



# **Orange County Public Schools**

## **Lightning Warning and Protection in Orange County Public Schools**

**March 5, 2010**



# Overview

- Provide lightning facts
- Review 30/30 Rule details
- Explain the Incident Response Model
- Present strategy to move forward





# Background

- Orange County Public Schools follows the 30/30 Rule when lightning occurs
- Fifty percent of lightning accidents and fatalities throughout the United States occurred within 30 minutes of the last sound of thunder in recorded incidents.





# Incidents

- Frangus ES Bus Student - 2005
- Oak Hill Portable
- Brookshire ES Crossing Guard Lightning Strike — August 2007
- Carolina Soccer Student Death — August 2007



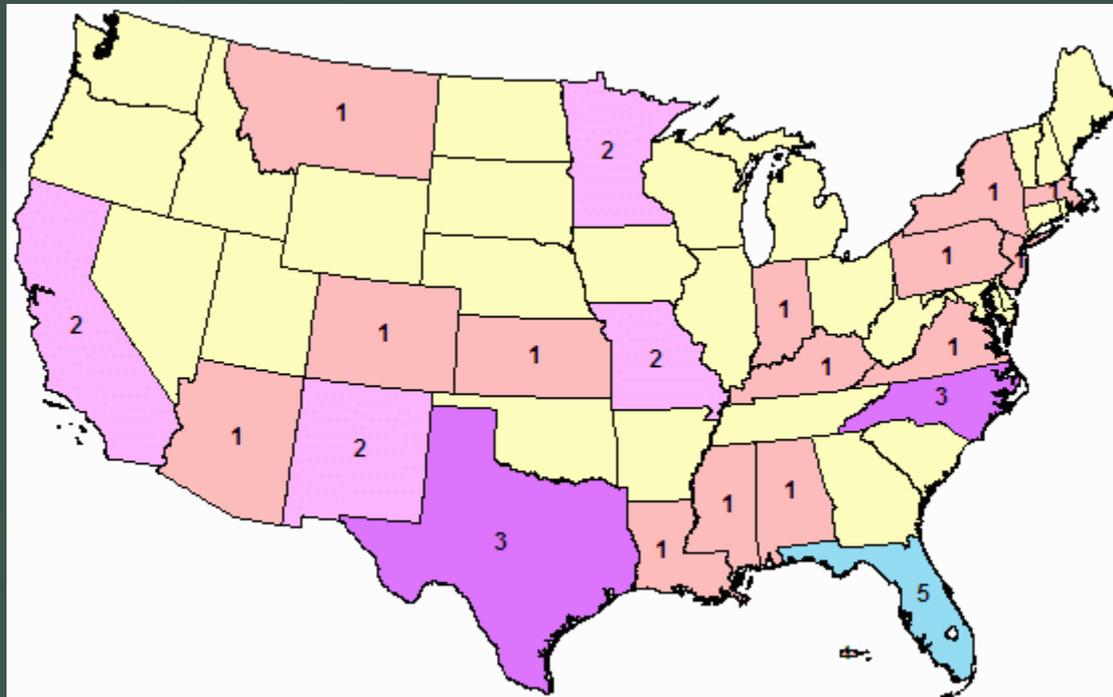
Game cancelled with 8:23 minutes remaining due to lightning— Labor Day Weekend, 2007





# FL Lightning Hazard

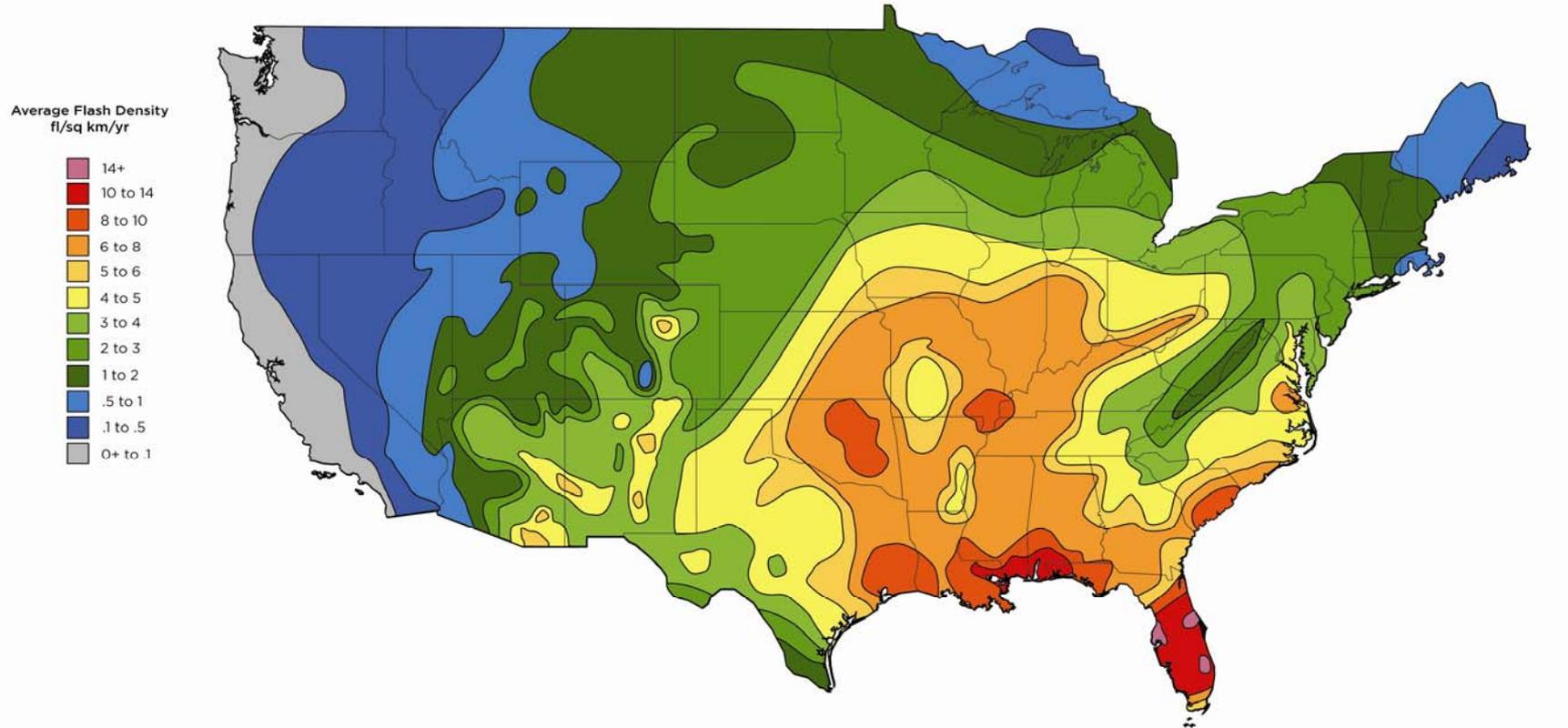
- Lightning is the #1 weather killer in Florida, killing more than all other weather sources combined
- Florida leads the U.S. in lightning related deaths and injuries.



Source: <http://www.lightningsafety.noaa.gov/fatalities.htm> (2009)

# Vaisala's National Lightning Detection Network (NLDN)

Cloud-to-Ground Lightning Incidence in the Continental U.S. (1997 - 2007)



**VAISALA**

Data courtesy of Vaisala ([strikenet@vaisala.com](mailto:strikenet@vaisala.com))

# USPLN Cloud-to-Ground Stroke Counts

## - 2005-2009 Average, State Rankings -



	<u>Strokes per Sq Mi</u>	<u>Strokes per Year</u>
<b>Florida</b>	33.1	2,173,387
<b>Oklahoma</b>	32.7	2,283,502
<b>Arkansas</b>	29.2	1,555,400
<b>Missouri</b>	27.3	1,900,651
<b>Indiana</b>	27.0	982,972
<b>Kansas</b>	27.0	2,222,636
<b>Louisiana</b>	26.6	1,378,237
<b>Illinois</b>	25.3	1,467,327
<b>Iowa</b>	25.2	1,419,402
<b>Mississippi</b>	24.9	1,204,773
<b>Alabama</b>	24.6	1,287,605
<b>Kentucky</b>	22.7	916,694
<b>Georgia</b>	22.1	1,311,899
<b>Tennessee</b>	21.5	905,929
<b>Texas</b>	21.1	5,664,515
<b>South Carolina</b>	19.8	634,446
<b>New Mexico</b>	18.4	2,242,106
<b>District of Columbia</b>	17.7	1,208
<b>Ohio</b>	16.1	721,132
<b>Nebraska</b>	15.9	1,232,425
<b>West Virginia</b>	14.9	360,235
<b>Arizona</b>	13.9	1,579,866
<b>North Carolina</b>	13.2	712,304
<b>Colorado</b>	13.1	1,360,893
<b>Delaware</b>	11.9	23,322
<b>Virginia</b>	11.5	493,558

Data provided by the US Precision Lightning Network ([www.uspln.com](http://www.uspln.com))



# 30/30 Rule

When those supervising children see lightning and hear thunder within thirty seconds of the strike the danger of another strike still exists.

Protective actions are taken and communicated.

Protective action continues until 30 minutes have passed since the last lightning and thunder.



# OCPS 30/30 Rule Implementation

- **Nationally Recognized Best Practice**
- **Not New to District**
- **Safety vs. Convenience**
- **Routinely Communicated**
- **National Collegiate Athletic Association (NCAA) Sports Medicine requirement**
- **Endorsed by the National Weather Service, American Meteorological Society and the National Weather Association.**





# NCAA Sports Medicine

- Designate a lightning monitor and plan where to shelter, how long it takes to get there and procedures to give the all clear
- Monitor weather reports each day before sports events or practice
- Monitor NOAA watches and warnings
- Follow the 30/30 Rule



# Partnerships

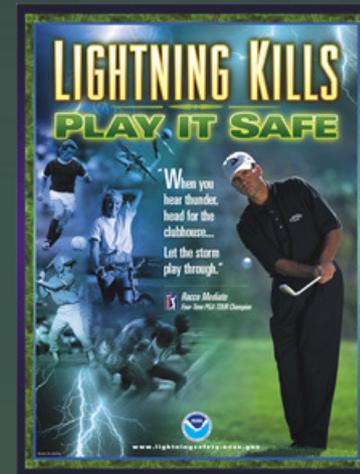
If I have seen a little further  
it is by standing on the  
shoulders of giants.

- *Isaac Newton, 1676*



# National Weather Service

- Provide technical expertise.
- Issue outlooks, forecasts, watches and warnings.
- Distribute pamphlets and posters to help you maximize impact.
- Are truly “Giants.” Stand on their shoulders!





# American Meteorological Society

- Obtain a forecast before outdoor activities. Schedule outdoor activities when safe.
- When outdoors, identify and stay within range of a proper shelter.
- Use the 30-30 Rule.
- Enumerates safest procedures if you cannot get to shelter.
- Describes signs of imminent strike and First Aid recommendations.



# National Weather Association

- Lightning casualties are generally preventable. NWA members are encouraged to proactively educate the public on lightning threats and safety.
- Refers members to [www.lightningsafety.noaa.gov](http://www.lightningsafety.noaa.gov) for more detailed information.



“Orange County Public Schools is one of the few school districts in the nation that has a comprehensive Lightning Protection Policy in place for the safety of the students, staff, and volunteers.”

John Jensenius  
National Spokesperson  
NOAA & National Weather Service  
August 29, 2007



# District's Response Model

## All Emergencies

- One-call System (407) 317-3333
- Incident Command System
  - School team (5-10) minutes
  - Nature of the emergency  
(Incident Commander determined)
  - First response support/direction



# Collaboration Model All Emergencies



Law Enforcement.

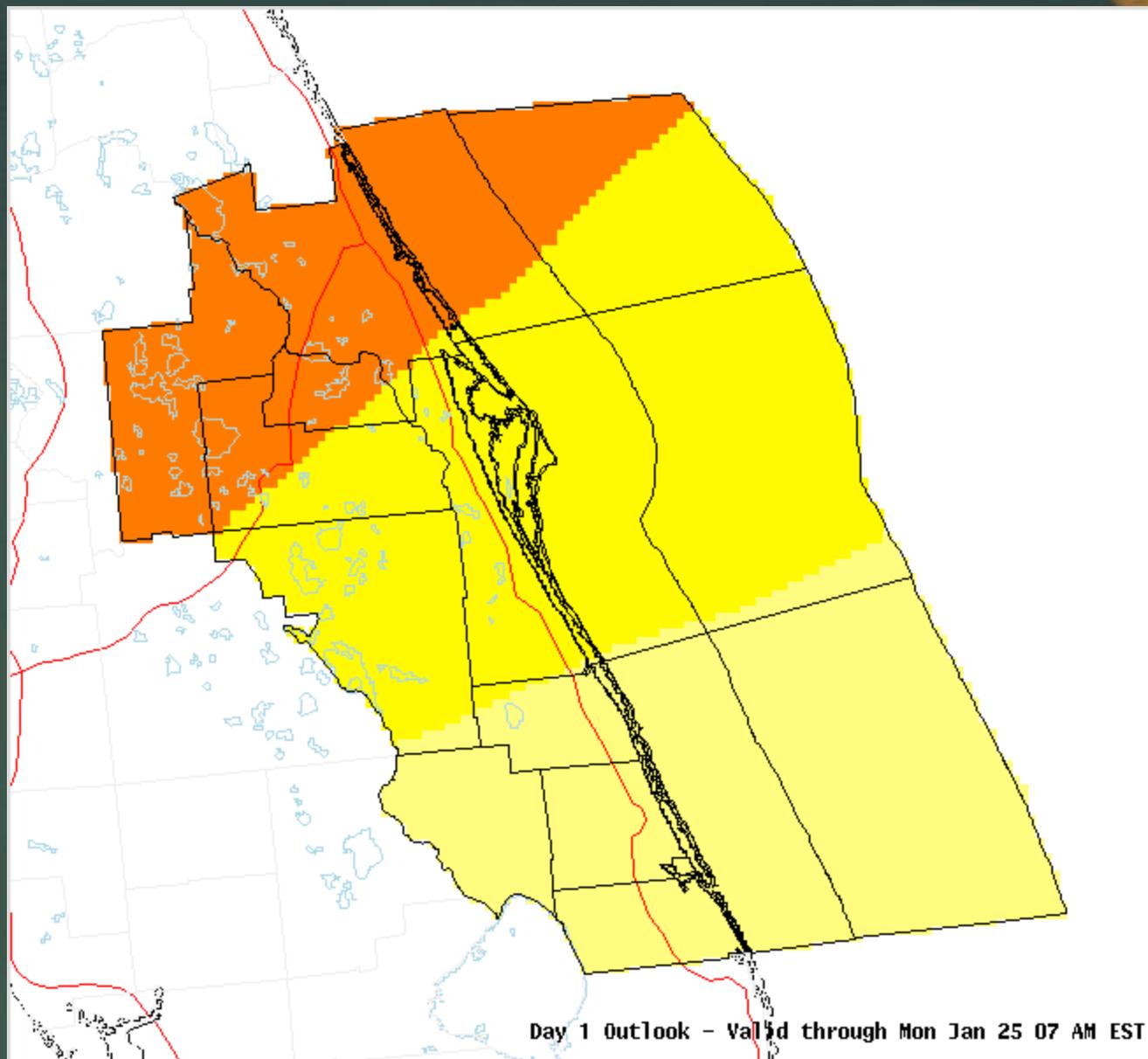


OCPS Security



Safe School Plans

# NOAA Data Sources

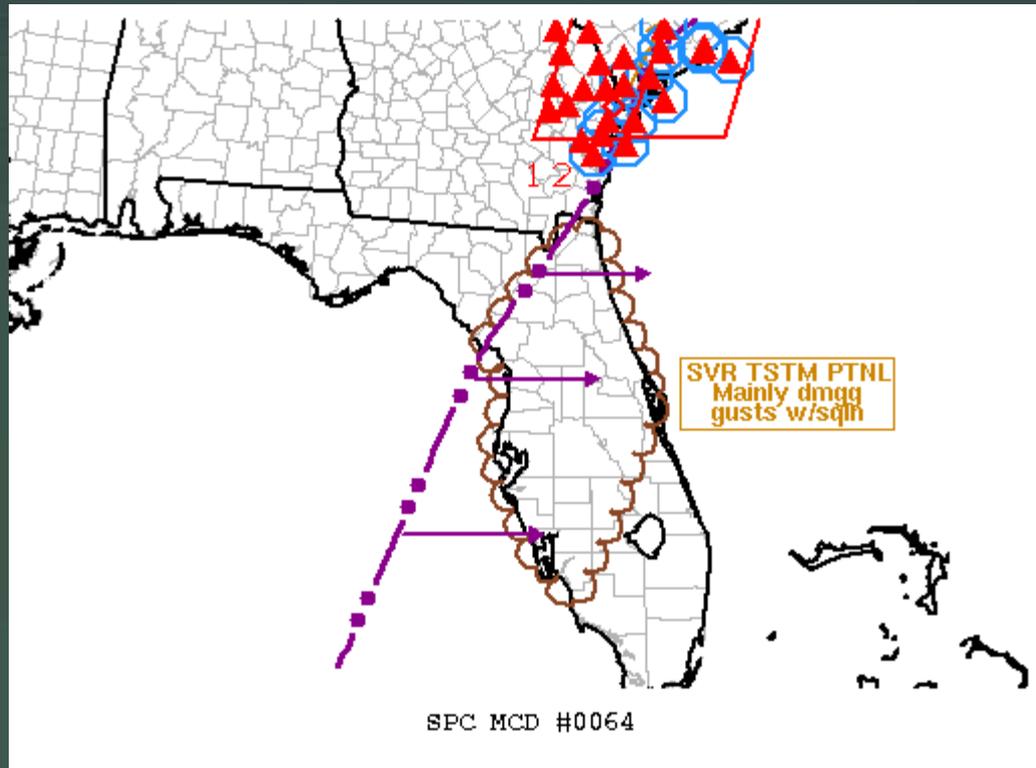


Lightning Threat - NWS Melbourne





# Other Guidance





Local Government Partner





# Emergency Preparedness Moving Forward

To maintain safety and accountability the district will:

- Implement the 30/30 Rule
- Collaborate with OCPS Security and Law Enforcement/Fire Rescue Responders
- Allow parents to sign out children
- Train and utilize the Incident Command System
- Conduct Table Top exercises
- Revise Emergency Procedures Manual
- Schools communicate to parents severe weather dismissal procedures



## What does dismissal look like when 30/30 is activated?

- Thunderclap exists at dismissal
- Principal initiates 30/30 Rule
- Principal calls 407-317-3333
- Security responds and assists (emergency actions if needed—food, generator, transportation) and contacts local law enforcement/fire rescue services if needed
- Parents or those previously authorized can sign out children
- Parents who refuse to sign but want their child to be released, school documents refusal and releases student to parent



# Questions



# Thanks for Participating!



Safety, Security &  
Environmental Services

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