



## Navigating the Tides of Transitional Housing After a Natural Disaster

There are countless things to worry about when a natural disaster occurs. Homeowners facing potential or impending natural disasters are justly focused on steps for preparation; however, there comes an inevitable aftermath. Exposure to live wires, gas leaks, contaminated water and hazardous air contaminants can put you and your family at serious risk. As powerful winds and floodwaters ravage the landscape, they expose, disperse, and transport potentially harmful liquids and contaminated solids far from their source. Although other pressing concerns exist, it is important to be aware of the surprisingly common materials that contaminate hurricane-affected areas.

### Precautions to Take Based on Damage

Hurricanes, tornados, and even floods can rip a building apart, carrying debris for miles. So when the clean-up begins, it's always necessary to use precautions, and ensure that proper measures are taken to keep homeowners, residents, and cleanup crews safe from hazardous debris, contaminated liquids, and potentially dangerous materials that could have been transported during the devastation.

### Flooding

Extreme flooding causes lakes, rivers, municipal sewers and residential septic systems to overflow, resulting in [hazardous floodwater contamination](#). Standing floodwater saturated with fuels, fertilizers, human waste, and potentially caustic chemicals, creates the ideal breeding ground for insects and E.Coli carrying bacteria. Returning individuals should always wear the correct protective equipment and avoid all contact with moving and standing water, being especially careful not to ingest any of it. Contaminated water can easily infect cuts, irritate skin and sinuses, or cause potentially serious skins burns unless the individual is properly protected.



Children walk through flooded streets in the rural migrant worker town of Immokalee, which was hard hit by Hurricane Irma.

Photo: Spencer Platt/Getty Images



## Debris

Hazardous debris and common building materials can also become a source of contamination. Fiberglass insulations, roofing shingles, ceiling tiles, flooring tiles, paints and adhesives could contain highly toxic asbestos. Take extreme precautions around older homes, as [asbestos could still be present and is commonly found contaminating disaster areas](#). Asbestos containing products that become damaged by flooding, high winds, or improper contact, are most hazardous if the brittle and carcinogenic fibrils become airborne, or contaminate floodwater. Inhalation or ingestion of asbestos particles can at worst cause mesothelioma to develop, an asbestos related disease extremely common among first responders, remediation contractors, and DIY enthusiasts. Mesothelioma develops slowly, and symptoms often go undetected, due to similarity with less severe illnesses. Because detecting and diagnosing the disease can be very difficult to the point where it often gets misdiagnosed, the average [mesothelioma life expectancy](#) is often less than one year after an official diagnosis has been made. Due to the potential presence of asbestos, storm debris like loose insulation, siding, roofing shingles, and unknown materials should only be handled and removed by certified professionals equipped to eliminate all sources of contamination.



Eustolia Flores and her daughter, Jocelyn, stand in front of their home in Immokalee that was completely flattened by Hurricane Irma. Flores, Jocelyn and her son, Andriz, were taken in by their next door neighbor Anita Martinez. Martinez's home received damage as well, half of it is covered in tarps slung over gaps in the roof. Both families are living in the damaged home, sleeping on sections of the floor that remain covered. Nobody in the neighborhood has power or running water.  
Photo by Daniel Draddy.

## Natural Disaster Housing Damage Facts & Stats

As of October 2017, there have been 15 weather and climate related disaster events across the United States. With each event generating losses in the billions, they have a significant economic effect on impacted areas. Although more accurate estimates for Hurricanes Harvey, Irma and Maria are still being calculated, Harvey damage estimates predict losses exceeding \$100 billion. To learn more about past Billion-dollar disasters, check out NOAA's 1980–2017 weather statistics and report summaries [here](#).

## Steps to Take in the Aftermath of a Natural Disaster

The physical damage and financial impact of a natural disaster or severe weather event can be devastatingly difficult, especially if a homeowner has been forced to evacuate their home. Upon return, homeowners should make sure both the property and structure have been thoroughly inspected by an InterNACHI® Certified Professional Inspector® or FEMA Inspector. Their report will help homeowners properly assess the damage, and select the correct remediation strategy based on structural needs and inspector recommendations. You can also consult [DisasterAssistance.gov](#) to find out if your primary residence is in a Presidential Major Disaster Declaration area, or if you qualify for Federal assistance through FEMA's individual program (IA). Homeowners are also advised to contact local offices to see if their project is qualified to receive Hazard Mitigation Grant Program (HMGP) funds.

Even before the time-consuming clean-up and reconstruction efforts begin, homeowners left waiting out this extended phase can find some peace of mind by using temporary shelters. Often making the prudent decision to live onsite throughout the post-disaster recovery and reconstruction, individuals and families displaced from uninhabitable homes can choose to rent or purchase a private and spacious provisional on-site structure that can be deployed, delivered, and assembled rapidly. This is an excellent option for displaced families in need of provisional housing or storage during the reconstruction process.

[When selecting a temporary structure, consider how much space you'll need](#). Don't forget storage space to store clothing, furniture, and other belongings. Need more space? You can always consider renting an offsite storage unit. Safely storing any salvaged, valuable, or precious items in a controlled and secure facility will ensure your belongings are protected and waiting for your return. Based on what you're looking to pack away, [renting a storage unit is a great way to get all the storage space you need](#), without breaking the bank.

No matter what a homeowner chooses to do after a disaster, the following checklist is filled with some helpful reminders.

- Wear protective clothing and avoid contact with hazardous materials and standing water.
- Have the property inspected to identify post-disaster hazards (e.g., asbestos, chemical spills, live wires, structural damage).
- Order a temporary dwelling structure during the remediation process for living and storage.
- Take photos of damage to structures, buildings and contents to document losses.
- Have debris and damage cleaned by trained professionals.
- Keep records and receipts for each cost incurred in clean-up and repair.

## Peace of Mind

Temporary shelters are a key step to regaining confidence and independence during recovery and reconstruction. 2017 has shown the need for post-hurricane relief, provisional shelters, and willingness of companies to go above and beyond to help and donate to those affected in the aftermath! Working directly with communities in disaster-prone areas, countless companies, individuals, and volunteers are donating labor and supplies that bring peace of mind and comfort during a difficult time.





A 16 foot diameter dome provides temporary housing to a family after Hurricane Katrina, 2005

### **We're Here to Help**

In response to the overwhelming destruction caused by hurricanes in 2017, Pacific Domes teamed up with The Grassroots Alliance and the Global Rainbow Rapid Response Relief network to provide aid for those in need. Hurricane Irma devastated the farming town of Immokalee, Florida, leaving many families homeless and without food. These farm workers, who harvest produce to feed their greater community, now need food on their plates. Through crowd funding we were able to contribute over \$2000 that helped fund 30,000 meals served over a one month period. Thanks to the teamwork and commitment between our organizations and the generous donations received by Pacific Domes crowd funding, we're helping change the lives of displaced people.

In the event that your home, a loved one's home or a neighbor's home is no longer habitable, look no further than a transitional dwelling from the company that cares, Pacific Domes.

Remember!

Aerodynamic and hurricane proof! There are continuous reports of the geodesic dome being the only structure left standing after a hurricane. As hurricanes continue to devastate many Coastal communities, Pacific Domes encourages the world to think 'geodesic dome' as the strongest structure known to man!