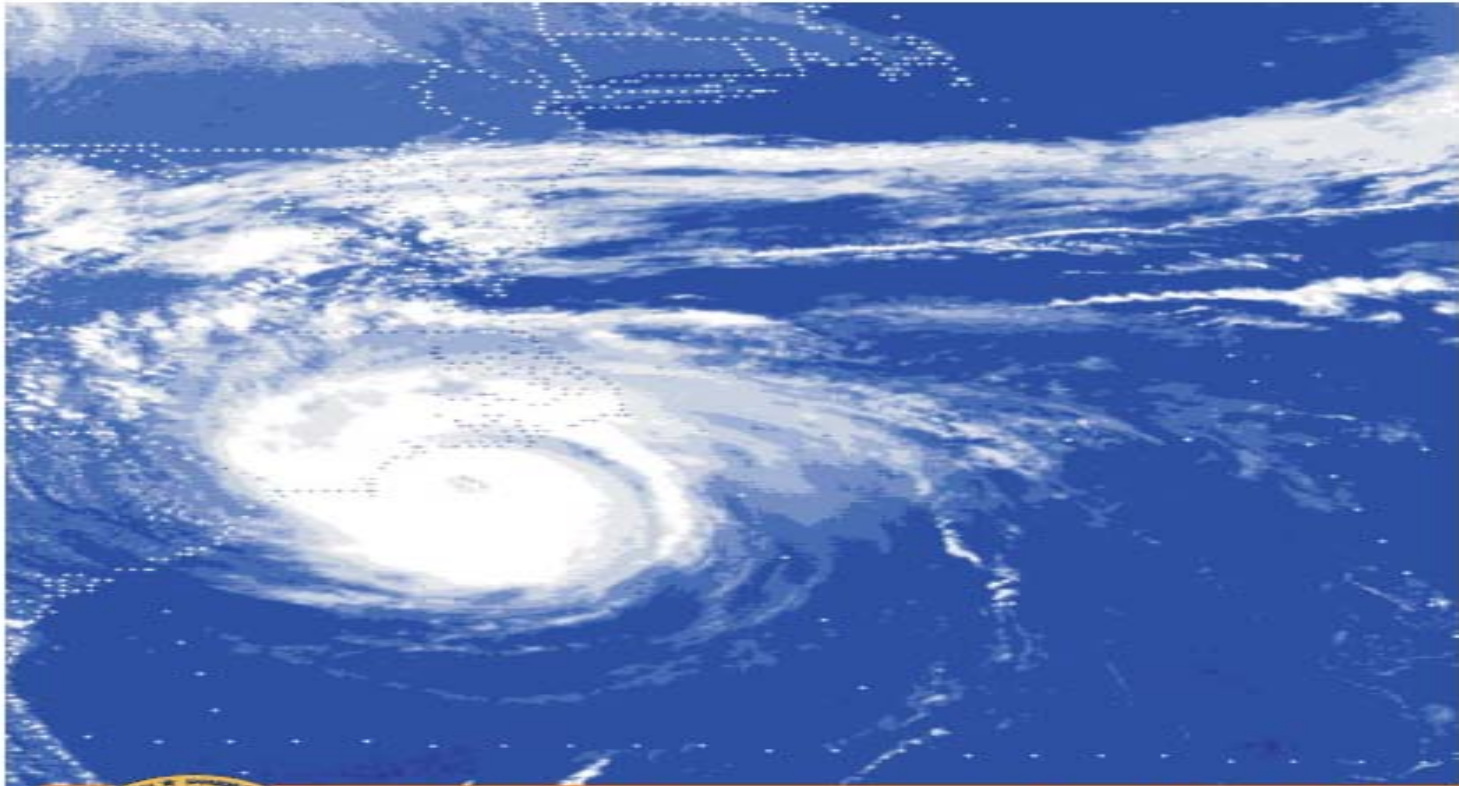
Mold Issues:

<http://emergency.cdc.gov/disasters/mold/>

Protecting from Mold:

<http://emergency.cdc.gov/disasters/mold/protect.asp>

# ACKNOWLEDGEMENTS



**Hurricane Survival Guide  
for New Jersey**

[ready.nj.gov](http://ready.nj.gov)

[facebook.com / READYNEWJERSEY](https://facebook.com/READYNEWJERSEY)

[twitter.com/ @NJOEM2010](https://twitter.com/@NJOEM2010)

QUESTIONS????

