So often when we talk about disaster safety, we focus on mammoth events like hurricanes, floods or earthquakes — overlooking the daily threat of lightning-producing thunderstorms. Many would be surprised to learn that lightning is one of the most consistently deadly and costly disasters in Florida.

Figures vary widely, but according to FEMA and the National Lightning Safety Institute respectively, approximately 100 deaths and more than $6 billion in annual property damage can be attributed to lightning. Think about it: lightning strikes on a football field or golf course and in an instant, a life is lost or forever changed. Many times tragedy occurs even before the rain begins.

What about our homes? Don’t we all know someone who has lost a telephone, computer or air conditioning unit to lightning or electrical surge? Sometimes an appliance like a television just stops working, and we may not think to blame it on lightning or surge.

Most know that Florida is the Sunshine State, but not everyone knows the flip side — Florida is the undisputed lightning capital of the United States. The combination of our climate and outdoor lifestyles makes the threat of lightning more severe here than anywhere else. That’s the bad news. The good news is that lightning is one of the most affordably prevented disasters.

That’s why this edition of NewsFLASH is dedicated to lightning ... what we call “the everyday disaster”. Inside you'll learn about personal lightning safety, affordable whole house surge protection, lighting facts, Web site links and more.

We urge you to heed the danger associated with lightning, especially in a state full of citizens who love the beach, boating and outdoors. Read inside about the trends in lightning protection. You’ll see that we’ve come a long way from old-fashioned lightning rods to whole house surge protectors installed and maintained by utility providers.

We are happy to bring you this information, which we gathered in response to your calls and emails. I think you’ll find it useful. Let me know. Contact FLASH toll-free at 1-877-221-SAFE, or via email at flash@flash.org.
Surge Protection for Your Home

Dollar figures for lightning and surge losses vary widely, but the best figures available estimate at least $2 billion in electrical and electronic equipment damage yearly — making lightning and surge a leading cause of electrical equipment failure.

Surge damage occurs when the normal electrical circuit is suddenly exposed to a large dose of energy. Lightning is the most obvious surge source, but normal utility switching operations or downed power lines can generate surge too. Inside a building, surge may come from fax machines, copiers, air conditioners, elevators, or motor pumps. Inside or outside, only lightning strikes within one mile of a structure are likely to damage electronic or electrical equipment.

A surge protection device (SPD) is the best way to prevent or reduce damage caused from electrical surges and should be installed strategically outside and throughout the home. SPD’s are designed to redirect high-current surges to the ground and bypass equipment to limit the voltage that is impressed.

Two different zones of defense should be used to provide maximum protection:

The first zone is the electric meter, where the utility power comes into the home. A “whole house SPD” can be installed directly into the meter box to reduce externally generated surges, including indirect lightning strikes on the line. Installing a whole house SPD requires the service of a professional electrician, and many local utility departments will install and/or lease units for $5/month. A whole house SPD rating should be between 20,000 and 40,000 amps. It should use fire proof and explosion proof polycarbonate glass-fiber reinforced enclosure with a matching mounting connector.

The second zone of defense is inside the home because a SPD installed at the meter will not protect against internally generated surges. Appliances, such as microwaves, refrigerators, and garage door openers that have a power plug require a surge protection device that plugs into the wall. SPD’s for appliances inside the home should not be rated less than 5,000 amps. Further, appliances that use two services, such as a television set with a cable wire and an electrical cord, may require a combination SPD that allows both a cable and a power connection. Computers, answering machines, satellite dish components and VCRs may also require combination protection.

Inside the home, SPD’s should be installed as close to the equipment as possible for maximum protection. Cable lengths should be as short and straight as possible to minimize the resistive path of the circuit to the ground. Also, the surge protectors should be equipped with indicators that show if the circuit is grounded and operating properly.

While nothing can prevent damage from a direct lightning strike, SPD’s can protect your valuable electronics and appliances from the most common source of damage — surge.

Editor’s Note: See the table for information on surge protection rentals in your county.
As you will see, not every utility provider offers low-cost rental and installation of the units. Below are the results of our poll.

1. Location of Incident:
   - 40% Unreported
   - 27% Open fields & recreation areas (not golf)
   - 14% Under trees (not golf)
   - 8% Water-related
   - (boating, fishing, swimming...)
   - 5% Golf/golf under trees
   - 3% Heavy equipment and machinery-related
   - 2.4% Telephone-related
   - 0.7% Radio, transmitter & antenna-related

2. Gender of Victims = 84% male; 16% female
3. Months of most incidents =
   - June 21%, July 30%, Aug 22%
4. Days of week of most incidents = Sun, Wed, Sat.
5. Time of day of most incidents = 2 PM to 6 PM
6. No. of victims = One (91%), two or more (9%)
7. Deaths by State, Top Five = FL, MI, TX, NY, TN
8. Injuries by State, Top Five = FL, MI, PA, NC, NY
Reduce Your Risk of Lightning Injuries with These Tips

Before the storm, stay alert and listen carefully at the first sign of lightning or thunder. If the time delay between seeing the flash of lightning and hearing the thunderclap is less than 30 seconds, activate your emergency/evacuation plan and seek shelter. Lightning often hits before the rain begins, so don’t wait for the rain to start before leaving.

If you are outdoors, avoid water, high ground, and open spaces. Stay away from metal objects, including wires, fences and motors. Find shelter in a sizeable building or in a fully enclosed metal vehicle such as a car or truck with the windows completely shut. Don’t get under a small canopy, small picnic shelter or near trees. If you cannot take shelter indoors, crouch down with your feet together and place your hands over your ears to minimize hearing damage from the thunder. Stay at least 15 feet away from other people.

If you are indoors, avoid water and stay away from doors and windows. Do not use the telephone or headsets. Turn off, unplug and stay away from appliances, computers, power tools and television sets. Lightning may strike exterior electric and phone lines, inducing shocks to inside equipment. After the storm, don’t resume activities until at least thirty minutes after the last lightning strike or thunderclap. Call 911 immediately if anyone is injured and use First Aid procedures. Lightning victims do not carry an electrical charge, so it is safe to administer medical treatment.

The 30-30 Rule
If you hear thunder within 30 seconds of seeing a lightning strike, take shelter. Never resume activities until 30 minutes after a storm.

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FLASH is a non-profit, 501(C)3 charitable organization dedicated to disaster safety education.