

# Earthquakes and Hurricanes

The Emergency Management  
Response to Regional Incidents



# Types of Incidents in our Region

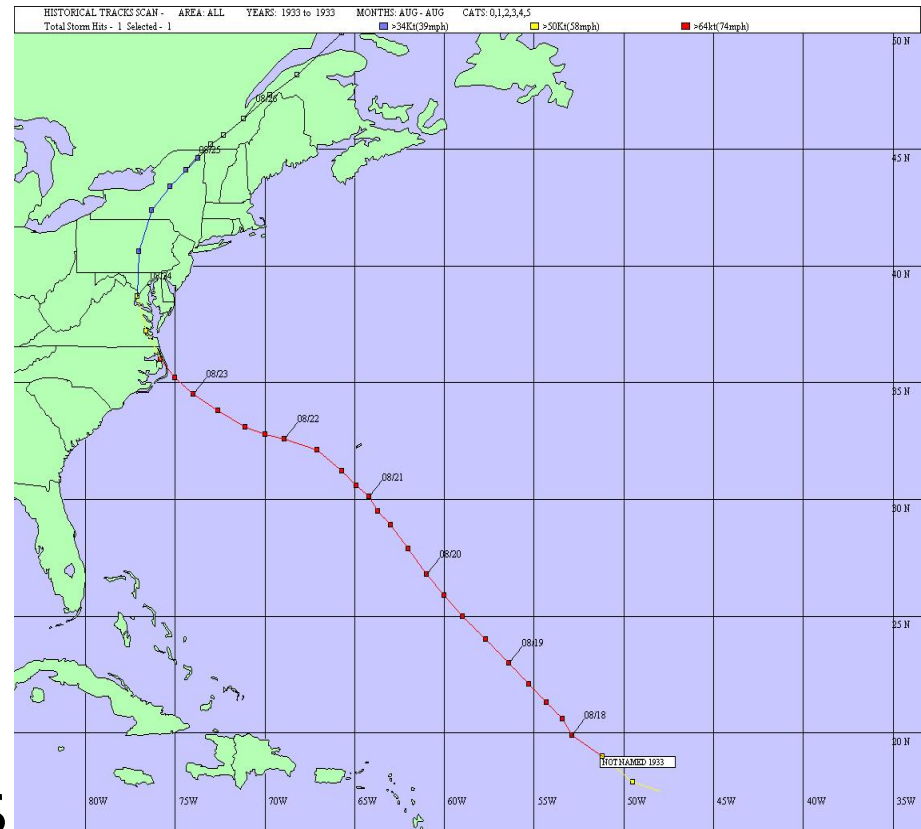
- ▶ Severe Winter Storms
  - ▶ Severe Summer Storms
  - ▶ Flooding
  - ▶ Hurricanes
  - ▶ Earthquakes
  - ▶ Terrorism
  - ▶ Civil Disturbances
  - ▶ Major Celebrations
  - ▶ Nationally Significant Events
- 

# Earthquake History

- ▶ August 23, 2011 – at 5.8 it was the biggest quake in this region in 114 years
- ▶ July 17, 2010 – 3.6 near Rockville, MD
- ▶ 2003 – 4.5 near Richmond, VA
- ▶ 1997 – 2.5 near Manassas, VA
- ▶ 1897 – 5.9 in Giles County, VA
- ▶ 1758 – first recorded quake in the region, near Annapolis – lasted 30 seconds

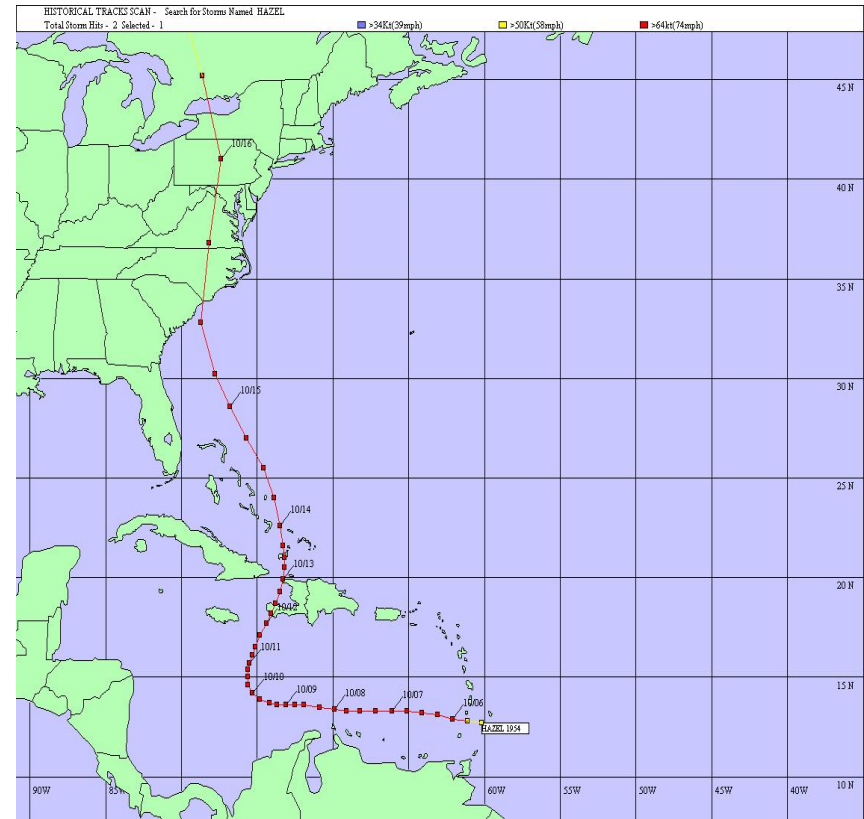
# 1933: Chesapeake Bay Hurricane

- ▶ Landfall near Virginia Beach
- ▶ Storm surge reached 11 feet in Washington, DC
- ▶ Highest ever recorded storm surge
- ▶ 18 deaths
- ▶ Millions in damages



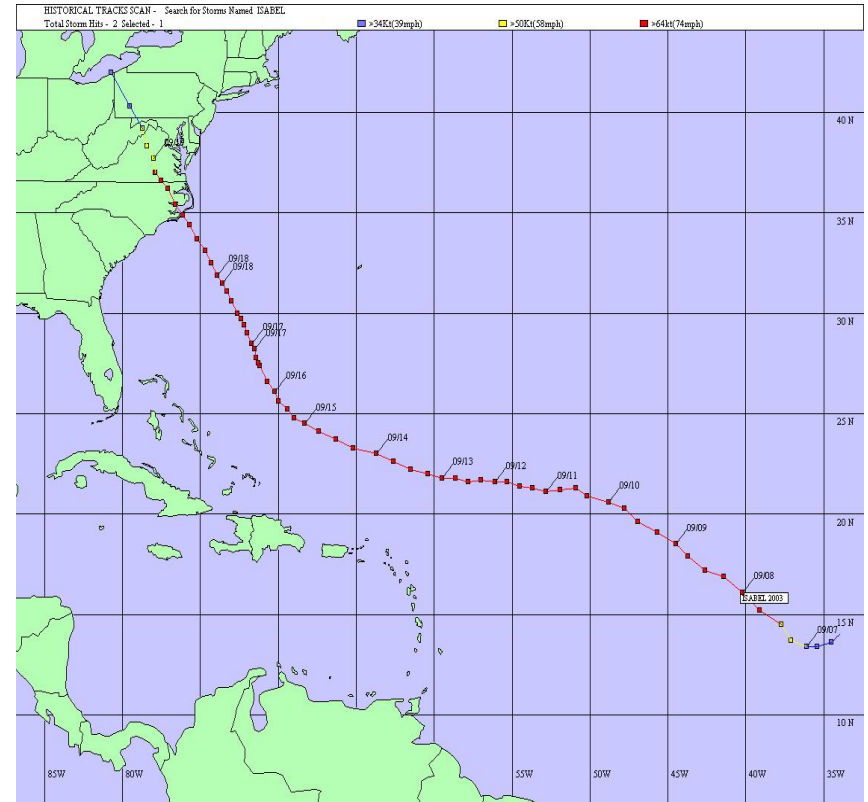
# 1954: Hurricane Hazel

- ▶ Hurricane force winds to Washington, DC
- ▶ Winds ranged from 78 to 98 mph at DCA
- ▶ 3 deaths in DC, 13 in VA, 6 in MD



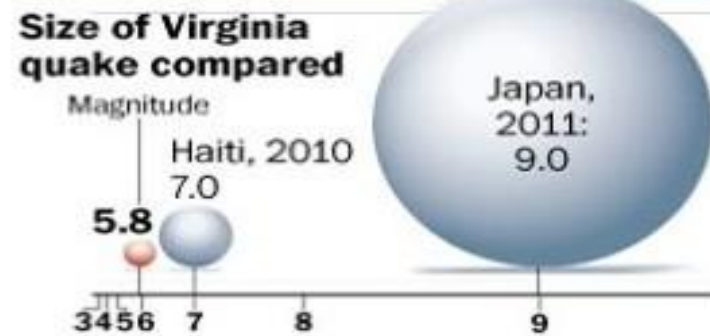
# 2003: Hurricane Isabel

- ▶ Storm surge of 6–8 feet
- ▶ Power outages plagued the region for over a week
- ▶ Major flooding in Alexandria and Baltimore

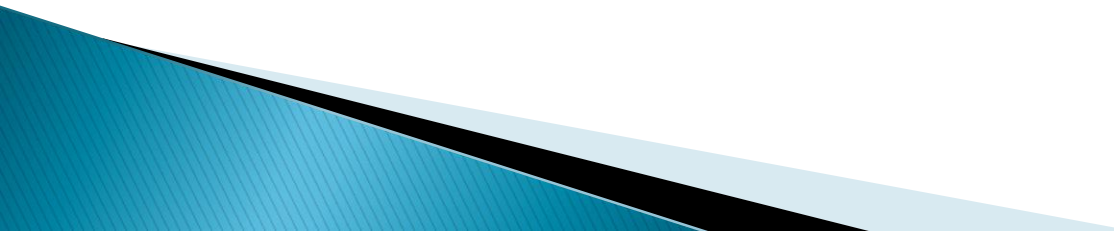


# Earthquake: August 23, 2011

- ▶ Occurred at 1:51 pm
- ▶ By 1:52 pm WAWAS first mode of regional communication – people looking for confirmation
- ▶ By 3:00 pm – conference calls, EOCs opening, damage assessments fully underway



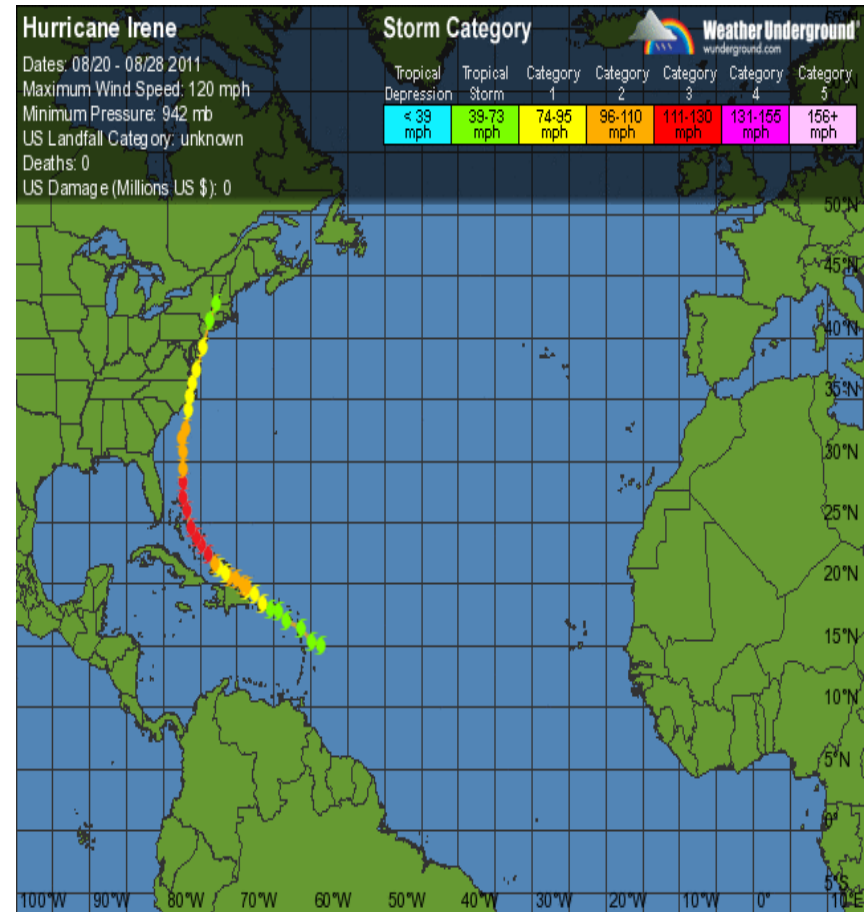
# Damages / Problems

- ▶ Minor cracks
  - ▶ Some structural damage
  - ▶ Cell phone system quickly overloaded
  - ▶ Prince George's County: Opened a shelter
  - ▶ Fairfax County: Two apartment buildings closed
  - ▶ EOC's activated: Montgomery, Prince George's, District, Arlington, Fairfax
- 



# Hurricane Irene

- ▶ Trees down / power outages
- ▶ Very minor flooding
- ▶ Most power outages concentrated in Prince George's
- ▶ Much worse in counties bordering the Bay and eastward
- ▶ Peak regional winds: gust of 66 in Gaithersburg, MD



# Alerting the Public

- ▶ **Between Emergency Managers**
  - Formal and informal conference calls
  - WAWAS / NAWAS
- ▶ **Public Notification Systems**
  - Montgomery
  - Fairfax
  - District
  - Arlington

# Alerting the Public (Cont'd)

## ▶ Earthquake

- Initial: situational awareness
- Subsequent: information on recovery and what to do post earthquake

## ▶ Hurricane

- Initial: what to expect and when
- Subsequent: What to do to prepare and what to do afterwards

# Lessons Learned

## ▶ Earthquake

- Expect the unexpected
- Inform public of what to do to stay safe
- Train first responders in earthquake response
- Include earthquakes in hazard mitigation plans

## ▶ Hurricane Irene

- Examine historical data of past storms
- Increase use of regional information sharing tools (WebEOC, CapWIN)

# Any Questions?

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