

**Lightning Safety  
Awareness  
Media Kit**

**2017**

# Personal Safety Tips

**Most lightning victims are steps away from lightning safety, so don't be apathetic about lightning. Remember, When Thunder Roars, Go Indoors!**

You are not safe anywhere outside. Run to a safe building or vehicle when you first hear thunder, see lightning or observe dark threatening clouds developing overhead. Stay inside until 30 minutes after you hear the last clap of thunder. Do not shelter under trees.

If it's not possible to shelter indoors or in a vehicle, these actions may reduce your chances of being struck by lightning:

- Avoid open fields, the top of a hill or a ridge top.
- Stay away from tall, isolated trees or other tall objects. If you are in a forest, stay near a lower stand of trees.
- If you are camping in an open area, set up camp in a valley, ravine or other low area. Remember, a tent offers NO protection from lightning.
- Stay away from water, wet items (such as ropes), and metal objects (such as fences and poles). Water and metal are excellent conductors of electricity. The current from a lightning flash will easily travel for long distances.
- The vast majority of lightning injuries and deaths on boats occur on small boats with NO cabin. It is crucial to listen to weather information when you are boating. If thunderstorms are in the forecast, do not go out. If you are out and cannot get back to land and safety, drop anchor and get as low as possible. Large boats with cabins, especially those with lightning protection systems properly installed, or metal marine vessels are relatively safe. Remember to stay inside the cabin and away from any metal surfaces. Stay off the radio unless it is an emergency!

Indoors:

- Avoid contact with corded phones.
- Avoid contact with electrical equipment or cords. If you plan to unplug any electronic equipment, do so well before the storm arrives.
- Avoid contact with plumbing. Do not wash your hands, do not take a shower, do not wash dishes, and do not do laundry.
- Stay away from windows and doors, and stay off porches.
- Do not lie on concrete floors and do not lean against concrete walls.
- Unplug electrical equipment.

# Personal Safety Tips

To prepare for a thunderstorm, you should do the following:

- To begin preparing, you should build an emergency kit and make a family communications plan.
- Remove dead or rotting trees and branches that could fall and cause injury or damage during a severe thunderstorm.
- Postpone outdoor activities.
- Go indoors at the first sign of a storm. Stay indoors for 30 minutes after hearing the last clap of thunder.
- Secure outdoor objects that could blow away or cause damage.
- Get inside a home, building, or hard top automobile (not a convertible). Although you may be injured if lightning strikes your car, you are much safer inside a vehicle than outside.
- Remember, rubber-soled shoes and rubber tires provide NO protection from lightning. However, the steel frame of a hard-topped vehicle provides increased protection if you are not touching metal.
- Shutter windows and secure outside doors. If shutters are not available, close window blinds, shades or curtains.
- Unplug any electronic equipment well before the storm arrives.

Source: [www.lightningsafety.noaa.gov](http://www.lightningsafety.noaa.gov)



# Lightning Facts

## I. What is Lightning?

- Lightning is a visible electrical discharge that occurs within a cloud, between two clouds, or between a cloud and the surface of the earth.
- As lightning passes through the air it heats the air quickly. This causes the air to expand rapidly and creates the sound wave we hear as thunder. Normally, you can hear thunder about 10 miles from a lightning strike.

*Source: National Oceanic and Atmospheric Association (NOAA) [www.noaa.gov](http://www.noaa.gov)*

### **Where, When and How Often Does Lightning Strike?**

- Average number of thunderstorms on Earth at any given moment: 1,800
- Number of times lightning hits the Earth per second: 100

*Source: Weather.com*

## II. Lightning Injuries and Fatalities

Lightning can occur during any time of the year, but lightning casualties are highest during summer. July is generally the month with the most lightning. Lightning strikes often occur in the afternoon. Two-thirds of all lightning casualties occur between 12-6pm.

- Males are five times more likely than females to be struck by lightning; around 85% of lightning fatalities are men.
- People aged 15–34 years account for almost half of all lightning strike victims (41%). The majority (89%) of lightning deaths occur among whites.
- About one-third (32%) of lightning injuries occur indoors.

*Source: CDC*

## III. Fires Caused by Lightning

From 2007 to 2011 local U.S. fire departments responded to an average of 22,600 fires per year that were started by lightning. These fires caused an average of nine civilian deaths and \$451 million in direct property damage per year. Home fires accounted for 19% of the lightning fires, fires in non-residential structures, including businesses and other non-residential properties, accounted for 7%, vehicle fires accounted for 1%. The remaining 73% were in outdoor and unclassified properties.

# Lightning Facts

Lightning fires in non-residential properties caused an average of \$108 million in direct damage each year from 2007-2011. The average annual damage in non-residential properties includes:

- \$28 million in storage/facilities
- \$22 million in places of assembly, such as houses of worship and restaurants
- \$19 million in non-home residential properties such as hotels and motels
- \$15 million in mercantile and business properties such as offices, specialty shops and department stores
- \$15 million in industrial and manufacturing facilities
- \$3 million in miscellaneous properties

Source: National Fire Protection Association NFPA

Top 10 States with Estimated Number and Cost of Lightning Claims, Recent Report

State	Number of Claims	Insured Losses (\$ millions)	Average Cost per Claim
GA	11,184	\$56.0	\$5,007
TX	6,419	54.2	8,436
NC	5,711	34.1	5,965
LA	5,547	21.6	3,902
AL	5,199	34.8	6,702
PA	4,483	22.4	4,987
TN	4,317	23.2	5,381
SC	4,011	23.1	5,755
OH	3,942	17.1	4,344
IL	3,849	25.6	6,646
Top 10	54,662	312.1	5,709
Other	60,078	361.4	6,015
<b>U.S.</b>	<b>114,740</b>	<b>673.5</b>	<b>5,869</b>

Source: Insurance Information Institute, State Farm®.



# Lightning Facts

## IV. Lightning-Related Homeowners Losses

Homeowners Insurance Claims and Payout for Lightning Losses, Recent Report

Year	Number of Claims	Insured Losses (\$ millions)	Average Cost per Claim
2009	185,789	\$798.1	\$4,296
2010	213,278	1,033.5	4,846
2011	186,307	952.5	5,112
2012	151,000	969.0	6,400
2013	114,740	673.5	5,869
Percent change, 2012-2013	-24.0%	-30.5%	-8.3%
Percent change, 2003-2013	-38.2%	-15.6%	36.6%

Source: Insurance Information Institute, State Farm®.

Source: Insurance Information Institute, State Farm

## V. What is a Lightning Protection System?

The highly conductive copper and aluminum materials used in a lightning protection system provide a low resistance path to safely ground lightning's dangerous electricity. When the lightning protection network is in place, the lightning strike is intercepted and directed to ground without impact to the structure, occupants or contents.

A lightning protection system that meets national safety standards of NFPA 780 and UL96, UL96A includes the following elements:

1. Strike termination network (air terminals or lightning rods)
2. Down-conductor network
3. Grounding electrode network
4. Equipotential bonding network
5. Surge protection devices (for all incoming power, data and communication lines)

Failure to make proper provisions for special grounding techniques, or any of the above five elements can result in inadequate protection.

The 2014 NFPA 780: Standard for the Installation of Lightning Protection Systems is essential for designers, installers, insurance professionals, AHJs, and anyone responsible for protecting lives and property from fire and related dangers associated with lightning events.

NFPA 780 continues to serve as the LPI-175 reference document used by LPI-certified designers, installers and inspectors.

Source: Lightning Protection Institute

# Lightning Facts

## How Effective are Lightning Protection Systems?

Lightning Protection Systems are highly effective at preventing lightning damage to buildings. A number of authorities have studied the benefits and reported on them, including:

- In January 2003 the American Meteorologist Society issued a Bulletin endorsing the lightning protection requirements, stating, "It is now well established that properly installed and maintained lightning rod-based protection systems significantly decrease lightning damage."
- In 2001 a joint paper was issued by lightning experts at the U.S. Army, Navy, Air Force, National Severe Storms Laboratory, Defense Explosives Safety Board, Department of Energy, NASA and FAA. This paper underscores the critical role that lightning protection systems play in protecting our national infrastructure.

Source: [Lightning-risk.org](http://Lightning-risk.org)



# Lightning Facts

## Lightning Causes Severe Homeowner Losses

Home insurance claim “severity” costs average at \$8,665, with the most expensive claims coming from fire and lightning – where costs can be as much as \$34,307 (claims averaged between 2008 – 2012). Ironpointinsurance.com cites these categories for home insurance claims “perils” that caused loss over the years from 2008-2012.

- Fire & Lightning
- Bodily Injury
- Wind & Hail
- Water
- Property Damage
- Theft
- Medical Payments
- Credit Card & Other

## Lightning Protection Provides Good Insurance

Costs for lightning protection systems generally come in at less than 1% the value of a structure, depending upon size, location, roof type, construction, grounding conditions and location. Costs for lightning protection systems typically compare with home security and alarm systems – and are sometimes less expensive. When considering repair and replacement, lightning protection systems provide insurance and peace of mind to safeguard structures, occupants, equipment and valuables from costly, yet preventable risk!

*Source: The Lightning Safety Alliance*



# Partnering Organizations

## About the Lightning Protection Institute (LPI)



The Lightning Protection Institute (LPI) is a not-for-profit nationwide group founded in 1955 to promote lightning safety, awareness and education and is a leading resource for lightning protection installation in accordance with national safety standards. LPI certifies individuals for the installation of lightning protection systems through a Master Installer testing program to qualify competence. LPI supports lightning protection quality control and assurance through third-party inspection. Information about follow-up inspection services can be found at [www.lpi-ip.com](http://www.lpi-ip.com).

For a list of certified contractors visit the LPI website at [www.lightning.org](http://www.lightning.org).

## About the Insurance Information Institute (III)



The I.I.I. is a nonprofit, communications and research organization supported by the insurance industry.

The mission of the Insurance Information Institute (I.I.I.) is to improve public understanding of insurance—what it does and how it works. For more than 50 years, the I.I.I. has provided definitive insurance information. Today, we are recognized by the media, governments, regulatory organizations, universities and the public—as well as within the insurance industry itself—as a primary source of information, analysis and referral concerning insurance issues.

Visit [www.iii.org](http://www.iii.org) for more information.

## About the Lightning Safety Alliance (LSA)



The Lightning Safety Alliance (LSA) is a non-profit, non-stock national business corporation comprised of lightning protection manufacturers, distributors and installers. Its purpose is to provide a comprehensive and focused evaluation and response to legislative, administrative and regulatory issues facing the industry. Additionally, the LSA acts as an informational clearinghouse for its membership and provides educational programming on lightning protection and lightning safety.

Visit [www.lightningsafetyalliance.org](http://www.lightningsafetyalliance.org) for more information.

# Partnering Organizations

## About the National Oceanic and Atmospheric Administration (NOAA)



NOAA understands and predicts changes in the Earth's environment, from the depths of the ocean to the surface of the sun, and conserves and manages our coastal and marine resources.

Visit [noaa.gov](http://noaa.gov) to learn more.

## About NOAA's National Weather Service (NWS)



The headquarters of the National Weather Service is located in Silver Spring, MD. With some 5,000 employees in 122 weather forecast offices, 13 river forecast centers, 9 national centers, and other support offices around the country, NWS provides a national infrastructure to gather and process data worldwide. Each year, NWS collects some 76 billion observations and issues approximately 1.5 million forecasts and 50,000 warnings.

Visit [www.lightningsafety.noaa.gov](http://www.lightningsafety.noaa.gov) for lightning safety information.

## About National Lightning Safety Council (NLSC)

The National Lightning Safety Council was established to promote lightning safety education and awareness. The Council recognizes National Lightning Safety Awareness Week as a unique opportunity to provide the public with safety information about lightning. We encourage you to visit NOAA's comprehensive lightning safety web site to learn more about lightning and lightning safety.

Visit [www.lightningsafetycouncil.org](http://www.lightningsafetycouncil.org) for lightning safety information.

