

### 2015 VA Public Safety Communications Conference

#### NWS and Public Safety Answering Point (PSAP) Interaction – Why It's Important

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## What is the NWS?

- The National Weather Service (NWS) is:
  - A Federal Government Agency
  - Part of the Dept. of Commerce
  - Nat'l Oceanic and Atmospheric Admin. (NOAA) is our Parent Agency
  - A 4700 Employee Agency Dedicated to Saving Lives and Protecting Property
    - WFO Wakefield is 1 of 122 local offices nationwide (including Puerto Rico & Guam)





### Severe Weather Safety -Watches vs. Warnings

- In all instances, WARNINGS are more important than watches
  - WATCH ALERT product Conditions are favorable for the event to occur. Does not mean event WILL occur!

**MARNING -** *ACTION* product – *Event imminent, occurring and heading your way, or high likelihood of occurring*. <u>*Take*</u> *appropriate action* to protect life & property!



# What is the Definition of a *Severe Thunderstorm*?

## **Severe Thunderstorms**

- Definition Produce one or more of the following:
  - Hail ≥ 1 Inch in Diameter (size of a quarter)
    - Sustained Winds or Gusts ≥ 58 mph (50 knots)
    - **Produces Wind Damage Trees Down, Power Lines Down, Structural Damage, etc.**
    - **Produces a Tornado**



### **NWS Mission**



"The National Weather Service <sup>™</sup> (NWS) provides weather, hydrologic, and climate forecasts and warnings for the United States, its territories, adjacent waters and ocean areas, for the protection of life and property and the enhancement of the national economy. NWS data and products form a national information database and infrastructure which can be used by other governmental agencies, the private sector, the public, and the global community."





# Weather Information for the 911 Center/Public Safety **Answering Point** (PSAP)



Reecom'

### **NOAA Weather Radio**

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#### •24/7 Weather Broadcast

#### •IMMEDIATE broadcast of Watches & Warnings

•S.A.M.E./Public Alert Radios are programmable to local areas

> tal Weather/All-Bazard Alert Monitor With Specific Aren Message Encoder

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#### http://weather.gov/akq/docs/MidAtlanticNWRandFIPS.pdf







### **NWS / 911 Center Interaction**

- Virginia EOC (VEOC) Notified of many Watches/Warnings via NAWAS
  - Prior to mid-2012 Hard copy received @VEOC and re-transmitted to local 911 centers via VCIN and/or SWAN
    - **Currently** 911 center/ECCs receive watches/warnings via iNWS or SWAN
  - For Tornado, Severe Thunderstorm and Flash Flood WARNINGS:
    - Some NWS offices notify 911/Communications Centers via Telephone (redundancy)





## **iNWS** Notifications



#### iNWS – cell phone/e-mail warning notification

- Available to EM (public and private), and all other first responders, government, military
- NOT a Public service!!!

Go to http://inws.wrh.noaa.gov/ click the Register link at the top right of the page



INWS - Interactive NWS National Weather Service Mobile Decision Support Services (MDSS)

#### **INWS MOBILE ALERTING**

My Alerts Neves FAO About

Receive customized text message and e-mail alerts for National Weather Service products that you care about.



#### Welcome.

InteractiveNWS (INWS) is the home of new mobile and desktop innovations of the National Weather Service. This application suite allows NWS partners to receive National Weather Service products in new and innovative ways, such as text messaging and mobile-enabled webpages. INWS strives to fulfill our mission of protecting life and property by using new technology to reach out to our customers.

#### Recent News.

New INVS Terms of Use Are In Effect Test Message Alerts Unlocked for All INVS Users New Version of the INVS Web Page Released All Advisories, Watches and Varning's Restored to INVS Test Message Alerts INVS Test Message Alerts

INWS is an experimental service intended for NWS core partners, including emergency managers, community leaders and other vernment agencies only. You are encouraged to complete a <u>hist surver</u> on JUWS. See the JUWS <u>Service Deconstant Document</u> for mo information.

> DOC - NOAA - National Weather Service - INVE Version 4 - Switch to Huide Version receiv Policy | Terms at Use | POLA | Information Quality | Dischamer | Discoury | Secting While Driving

Home My Alerts News	oduc	ts Ava	ailable via iNWS			
Alerts Home Account Settings	WS My Alerts Set Alert Area Options Select which alerts you would like to recieve for your alert area and name your alert area. For examples of what products are in what categories see FAQ.					
iNWS Alert Areas Add New Alert Area Home Bay, Oyster, Cherrystone Hydrology Alert Points Add New Hydro Point	Feature Name: Alert Categories: Create Alert Are Back	Severe Weather  Winter Weather Hydrology Fire Weather Marine Weather Coastal Hazards Tropical Weather Aviation Non-Precipitation Civil Emergency Other	When creating an iNWS Alerts alert area, what types of NWS products fall into each weather category? Severe - Severe Weather, Tornado (SVR, SVS, TOR, WCN) Winter Weather - Blizzard, Snow, Winter Storm, Winter Weather, Ice Storm, Avalanche (WSW, AVA, AVW, SAB) Hydrology - Flash Flood, Flood, Areal Flood (FFA, FFS, FFW, FLS, FLW) Fire Weather - Red Flag, Rangeland Fire Danger (RFW, RFD) Marine Weather - Lake Wind, Marine, Small Craft, Hazardous Seas (CWF, MWS, NSH, GLF, SMW, OFF, MWW) Coastal Hazards - Tsunami, Costal Flooding, High Surf (CFW, LSH, TSU) Tropical Weather - Hurricane, Tropical Storm, Hurricane Winds (HLS, TCM, TCP, TCV) Aviation - Aviation Weather Warnings (AWW) Non-Precipitation - High Wind, Fog, Frost, Freeze, Dust (NPW, ASA) Civil Emergency - 911 Outage, Evacuation, HazMat, Nuclear, Volcano (CAE, CDQ, CEM, EQW, EVI, FRW, HMW, LAE, etc.) Other - Special Weather Statement (SPS)			
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#### Wireless Emergency Alerts (WEA)

- Began in 2012
- Alert You "Where You Are"
  - Based on Cell Tower Coverage

Limited to most newer (2012 on) cell/smart phones

More Info: ctia.org/wea



Warning Type	WEA Message			
Tsunami Warning*	Tsunami danger on the coast. Go to high ground or move inland. Listen to local news. –NWS			
Tornado Warning	Tornado Warning in this area til hh:mm tzT. Take shelter now. Check local media. –NWS			
Extreme Wind Warning	Extreme Wind Warning this area til hh:mm tzT ddd. Take shelter. – NWS			
Hurricane Warning	Hurricane Warning this area til hh:mm tzT ddd. Check local media and authoritiesNWS			
Typhoon Warning	Typhoon Warning this area til hh:mm tzT ddd. Check local media and authoritiesNWS			
Flash Flood Warning	Flash Flood Warning this area til hh:mm tzT. Avoid flooded areas. Check local mediaNWS			
Dust Storm Warning	Dust Storm Warning in this area til hh:mm tzT ddd. Avoid travel. Check local mediaNWS			



## **NWS / 911 Center Interaction**

- What 911/Communications Centers Can Get From NWS
  - Updated Weather Information 24/7
  - In HAZMAT Situations Call NWS for Updated Forecasts, Radar Information and Weather Observations – Dispersion Concerns
    - Internet graphical forecasts can be useful (wind info)
    - Also have capability to run HYSPLIT dispersion model for major events



## **NWS / 911 Center Interaction**

 What NWS Would Like From 911 Centers/ECCs During Weather Events

 Ask Field Personnel (Police, Fire, EMS, Public Works, etc.) for Reports of Hail, Wind Damage, Tornadoes, Flooding, Snow, Ice, etc.

Relay Severe Weather Reports to NWS (phone, e-mail), or Be Ready for Our Follow-up Calls

Importance of Storm Reports Dispatchers Can Make a Difference

- Dispatchers play a vital role with the flow of severe weather information through the 911 center
- Dispatchers are often the first to hear about severe weather
- Doppler radar CANNOT see below the cloud base... reports are just as important as the radar







Importance of Storm Reports contd.

Verification of warnings – NWS performance

Warning Decision Making Process

Quantifying magnitude of severe weather

Hail Size, Wind gusts, rainfall/snowfall amounts, etc.

Assessment of damage

Wind, Tornado, Flood, Hurricane/Storm Surge

Climatological Database (Storm Data)

#### How You Help and Have Helped

Thank You!

FLASH FLOOD STATEMENT NATIONAL WEATHER SERVICE BALTIMORE MD/WASHINGTON DC 1253 AM EDT FRI JUL 12 2013

... A FLASH FLOOD WARNING REMAINS IN EFFECT UNTIL 145 AM EDT FOR SOUTHWESTERN PAGE...CITY OF HARRISONBURG AND CENTRAL ROCKINGHAM COUNTIES...

AT 1246 AM EDT...NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATED VERY HEAVY RAIN CAPABLE OF PRODUCING FLASH FLOODING. RADAR ESTIMATES THAT UP TO 4 INCHES OF RAIN HAVE ALREADY FALLEN ACROSS PORTIONS OF THE WARNED AREA. ADDITIONAL RAINFALL AMOUNTS OF UP TO 1 INCH CAN BE EXPECTED.

LOCATIONS IN THE WARNING INCLUDE BUT ARE NOT LIMITED TO BRIDGEWATER...BROADWAY...DALE ENTERPRISE AND SHENANDOAH.

AT 1246 AM EDT...THE ROCKINGHAM COUNTY 911 CENTER REPORTED NUMEROUS ROADS CLOSED. WATER RESCUES WERE ALSO REPORTED NEAR BEAVER CREEK AND SILVER CREEK ROADS...AND ALSO NEAR THE 8700 BLOCK OF WAGGYS CREEK ROAD.

BE ESPECIALLY CAUTIOUS AT NIGHT WHEN IT IS HARDER TO RECOGNIZE THE DANGERS OF FLOODING. ACT QUICKLY IF FLASH FLOODING IS OBSERVED. MOVE TO HIGHER GROUND TO ESCAPE FLOOD WATERS. DO NOT STAY IN AREAS SUBJECT TO FLOODING WHEN WATER BEGINS RISING.

LAT...LON 3848 7914 3866 7872 3862 7866 3850 7853 3835 7897

PRELIMINARY LOCAL STORM REPORT NATIONAL WEATHER SERVICE BLACKSBURG VA 839 PM EDT MON JUL 14 2014							
TIME DATE	EVENT MAG REMARKS	CITY LOCATION COUNTY LOCATION	st	LAT.LON SOURCE			
0600 PM 07/14/2014	TSTM WND DMG	5 W DILLWYN BUCKINGHAM	VA	37.55N 78.56W 911 CALL CENTER			
	ONE TREE DOWN AT	THE BUCKINGHAM COUR	THOU	SE			
0600 PM 07/14/2014	TSTM WND DMG	4 WSW DILLWYN BUCKINGHAM	VA	37.53N 78.53W 911 CALL CENTER			
	TWO TREES DOWN AN	LONG OAK HILL ROAD					
0600 PM 07/14/2014	TSTM WND DMG	4 SW DILLWYN BUCKINGHAM	VA	37.50N 78.52W 911 CALL CENTER			
	TWO TREES DOWN ON ANDERSONVILLE ROAD NEAR THE INTERSECTION WITH OAK HILL ROAD						
0604 PM 07/14/2014	TSTM WND DMG	3 W DILLWYN BUCKINGHAM	VA	37.55N 78.52W 911 CALL CENTER			
	ONE TREE DOWN ON	LEE WAYSIDE ROAD					
0608 PM 07/14/2014	TSTM WND DMG	5 SSE GOLD HILL BUCKINGHAM	VA	37.54N 78.35W 911 CALL CENTER			
	ONE TREE DOWN AT AND BELMONT LANE	THE INTERSECTION OF	BEI	LE BRANCH ROAD			
0630 PM 07/14/2014	TSTM WND DMG	3 NE GOLD HILL BUCKINGHAM	VA	37.65N 78.33W 911 CALL CENTER			
	ONE TREE DOWN ON	CHAPEL ROAD					

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### Trust in NWS Warnings is Essential

- We both share the same goal to save lives and protect property!
- The more accurate/reliable our warnings, the more likely the public will take the warning as a life threatening situation.
- This includes the real-time and poststorm reports you provide
- Thank you for all your help!



## Making Good Severe Weather Reports

**Answer 3 Basic Questions:** 

1). What Happened? Type and Magnitude of the Event

2). When Did the Event Happen? Also, event duration.

3). Where Did the Event Happen? Location Referenced to City/Town, Portion of County, Major Intersection

a). Lat/Lon info can be used.



## Making Good Severe Weather Reports

#### What Should Be Reported?

#### Severe Weather Reporting Criteria

#### Thunderstorms and Hurricanes

Hail - Pea Size or Larger Winds - 50 mph or higher - Trees, Branches, Power Lines Down - Any Structural Damage Tornadoes Funnel Clouds



Waterspouts Flooding - Ditches, Streets, Streams & Rivers. ALSO, Coastal Flooding from High Tides



#### Winter Weather

Snow - Depth of 2" or more, or falling at a rate of 1" per hour or more lcing - Any Ice Accumulation on Roads, Trees, etc.

#### Also, Lightning deaths/injuries and damage

John PartipliorThe Tennessean

### **Providing Reports to NWS**

NWS Wakefield: Phone – 757-899-2415 E-mail: akq-report@noaa.gov NWS Blacksburg: Phone - 800-221-2856 E-mail: rnk.skywarn@noaa.gov

NWS Sterling: Phone – 703-996-2201 E-mail: lwx-report@noaa.gov NWS Charleston WV: Phone - 304-746-0180 E-mail: rlx.storm@noaa.gov

NWS Morristown TN: Phone - 800-697-0075 http://www.srh.noaa.gov/StormReport/SubmitReport.php?site=mrx





### **Good Post-Storm Report**

" Hi, this is Carol, spotter ID is VNOT062. I am 4 miles south of Crewe in Nottoway County, VA on route 49. I just drove past a swath of large trees down, and numerous branches were on the ground. The trees were lying in one direction; so it looks to be straight line wind damage."



# In Summary



- The NWS and 911 Centers Have Similar Missions
- You Provide Critical Information During and After Severe Weather Events
- There are Several Timely Ways you can Receive info from NWS
  - Please Keep Providing Us with Reports. We Need You!!



### 2014 APCO Conference Presentation

# Are There Any Questions??

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