



WFO Support of Local and Regional Weather Sensitive Events: Thinking Inside and Outside the Box

**National Weather Service
Decision Support Operations
Springfield, Missouri**



Mission Differ

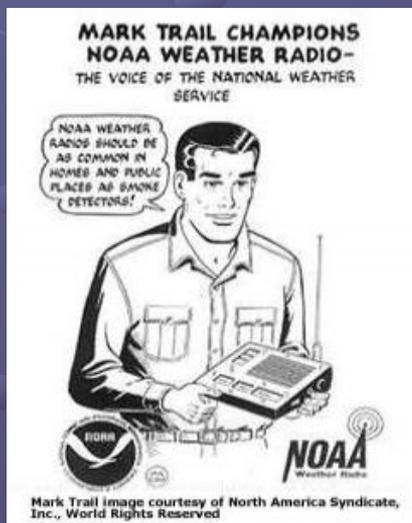
- Provide specific weather information to support government strategic and tactical decisions where and when it is needed.
 - Predictive Mitigation. Correctly anticipating “high impact” weather events. Weather adversely impacts normal societal activities and the economy.
 - Reactive Mitigation. Providing weather information and predictive services for man made and natural disaster support.
 - Preventive Mitigation. Weather information for weather sensitive planned events.



Inside The Box=Direct WFO Support

Traditional WFO Support

- Text Products, phone/telecommunication, NOAA Weather Radio
- Internet? Is the Internet traditional?
- Traditional Media Partnerships/Outreach
- Yes, improvements such as VTEC, programmable alerts
- Will these methods disappear? No, but delivery methods will/should change. NWR via satellite? Mobile/Wireless technology. Internet delivery of multimedia presentations.
- Traditional methods are more relied upon during natural disasters.
- Future: Change is inevitable and constant
- **Predictive Mitigation. Reactive Mitigation. Preventive Mitigation.**





Inside The Box=Direct WFO Support



Traditional:

- Conference calls with emergency management and amateur radio. No graphics. Broadcast on NOAA Weather Radio (sometimes).
- Recently augmented by pre call emails with presentation graphics.





Best Practices - PIO

● Public Information Officer (PIO)

- Handles non-routine conference calls, graphical products both web based and email to users such as MODOT/KDOT, schools, emergency management.
- Monitors media outlets, chat board(s).
- Develops consistent message to outside agencies, media.
- Support before, during, and after high impact weather events.

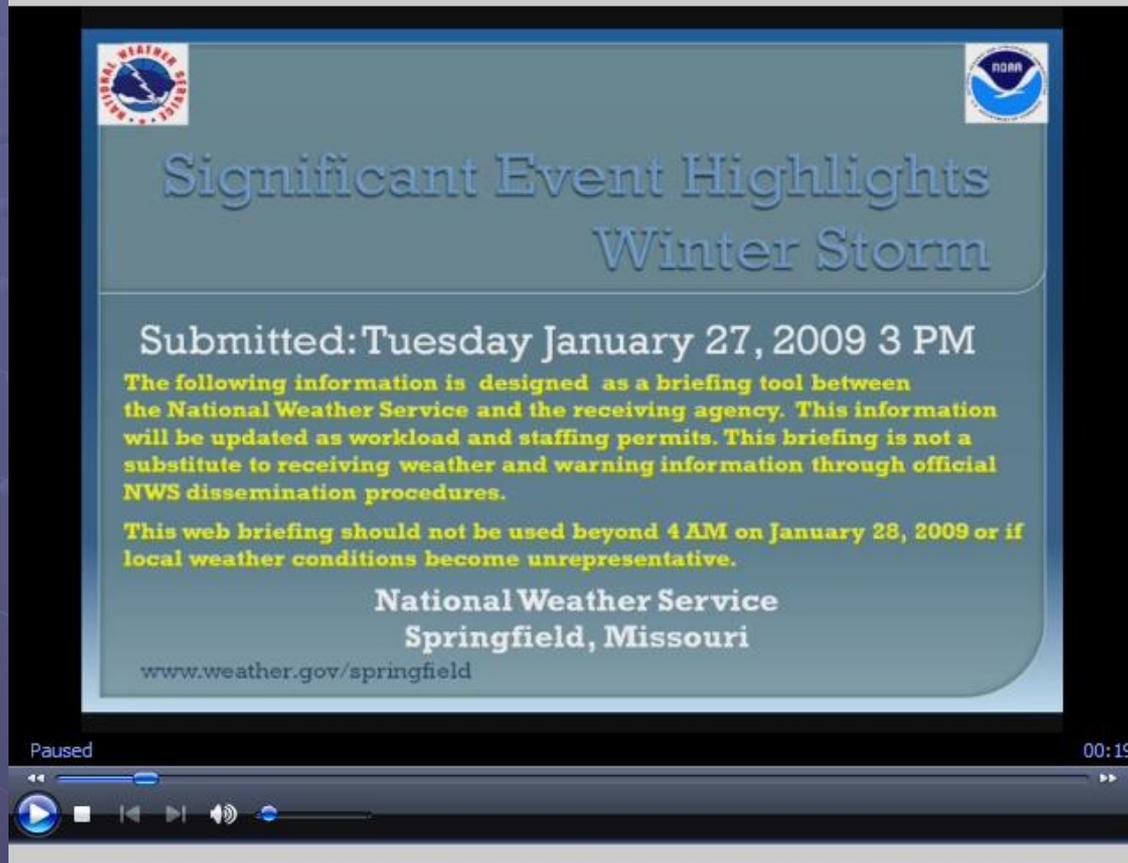


Best Practices – Web Briefings



Experimental Web Briefing

Please be patient while video loads...Video may not load if pop up blocker is turned on)
Let us know what you think of this product here!

A video player interface showing a slide titled "Significant Event Highlights Winter Storm". The slide contains text about the briefing's purpose and submission date. The video player shows a "Paused" status and a duration of "00:19".

Significant Event Highlights Winter Storm

Submitted: Tuesday January 27, 2009 3 PM

The following information is designed as a briefing tool between the National Weather Service and the receiving agency. This information will be updated as workload and staffing permits. This briefing is not a substitute to receiving weather and warning information through official NWS dissemination procedures.

This web briefing should not be used beyond 4 AM on January 28, 2009 or if local weather conditions become unrepresentative.

**National Weather Service
Springfield, Missouri**

www.weather.gov/springfield

Paused 00:19

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<http://www.crh.noaa.gov/sqf/?n=webbriefing>



Web Briefings

- Information can supplement or sometimes replace conference calls.
- Must be concise. Just a few slides.
- Staffing needed to accomplish and update as needed.
- Notification problems: How do we let people know when web briefings are updated?
- Ties already existing graphics together.

NOAA's National Weather Service Weather Forecast Office
Springfield, MO

Local forecast for City, ST or Zip Code

Home Site Map News Organization

Weather Story
NWS Springfield, MO

Current Hazards
U.S. Hazards
Hazardous Info
2008 Spotter Training
Elspotter
Weather Briefing
Pages
Road Watch

Current Conditions
Observations
Satellite Images
Rivers & Lakes AOPs
Flood Guidance
Snow Cover
Lake Levels
Radar Imagery
Local Radar
Radarwreath

Forecasts
Activity Planner
Avalanche
Fire Weather
Crews
Forecast Discussion
Ranger's Guidance
Rivers & Hydrology
AOPs / River Info
Flood Briefing Page
Hydro Page

Climate
Local
National
Marine
Senior Weather
Classification
Monthly Climate
Summer
Weather Safety
StormReady
Preparedness
Weather Radio

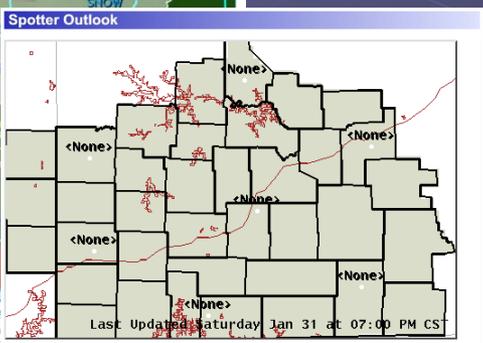
TUESDAYS SYNOPSIS

SHOW

Colder

MON
National Weather

Excessive rainfall leading to flash flood Tuesday. Rainfall amounts ranging from line from Neotoma up to Lake of the Oz areas along and east of a line from Ta shear combined with unusual amounts



Spotter Activation Key	
	Spotter Activation Likely < 3 hours
	Spotter Activation Possible < 6 hours
	None

Experimental Web Briefing

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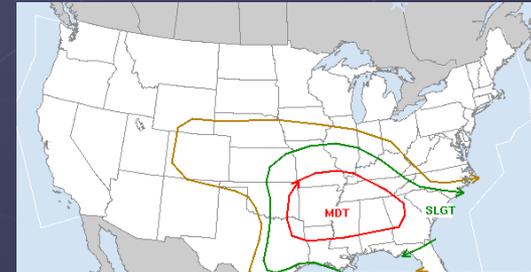
Significant Event Highlights
Winter Storm

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National Weather Service
Springfield, Missouri
www.weather.gov/springfield



NOAA SPC DAY1 CONW OUTLOOK
ISSUED: 2009Z 05/10/2009
VALID: 10Z000Z-11/2009
FORECASTER: DIAL
National Weather Service
Storm Prediction Center
Norman, Oklahoma





Partnerships

MOKAN SKYWARN
EMERGENCY PREPAREDNESS

Home | News and Events | Repeater | Skywarn | Contact Us | About

MoKan Skywarn of SW Missouri and SE Kansas

Winter Weather Net **Monday**

Winter Storm Warning #1 issued 2009-01-26 21:00Z expires 2009-01-28 00:00Z

We will be hosting another chat session throughout this winter weather event. It will be nice to know what is happening in your area. Logon and share. Please feel free to utilize the online wx report form to submit weather activity and accumulation amounts to net control.

Skywarn WeatherNet Links

- Submit a Weather Report to Net Control
- MoKanEP Chat Room
- Severe Weather Briefing Page
- Local Radar
- Watches, Warning, Hazards
- Weather Story
- Graphical HWO
- E-Spotter
- Severe Studios Live Chase Cams
- Mokan Spotter Dashboard

Field Reports - Beta

- 01-27-09 6:50a Springfield
- 01-26-09 3:30p Pittsburg
- 01-26-09 3:23p Carthage
- 01-26-09 2:50 Neosho
- 01-26-09 1:25p Seneca

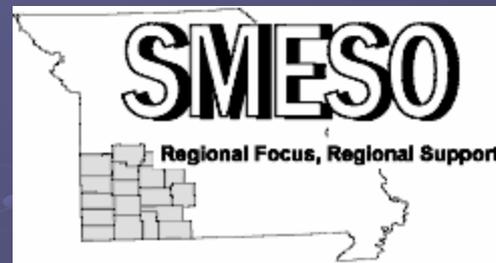
MoKanEP Chat Room

3 users in 1 room.

MoKanEP (3)

- o garyb31
- o kd0djg
- o kc0shn

<http://www.mokanep.com/>



<http://smeso.org/>



<http://www.fs.fed.us/r9/forests/marktwain/>



<http://www.modot.org/>



<http://sema.dps.mo.gov/>



<http://www.mdc.mo.gov/>



Partnerships

- Knowledge – NWS learns what is important to partners. Partners learn capabilities of the NWS.
- Sparks ideas for new strategies.
- Low cost training opportunities.

FIRE AND RESCUE TRAINING INSTITUTE
MU EXTENSION, UNIVERSITY OF MISSOURI-COLUMBIA



Big Rivers Forest Fire
Management Compact



MU | FRTI

A photograph showing three firefighters in yellow gear and white helmets. Two are standing and looking at a document held by one of them, while a third is kneeling in the background. They are outdoors in a grassy field with mountains in the distance.

SEMA's Training/Exercises



Best Practices - GIS Based Graphics



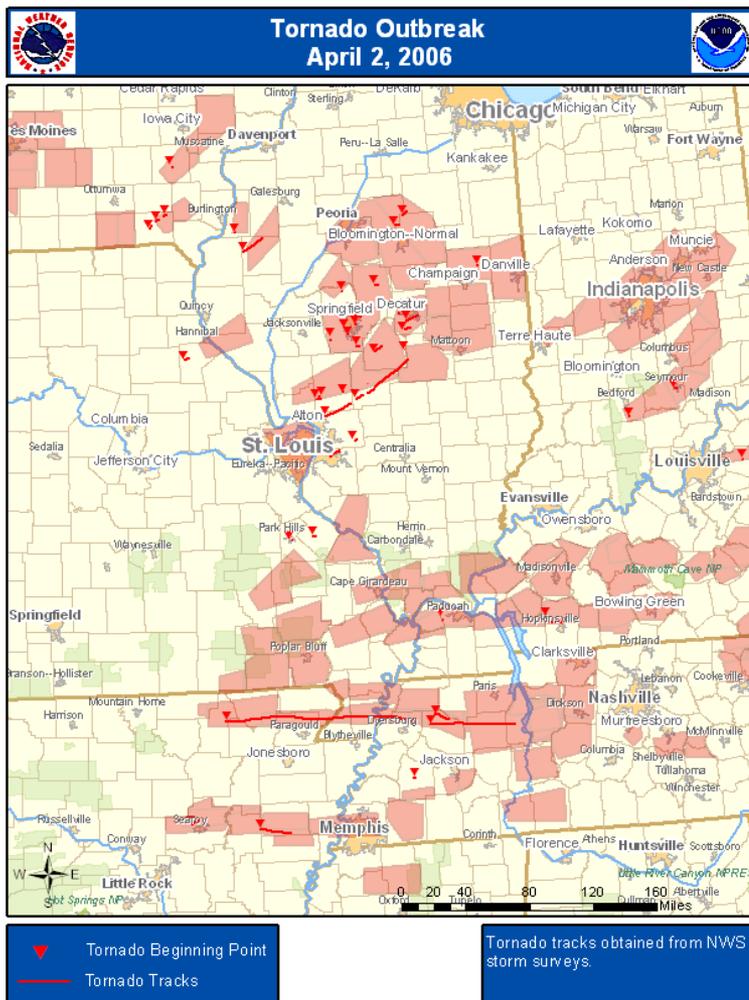
GIS benefits operational and user needs

- Radar & Satellite
- Warning Polygons
- Storm Reports
- Spotters/Verification
- Impact assessment
- Flash Flood / Hydro
- Fire Weather
- Obs. Sites/COOP
- Aviation
- Climate
- Situational Awareness





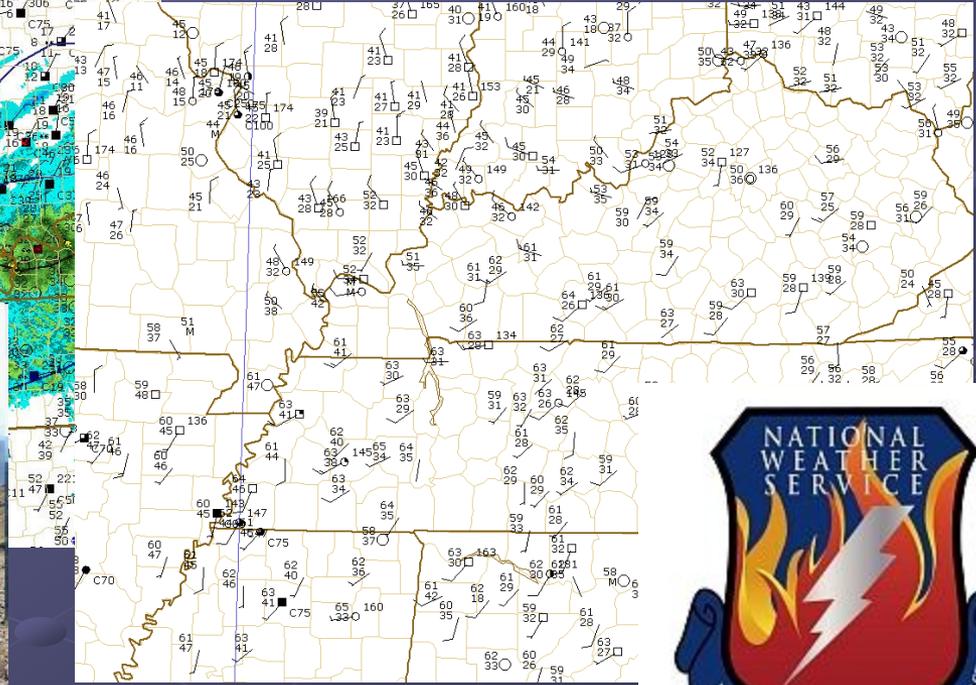
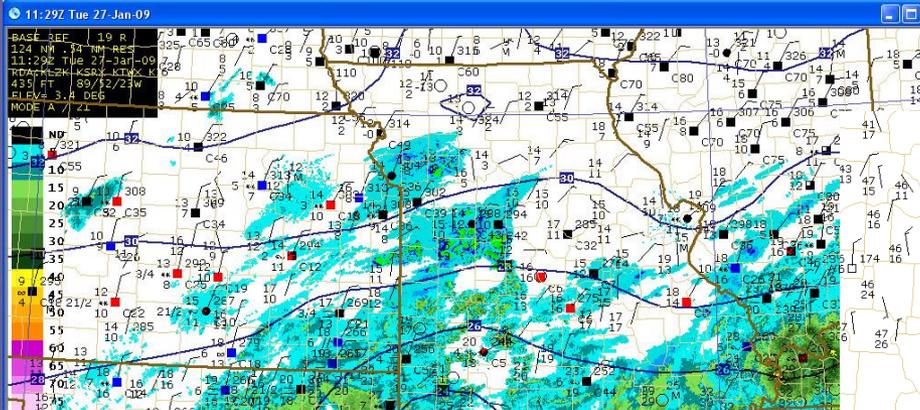
Best Practices - GIS Based Graphics



- Collective storm reports & survey results
- Serve government agencies, emergency management, media & the general public with a detailed regional hazard maps.
- Provide a consistent one stop location for the graphical depiction of severe weather events
- Assist post storm impact assessment and recovery efforts by the emergency management community, and local, state, and federal agencies.
- Effectively representing the impact of severe weather to the public and highlighting why the NWS exists.
- Support WFO's and the scientific community in post event analysis.
- Meeting the demand for graphics from local and national media.



Outside the Box = NWS Remote Support



NWS Incident Meteorologists have a long and successful track record. Provide critical and timely weather information anytime and anywhere a disaster strikes.



Outside the Box

- On site meteorologist acts as liaison between WFO and agency. The meteorologist represents the WFO and presents a tailored WFO forecast for specific mission needs.
- Utilize Internet graphics from the WFO (Radar, news stories, etc.)
- Utilize weather display software
- Utilize GIS viewers
- Document EVERYTHING.
- Be prepared to brief at anytime.
- Be flexible.



NWS SGF Remote Support

- Incident command teams for regional emergencies have been established for ice storms (Jan and Dec 2007), Missouri River Flooding (May 2007), large prescribed fires, tornado recovery, etc.
- WFO staff have been dispatched to some of these incidents/incident command posts.
- **Predictive Mitigation** (rarely), **Reactive Mitigation**, **Preventive Mitigation**





WFO Outside the Box Challenges

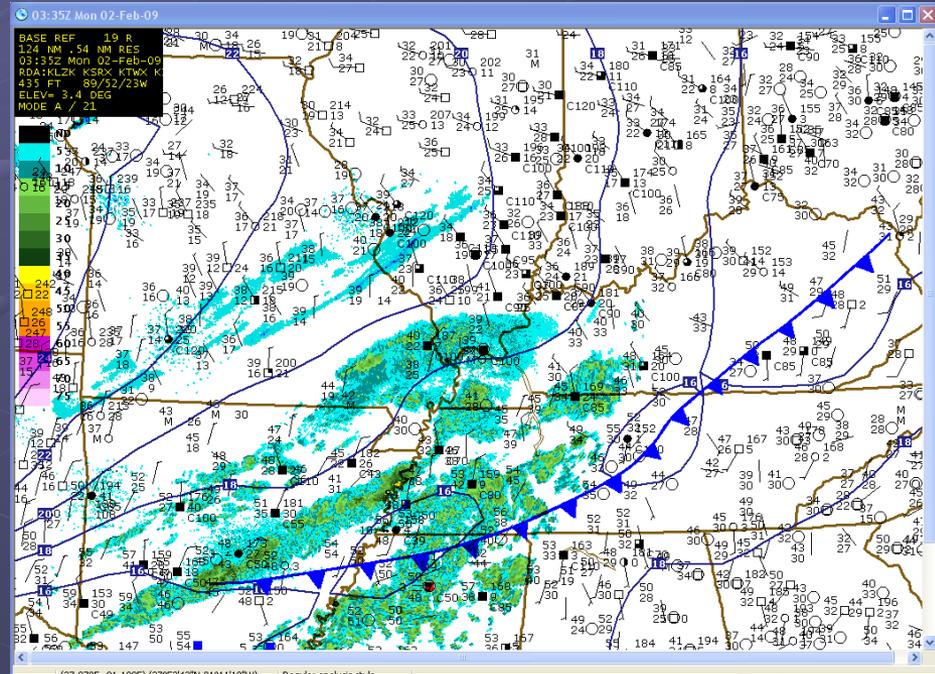
- Staffing & Resource Allocation
- Communications – Internet, etc.
- Funding – Travel, mileage, salary, etc. Who pays?
- Training ICS 100/200/700, S-290/390.
- Equipment – communications, monitoring software, protective clothing,
- Local Policy – When and where to deploy?
- Partnerships – need to build relationships
- Weather information timeliness and availability
- IT Security Issues



WFO All Hazards Support Onsite – Software - Digital Atmosphere



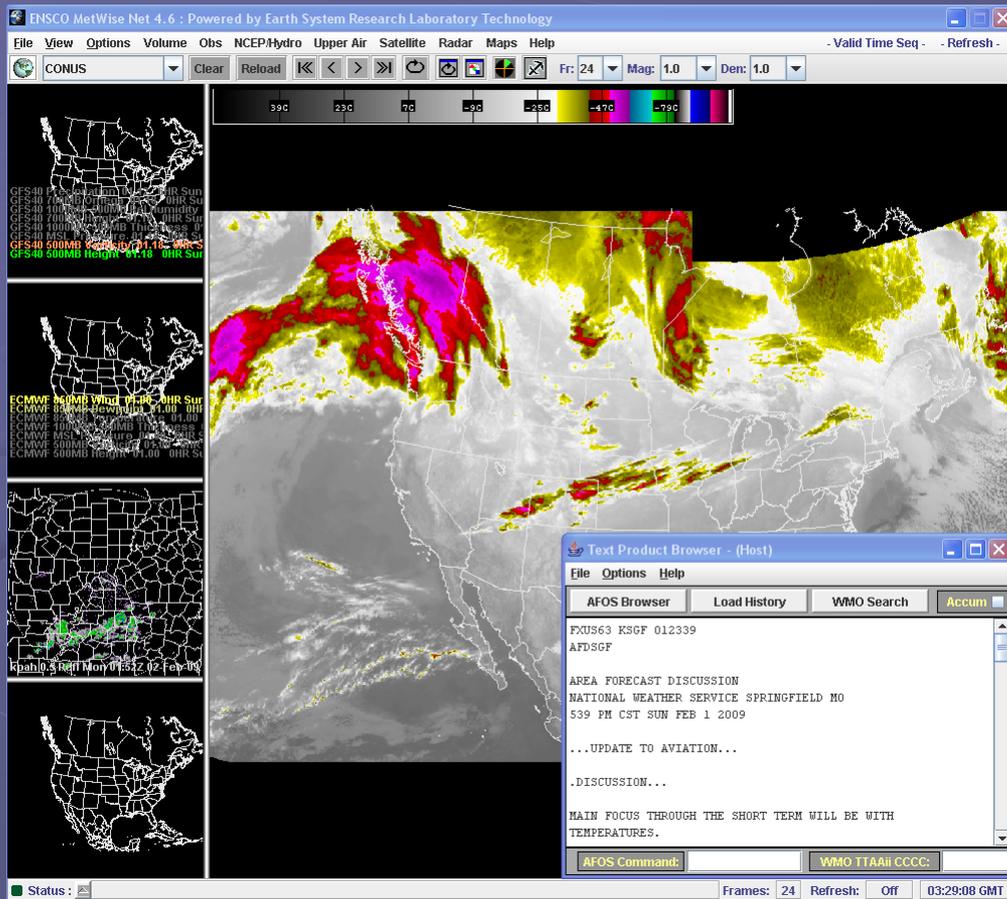
- Download surface data, radar, watch/warning data.
- Develop and display maps of data in real time.
- Customizable maps.
- Excellent for weather monitoring local weather. Displays mesonet, RAWS, any stations in the Meteorological Assimilation Data Ingest System (MADIS).
- Low cost.
- Data is free.



<http://www.weathergraphics.com/da/>



Weather Software

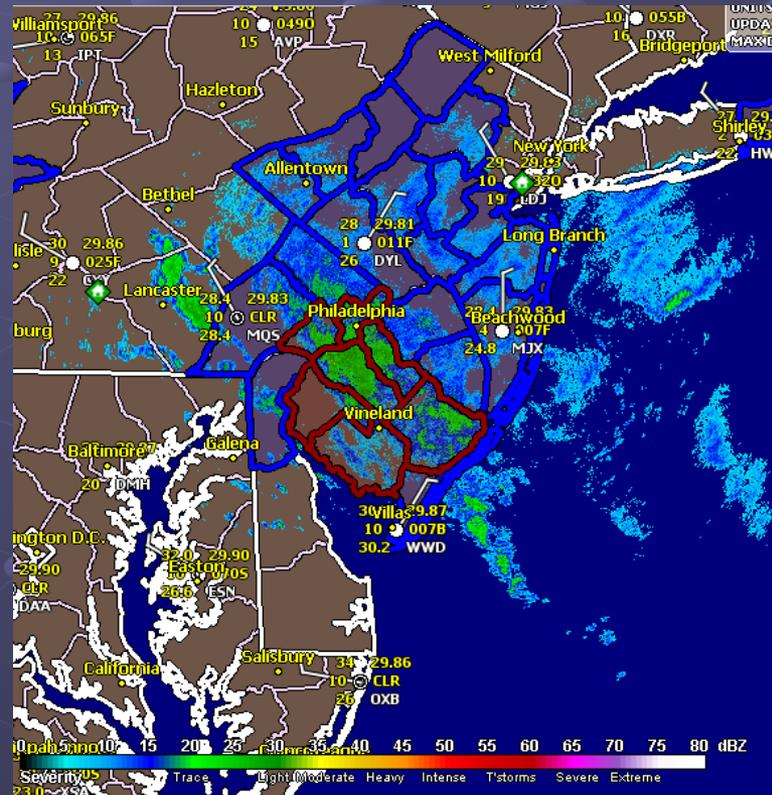


-FX Net request-based, client-server system



Other Software

- Several options available. StormLab, GRLevelX, WeatherTAP.com, etc.
- BUFKIT
- Office Software
- TechSmith Snagit





The Future?

- Innovative “inside the box” solutions.
- Maintain several layers of technology.
 - One step in the past and one on the cutting edge.
- “Outside the box” funding, staffing, policy.
- Proof of concept.
- Partnerships – Embed our technology for decision support. Support of exercises, prescribed burns, etc.



Any Questions?



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