



Virtual Operations Support Teams: *Using Social Media to Promote Situational Awareness*

Presenter:
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City of Altus (OK) EMA VOST

What is Virtual Operations Support?

Virtual Operations Support (VOS)

- uses new communication technologies and social media tools...
- so that a team of ***trusted agents*** can lend support via the internet to those on-site who may otherwise be overwhelmed by the volume of data generated during a disaster



Virtual Operations Support Teams & Groups (VOST/VOSG)

- **VOS Teams (VOST)** are activated to perform specific functions in support of affected organizations & jurisdictions. Each VOST has a Team Leader that reports directly to the affected organization/jurisdiction.
- As additional VOSTs are established, a **VOS Group (VOSG)** may be established to coordinate the work of the VOSTs to maintain an effective span of control. The VOSG has a Group Supervisor that reports to the affected organization/jurisdiction. The VOST Leaders report to the Group Supervisor.



A VOST gathers information from many sources & by many means

- Text messages (SMS)
- Web form reporting
(PC/Laptop/Tablet/Smartphone)
- Email (PC/Laptop/Tablet/Smartphone)
- Social Media (Twitter, Facebook, etc)
- Amateur Radio (Skywarn & ARES nets)
- Telephone / Mobile / VOIP
- Broadcast media
- NWS sources
- Official EM, governmental & VOAD sources



VOST & Situational Awareness

Situational awareness

- being aware of what is happening in the vicinity
- to understand how information, events, and one's own actions will impact goals and objectives,
- both immediately and in the near future





Connie White @conniemwhite

“@AlabamaEMA You should be tweeting out some information right now. **Where are you?**”

9:43 AM - 2 Mar 12 via TweetDeck



VOST & Situational Awareness

Example:

NWS OUN issues a Hazardous Weather Outlook, with a forecast of a severe weather outbreak 12-18 hours in near term: supercell thunderstorms: high winds, large hail, tornadoes, locally heavy rain & possible localized flooding



VOST & Situational Awareness

Q. How is this information disseminated & by whom is it received?

Q. What are hindrances / delaying factors to receiving this information?



VOST & Situational Awareness

WFUS54 KOUN 072014
TOROUN
OKC055-057-075-072100-
/O.NEW.KOUN.TO.W.0078.111107T2014Z-111107T2100Z/

BULLETIN - EAS ACTIVATION REQUESTED
TORNADO WARNING
NATIONAL WEATHER SERVICE NORMAN OK
214 PM CST MON NOV 7 2011

THE NATIONAL WEATHER SERVICE IN NORMAN HAS ISSUED A

* TORNADO WARNING FOR...
GREER COUNTY IN SOUTHWEST OKLAHOMA...
NORTHERN HARMON COUNTY IN SOUTHWEST OKLAHOMA...
EXTREME NORTHWESTERN KIOWA COUNTY IN SOUTHWEST OKLAHOMA...

* UNTIL 300 PM CST

* AT 214 PM CST...NATIONAL WEATHER SERVICE RADAR INDICATED A SEVERE
THUNDERSTORM CAPABLE OF PRODUCING A TORNADO 6 MILES SOUTH OF
VINSON...MOVING NORTHEAST AT 35 MPH.

* LOCATIONS IN THE WARNING INCLUDE BRINKMAN...MCKNIGHT...VINSON AND
WILLOW.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

IN ADDITION TO A TORNADO THREAT... THIS STORM LIKELY CONTAINS
DAMAGING HAIL TO THE SIZE OF BASEBALLS.

A TORNADO MAY FORM AT ANYTIME. TAKE COVER NOW. ABANDON MOBILE HOMES
AND VEHICLES. IF POSSIBLE... MOVE TO A BASEMENT OR STORM SHELTER.
OTHERWISE... MOVE TO AN INTERIOR ROOM OR HALLWAY ON THE LOWEST FLOOR.
STAY AWAY FROM WINDOWS.

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LAT...LON 3511 9969 3511 9944 3512 9932 3510 9929
3469 9982 3482 9998
TIME...MOT...LOC 2014Z 223DEG 31KT 3483 9982

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@OKTwister Tweets / Re-Tweets

11/7/11

oktwister: Fort Cobb OK has sounded their sirens #okwx #okdemwx

oktwister: Carnegie OK sounding their sirens at this time #okwx #demx

oktwister: HWY 19 & HWY 58 TOR cyclic with rotation N of 13 mi curve among wind turbines #okwx

oktwister: RT @JoleenChaney: Tornado on ground in SE corner of Kiowa County west of Boone headed to Caddo Co/Anadarko to Grady Co/Chickasha area.

oktwister: RT @seanashwx: @wxbrad WHOA! <750m LCLs are allowing this meso to nearly sit on the ground near Alden! <http://t.co/BNd84xIQ> #okwx #t ...

oktwister: RT @HumanityRoad: #tornado "Warning" indicates imminent danger to life and property <http://t.co/YWLCzI37> V @redcross #hmrdr #okwx

oktwister: RT @kfor: CORRECTION: Severe storms to hit metro after dark.. Stay #4warned here: <http://t.co/6p1YODxz>

oktwister: TOR small elephant trunk funnel 5 SW of HWY 58 & Hwy 19 #okwx

oktwister: RT @iembot_oun: #OUN issues Severe Thunderstorm Warning for Kay [OK] till 5:00 PM CST <http://t.co/4owLFgZd>

oktwister: RT @SeverePlains: Cyclic tornadic storm over Wichita Mtns will need to be monitored, current trajectory takes it between El Reno & Oklah ...

oktwister: RT @iembot_oun: #OUN issues Tornado Warning for Caddo, Comanche, Kiowa [OK] till 5:00 PM CST <http://t.co/1fD4uasg> #okwx #demx

oktwister: RT @iembot_oun: #OUN 10 S Sayre [Beckham Co, OK] emergency mngr reports HAIL of golf ball size (E1.75 INCH) at 04:12 PM CST <http://t.co/> ...

oktwister: Rain wrapped TOR on ground approx 10 mi NW Meers OK. #okwx

oktwister: Submit storm reports to NWS #OUN <http://t.co/6QeX68bl> #okwx

oktwister: When TOR supercell crosses out of WMWR near Saddle Mountain, will pass 'tween Apache & Fort Cobb #okwx

oktwister: RT @themahler: !!!!! Multi-vortex tornado near Snyder, OK. #okwx <http://t.co/UgWYiSlv>

oktwister: RT @iembot_oun: #OUN expires Tornado Warning for Kiowa [OK] till 4:15 PM CST <http://t.co/j3D4O1nj>



VOST & Situational Awareness

"Social media tools offer distinct advantages for alerting the public of severe weather events...we can now tweet or post on Facebook and Google+: radar loops, storm coordinates, and live streaming video of the tornado's path—as we see it unfold. This was not possible, even just a few years ago...."



VOST & Situational Awareness

"...This affords a greater chance to save lives by alerting people that may not be tuned into local weather reports when the severe weather event is bearing down on their community." >

-- John Serpa, "Saving Lives With Social Media"

Oklahoma Crisis Mappers VOST

The Oklahoma Crisis Mappers VOST (OCMVOST) is a volunteer-staffed VOST working under the direction of the City of Altus (OK) Emergency Management Agency. The OCMVOST provides

- **operational intelligence input for Emergency Managers / Incident Commanders from news media, social media, amateur radio, web pages, text messages & email.**
- **public-facing social media products under the direction of the EM / IC / PIO through OCM's Twitter feeds, Facebook page, and through its mapping products, along with other jurisdictional social media and web sites, as directed.**



OCM VOST is a Volunteer Organization

- OCMVOST draws from volunteers across the State of Oklahoma, along with volunteers in other states.
- It also will request assistance from other Voluntary Organizations Active in Disaster (VOADs) in monitoring social media & mapping.



Deployment of the OCM VOST

OCMVOST is available on a request basis to support Emergency Managers / Incident Commanders / Other Government Officials in the State of Oklahoma through the City of Altus (OK) Emergency Management Agency:

City of Altus

Emergency Management Director

Lloyd Colston

(580) 482-8336

lcolston@cityofaltus.org



Oklahoma Crisis Mappers' Origin

- OCM was born on Christmas Eve, 2009, during the blizzard that affected much of Oklahoma
- The OKIceMap was created, using Google Maps, Twitter, and Email.
- A collaborative effort of friends in OKC, Lawton, and Tulsa, the OKIceMap tracked
 - storm reports
 - road closings and conditions
 - stranded motorists
 - shelters
 - offers of shelter to stranded motorists
- It also was active during the January 28, 2010 ice storms
- As of May, 2011, OKIceMap has had over 319k visitors.

Oklahoma Crisis Mappers and Crowdmap



OCM utilizes Crowdmap, a mapping and reporting tool derived from Ushahidi, a mapping tool originally developed in Kenya to report and map election fraud and violence. Crowdmap has now been deployed world wide for any (legitimate) use the public may desire.

OCM's current maps:

<http://okicemap.crowdmap.com> (seasonal)

<http://okfires.crowdmap.com> (current)

<http://oktornado.crowdmap.com> (current)

<http://okflood.crowdmap.com> (on standby)

<http://okquake.crowdmap.com> (on standby)

<http://okcrisis.crowdmap.com> (on standby)

Oklahoma Crisis Mappers & Social Media



OCM maintains Twitter and Facebook accounts to glean information, publish reports and interact with our sources:

Twitter

@OKIceMap

@OKFires

@OKTwister

@OKQuake

@OKCrisisMappers

Facebook

Oklahoma Crisis Mappers Group

OKIceMap Group

For more information about the VOST concept...

**Oklahoma Crisis Mappers
Virtual Operations Support Team**

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