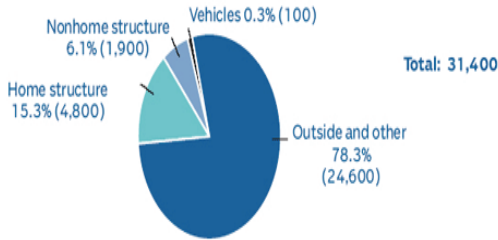




Fires Started by lightning 2002 –2005



* Source National Fire Protection association



Homeowners Insurance Claims and payout for lightning losses 2004—2007

	2004	2005	2006	2007
Number of paid claims	278,000	265,700	256,000	177,100
Insured losses in Millions	\$735.5	\$819.6	\$882.2	\$942.4
Ave cost per claim	\$2,646	\$3084	\$3,446	\$5,321

Source: Insurance Information Institute

Lightning Season streaking toward us

How Lightning works

In an electrical storm, the storm clouds are charged like giant capacitors in the sky. The upper portion of the cloud is positive and the lower portion is negative. This electronic field becomes so intense that the electrons at the earth's surface are repelled deeper into the earth. This allows the earth's surface to acquire a strong positive charge.

The strong electric field causes a path that short-circuits the cloud / earth as if there were a long metal rod connecting the cloud to the earth.

Once the ionization process begins and plasma forms, a path is not created instantaneously. In fact, there are usually many separate paths of ionized air stemming from the cloud. These paths are typically referred to as step leaders.

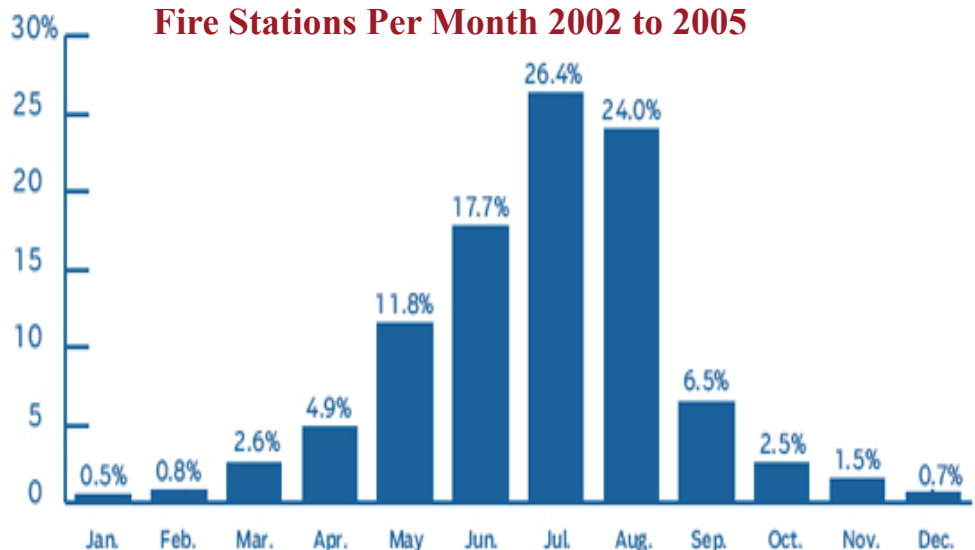
As the step leaders approach the earth, objects on the surface begin responding to the strong electric field.

The objects reach out to the cloud by "growing" positive streamers. These streamers have a purplish color and appear to be more prominent on sharp edges. The human body can and does produce these positive streamers when subjected to a strong electric field such as that of a storm cloud, in actuality, anything on the surface of the earth has the potential to send a streamer. Once produced, the streamers do not continue to grow toward the clouds; bridging the gap is the job of the step leaders as they stage their way down. The streamers wait patiently, stretching upward as the step leaders approach.

Any time there is an electrical current, there is also heat associated with the current. Since there is an enormous amount of current in a lightning strike, there is also an enormous amount of heat. In fact, a bolt of lightning is hotter than the surface of the sun.

When a leader and a streamer meet

Lightning Incidents Reported To Fire Stations Per Month 2002 to 2005



Source: National Fire Protection Association

G.S. Jones can help

Natures fireworks - lightning can cause numerous issues to the power systems of a structure. G.S. Jones electricians will perform a mega meter test, which checks for damage to wiring throughout the system. In addition, all circuit breakers, outlets, and switches can also be checked for damage.

We also can provide expert masonry craftsman to repair damaged chimneys and linings as a result of lightning strikes.

If you or your clients need help as a result of a lightning strike, G.S. Jones crews are ready to go.

DID YOU KNOW???

* Surge protectors won't save your electronics if lightning strikes your power line. Surge protectors provide protection for power surges in the line from the power company, but not for lightning. To really guard against strike damage, you need a lightning arrester. This device uses a gas-filled gap that acts as an open circuit to low potentials, but becomes ionized and conducts at very high potentials. When lightning strikes the gas gap will conduct the current safely to the ground.

In Memoriam

All of G.S. Jones Employees and Associates would like to extend their sincerest sympathy to the family and friends of Andrea Smarsh.

Lightning...

and the current flows (the strike), the air around the strike becomes extremely hot. And actually explodes because the heat causes the air to expand so rapidly. The explosion is soon followed by what we all know as thunder.

Thunder is the shockwave radiating away from the strike path. The shockwave that produces the thunder from a lightning strike can most certainly damage structures and people.

Lightning rods were originally developed by Benjamin Franklin. A lightning rod is very simple - it's a pointed metal rod attached to the roof of a building. The rod might be an inch in diameter. It connects to a huge piece of copper or aluminum wire that's also an inch or so in diameter. The wire is connected to a conductive grid buried in the ground nearby.

The purpose of the lightning rod is not to attract lightning - it merely provides a safe option for the lightning strike to choose. Regardless of whether or not a lightning rod system is present, the strike will still occur.

If you are caught outside in a storm, always look for appropriate shelter. Do not take any chances. If you cannot find shelter, put your feet as close together as possible and crouch down with your head as low as possible without touching the ground. Never lay down on the ground. After lightning strikes the ground, there is an electric potential

that radiates outward from the point of contact, if your body is in this area, current can flow through you.

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