# NAVIGATING FLOODS AND POWER OUTAGES FOR SEPTIC SYSTEMS

Louisiana has a history of impactful weather events which have negative consequences on infrastructure. Before hurricane season, take stock in preventative maintenance tips and get a checklist ready to get your septic system back online to reduce downstream water quality issues. A key to a healthy, efficient septic unit is a well-maintained system. Homeowners should have their septic tank inspected every six years and pumped at least every eight years by a licensed sewage hauler. It is best to consult professionals for major septic service needs, but some helpful tips to navigate before, during and after storm events are outlined in this article.

## Before the Season Checklist

- Take pictures of your septic unit and connection points in case of damage. These could include, but are not limited to, electrical connections, model numbers for units, filters and chambers.
- If financially feasible, get extra components that may need to be replaced. Blowers on septic units must be periodically replaced and would be beneficial to have in case a failure occurs.
- Keep all drawings and important septic documentation in a safe, waterproof area.

Residential septic aerator in area of potential flooding. Photo by Richard Grabert

## During a Storm Event

- If you have a septic system that requires power (aerobic treatment units, distribution pumps, spray irrigation, etc.), it's best to minimize water usage during power outages. This means taking shorter showers, turning off water in sinks when not in use while shaving or brushing teeth, minimizing the number of times you flush your toilets and trying not to run washing machines or dishwashers unless necessary. When the power is off, the septic unit will collect water without dispersing.
- For gravity-fed systems with no electrical components, the system should operate as normal. Be aware that heavy rain or flooding can saturate discharge areas and create issues with processes. If there is an indication of backups or septic odor coming from discharge points, it's best to call a licensed service provider.

## After Power Outage Safety Tips

It is always a best practice to leave service and maintenance up to service professionals. In any case, if your septic system makes you feel unsafe call a local organization for assistance. There are many resources that can be used to determine local professional services.

- Make sure the power is off to the system before inspecting. It is best to turn off the circuit breaker or unplug the unit in case the power has come back on. This could pose a shocking hazard.
- Untreated septic effluent can be hazardous to human health. It's best to wear rubber gloves and eye protection when inspecting septic system components. After you complete the inspection, wash your hands thoroughly, dispose of gloves and wash any contaminated clothes.
- If there is an odor or standing water around the septic unit, stay out of the affected area. This could be untreated effluent and should be disinfected or removed by a licensed hauler. Untreated effluent is a health hazard for humans and the environment.
- The septic tank and pumping chambers contain gas from the bacteria digestion process. These gases lack oxygen and can be fatal. A homeowner should never enter the chamber or tank where this gas is located.

## After Power Outage Checklist

- Make sure the circuit breaker is turned off or the unit is unplugged prior to inspecting.
- Initially, check for issues in the following areas:
- Damaged piping
  - Open covers
  - Exposed electrical wiring
  - Eroded or unlevel ground around the unit
  - Damage or compaction to discharge area
  - Sewage odor in the house or yard
  - Pooling of water around the unit or discharge area
  - Plumbing backups
  - Exposed septic components
- When power is restored, check for issues in the following areas:
  - Audible alarms from the unit
  - Visible lights from the unit
  - Unfamiliar operating noises
  - Grayish-brown water in aeration chamber of aerobic treatment units. This should be chocolate-brown colored effluent.
  - Excess solids or floating material in chambers
  - Plumbing backups
  - Sewage odor in the house or yard
- It is best to continue water conservation practices and minimize the amount of solid waste (human or domestic food scraps) that goes into the septic unit for a few days while the systems get back to normal after a weather event.

## Specialized Systems Instructions

For pump systems with automated controls that trigger the "pump on" at a designated volume, power outages can affect the effluent collected in the pumping chamber. While the power is off, effluent will collect in the pumping chamber and accumulate past the high-water level eventually feeding back into the main septic tank. This can cause water to back up into the house if not properly cycled. It is best to turn off the power supply to the pumps at the circuit breaker to avoid any electrical issues once power is restored. After the power comes back on, the pump should be manually run for five minutes and allowed to shut off for six hours.

This cycle should be repeated until the pump automatically turns off. This will indicate when the water has reached the correct volume for the automated controls to function properly.

For timer-based systems like spray irrigations, the time-cycling devices should reset once the power has been restored. During a 24-hour period, monitor the timer function to ensure that it is spraying at the anticipated times. For the first few days, it is good to conserve water usage until the timer systems get back to the correct schedule. The homeowner may have to reset the time cycle device or change the time setting to the appropriate time.

## Most Common Issues

During storm events, the components most likely to be damaged are the pumps and aerators. These components may need to be repaired or replaced if the system was inundated, or they may fail to operate once power is restored. If practical, keep a backup for critical components in case of emergency. When the pumps are not functioning correctly, the tank will continue to fill without dispersion resulting in sewage backup into the house. If the aerator does not work, sewage will not be properly treated. This will result in the discharge of partially or untreated sewage leading to public health hazards and water quality impairments. The best practices for inspecting and identifying the proper steps to fix your septic system is through local service professionals.

## References


- https://ldh.la.gov/assets/docs/EmergencyPrep/flood/seet/epa816f05021.pdf
- https://ldh.la.gov/page/flood-related-information-resources
- https://ldh.la.gov/assets/oph/Center-EH/sanitarian/onsitewastewater/PowerOutageSeptic.pdf
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