

Seacoast Utility Authority

Hurricane & Disaster Preparedness



Seacoast Utility Authority

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- ≈ **Preparedness is the key to reducing the effects of a storm system once it reaches land.**
- ≈ Storms typically begin as a tropical depression and then develop into a tropical storm.
- ≈ The winds of a tropical storm must exceed 74 miles per hour for the storm to qualify as a hurricane.
- ≈ **When a storm is coming, your plans need to be implemented, not created.**
- ≈ **Planned action rather than reaction** to these storms has been proven to be the most successful response method.

When A Storm Threatens

- **Teach family members how & when to turn off electric, gas, & water services.**
- **Keep a supply of cooking & eating implements that can be used in the absence of water and electric service, such as:**
 - **Plastic utensils, paper cups & plates.**
 - **Plenty of plastic garbage bags.**
 - **Manual can & bottle openers.**
 - **A heating source, such as a camp stove or canned heat stove, and extra fuel.**
- **Monitor local radio broadcasts for emergency information.**

During the Hurricane Watch & Warning

- **Thoroughly clean the bathtub, jugs, bottles & cooking utensils.**
- **Fill your bathtub and any other large containers with water for washing, cleaning, and to flush toilets. Pool water can be used for these purposes as well.**
- **Have one gallon of water per person, per day available to meet your drinking & cooking needs for a two-week period.**
- **Do not lower the water level in your swimming pool, or it may pop out of the ground.**
- **Be ready for the unexpected—place important documents inside plastic bags or other waterproof containers and move to an elevated area.**

What to do Before, During & After a Hurricane

After the Hurricane

- **Watch or listen to news for an all clear to drink water. After an all clear flush pipes for 3 minutes or until water runs clear, and carefully follow any boil water instructions. (See page 4).**
- **Seacoast customers may call 561-656-2244 & carefully listen to our message line that is designed to provide daily updates on the drinking water status.**
- **You can also visit the Seacoast website, www.sua.com, for daily updates.**
- **Make sure children & pets do not consume food or water that may be contaminated.**
- **Check electric, gas, & water connections before turning them back on.**
- **Check for sewer and water line damage. If you suspect lines not on your property are damaged, contact Seacoast. For damaged lines on your property contact a plumber.**
- **After the storm has passed please limit water usage by not running the dishwasher & washing machine. Using these appliances right after a storm passes can cause sewer backups.**
- **When possible, avoid walking through flowing water or driving through a flooded area. Always look before you step—after a flood the ground and floors are covered with debris.**

Why do we have to boil water?

Seacoast generally provides water pressure in the range of 50 to 60 pounds per square inch (psi) at the customer's meter. Whenever an incident occurs that reduces pressure to below 20 psi for an extended period, the potential for backflow or back siphoning of undesirable material into the drinking water system increases.

To assure that this has not occurred, regulations require public drinking water suppliers to issue a precautionary "boil water" order to their customers. Such orders are generally in effect for 48 to 72 hours, long enough for the water utility to collect and analyze samples from the affected portion of its system. If samples indicate bacteriological contamination (as they very rarely do), the utility issues a notice extending the boil water order until testing indicates that water quality is acceptable.

Boiling water as directed in Seacoast's published notices generally inactivates disease-causing microorganisms if any are present. It is a precautionary interim disinfection measure which is relatively simple and highly effective, and which provides extra security while laboratory analyses confirming the water's safety are in progress.

How will we know if we have to boil the water?

Depending upon the number of customers affected, Seacoast issues boil water orders either through the media or by delivering notices to the door of each affected customer. Clearly, when all 30,000 Seacoast customer accounts are affected, it is impossible to deliver notices to every door.

The two simplest ways that you can keep current on the status of a "boil water" advisory, provided that you have phone and electric, is to check our website, www.sua.com, or call 561-656-2244 to listen for the latest updates. During a declared disaster, listen for broadcast updates from your local Emergency Operation Center (EOC). Seacoast is in constant contact with the EOC to update any information regarding your water and sewer service.

Boil Water

What water uses require boiling and how long do I boil the water?

Here are the instructions when a “Boil Water Advisory” has been issued. If you are in doubt whether or not to “boil water”, just follow these simple instructions as a precaution:

1. Bring water to a rolling boil for one (1) minute before using for culinary (cooking), brushing your teeth, or drinking purposes.
2. Water not being used for the above purposes does not have to be boiled. This means that water used to wash dishes, do the laundry, or to bathe does not need to be boiled. Water used for these purposes may be disinfected by adding six (6) to eight (8) drops of unscented bleach per gallon of water used.
3. If you have an ice maker or public drinking water fountain, turn it off and do not turn it back on until the “precautionary boil water advisory” has been lifted. You may prefer to dump the first load of ice from the ice maker and/or run the water in the water fountain for three (3) minutes.
4. Continue this procedure until further notice.
5. Monitor media reports and newspapers for updates, and remember that you can visit our website, www.sua.com, or call 561-656-2244 for a phone message with the latest status regarding a “boil water advisory”.



Do I have to boil the water that my pet drinks?

Only you know your pet's sanitary habits, and the decision to boil your pet's water, or not to boil your pet's water, is your decision. You may want to ask your vet what he/she recommends. Keep in mind that boiling the water is precautionary, and if your pet already sneaks a drink out of the toilet or the puddle in the driveway then you may not necessarily need to boil your pet's water.

Do I have to boil the water for my pet turtle & fish?

You should treat the water as usual for your aquatic life. Check with your local pet store or veterinarian for their recommendation.



≈ Cell phone use was another barrier during crisis in the 90's & 2004. Loaded circuits made it very difficult to communicate with emergency crews trying to get the water restored.

≈ **Please use your cell phone for "emergencies only" during and immediately there after a hurricane.**

More Tips

What can I do if I don't have any electric to boil the water?

Remember that you are instructed each and every hurricane season to purchase bottled water (fourteen (14) gallons per person, for a two-week period, is recommended) for this very reason. If you lose water pressure or a water break completely shuts down your water supply, you should have bottled water available to drink, brush your teeth, and cook . HOWEVER, do not waste your bottled water on washing dishes or clothes, etc.

It is important to remember that before the storm, you should fill your bathtub to be used to flush your toilet, wash dishes, clean, etc. Unscented bleach should also be on your supply list. Use six (6) to eight (8) drops of bleach per gallon of water that has been drawn and sitting un-refrigerated for over a week (this could be water in your bathtub, etc.).

Does your sewer system have a backflow valve?

If flood waters enter the sewer system, sewage can back up into your home. To prevent this, have a licensed plumber install an interior or exterior backflow valve.

Why should I conserve water during and after the storm?

Sanitary sewer systems become strained during and after a storm. Backups and overflows can be expected due to flood waters and/or the loss of electrical power to our sewer pumping stations. That is why it is important for everyone to conserve water. **Reducing your water usage helps reduce the wastewater flowing down your drains in to the sewer system.** Turn your water faucets off when not in use and avoid unnecessary toilet flushing. It is important that you refrain from using your dishwasher and washing machines until conditions improve. Please call us if you are experiencing sewage overflows.

Trees & Water Lines

- ≈ A tropical storm in the 90's dramatically demonstrated the need for proper coordination of tree plantings. It took 2 days to restore full water service to an entire neighborhood after the trees blew over & took electrical lines with them. During the hurricanes of 2004, trees took down electrical lines and pulled up water lines, thus leaving parts of the Seacoast service area without electric and/or water for over a week at a time. Fixing a water main was the easy part, sawing the roots of the toppled trees away from the mains took many, many hours.



Trees can be a hazard to water lines during a storm.

Rule of Thumb:

These exercises are a good way to evaluate whether or not your water service is at risk during a severe storm:

- ≈ Find the water meter that serves your home/business.
- ≈ Look for your “plumber’s valve” (usually near your outside hose bib without a hose connection).
- ≈ Draw an imaginary straight line between your meter & “plumber’s valve”.
- ≈ If there is a shade tree within 3 ft. of either side of the imaginary line, water service to your home/business may be at risk during a wind storm.
- ≈ Standing in front of your house & facing away, look to the left & right, up & down the street.
- ≈ Are trees planted on the same side of the street as fire hydrants?
- ≈ If they are planted within 10 ft. of the edge of the road, there is a greater likelihood the water service could be interrupted during a wind storm.



It is better to be prepared for a storm then to react to one.

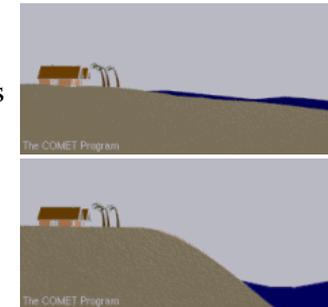
STORM SURGE

"The greatest potential for loss of life related to a hurricane is from the storm surge." - Brian Jarvinen, National Hurricane Center

Storm surge is simply water that is pushed toward the shore by the force of the winds swirling around the storm. This advancing surge combines with the normal tides to create the hurricane storm tide, which can increase the mean water level 15 feet or more. In addition, wind driven waves are superimposed on the storm tide. This rise in water level can cause severe flooding in coastal areas, particularly when the storm tide coincides with the normal high tides. Because much of the United States' densely populated Atlantic and Gulf Coast coastlines lie less than 10 feet above mean sea level, the danger from storm tides is tremendous.



The level of surge in a particular area is also determined by the slope of the continental shelf. A shallow slope off the coast (right, top picture) will allow a greater surge to inundate coastal communities. Communities with a steeper continental shelf (right, bottom picture) will not see as much surge inundation, although large breaking waves can still present major problems. Storm tides, waves, and currents in confined harbors severely damage ships, marinas, and pleasure boats.



The more intense the storm, and the closer a community is to the right-front quadrant, the larger the area that must be evacuated. The problem is always the uncertainty about how intense the storm will be when it finally makes landfall. Emergency managers and local officials balance that uncertainty with the human and economic risks to their community. This is why a rule of thumb for emergency managers is to plan for a storm one category higher than what is forecast. This is a reasonable precaution to help minimize the loss of life from hurricanes.

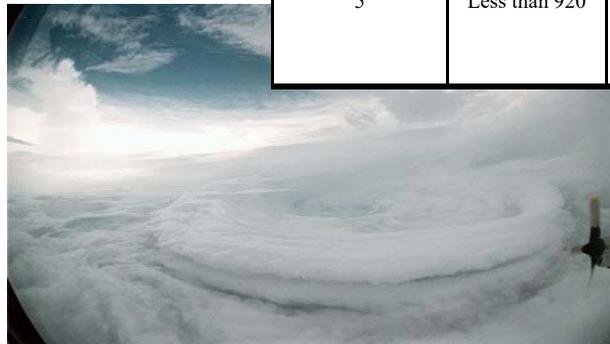
Wave and current action associated with the tide also causes extensive damage. Water weighs approximately 1,700 pounds per cubic yard; extended pounding by frequent waves can demolish any structure not specifically designed to withstand such forces.

The currents created by the tide combine with the action of the waves to severely erode beaches and coastal highways. Many buildings withstand hurricane force winds until their foundations, undermined by erosion, are weakened and fail. For more info go to hurricanes.noaa.gov

Seacoast Utility Authority

The Saffir-Simpson Hurricane Scale

Category	Pressure (bar)	Wind Speed (knots)	Wind Speed (mph)	Surge (ft)	Damage Level
TD	————	Less than 34	Less than 39	————	————
TS	————	34 to 63	39 to 73	————	————
1	980 and up	64 to 82	74 to 95	4 to 5	Minimal
2	965 to 980	83 to 95	96 to 110	6 to 8	Moderate
3	945 to 965	96 to 112	111 to 130	9 to 12	Extensive
4	920 to 945	113 to 134	131 to 154	13 to 18	Extreme
5	Less than 920	134 and higher	155 and higher	18 and up	Catastrophic



Threats to our Water

- ≈ Local officials, industry groups and water experts agree that any effort to use a water plant to poison people would likely fail because contaminants would be diluted amid millions of gallons of water and neutralized during the water treatment process.
- ≈ Terrorists prefer targets that are relatively easy to hit and will have the maximum impact.
- ≈ Seacoast draws its water from ground water (wells) only. Our wells draw from aquifers that are approximately 100 ft. beneath the earth. Sabotage of all these wells simultaneously would be exceedingly difficult and time consuming.



Seacoast is an active participant in the surrounding communities Workers on Watch “WOW” Program. We report suspicious activity to local authorities immediately and recommend that you do the same.



CALL US FIRST

We are here to serve you 24 hours a day, 7 days a week, if you have a problem with a **SEWER BACKUP** or your **WATER SERVICE**.

Engineering & Administration Hours - **Mon - Fri, 8:30am-5pm**

Customer Service Hours - **Mon - Fri, 9am-4pm**

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Administration/
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