

A dark blue background with a stormy sky. In the top right, there are dark, heavy clouds. In the bottom right, a bright white lightning bolt strikes downwards. On the left side, a metal radar tower is visible against a slightly lighter blue background.

# Using GIS Applications to Assist in Decision Support

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NWS - Central Region  
Headquarters

# GIS Application Goals

- Display a wide variety of meteorological, hydrological, and system state data for decision support and situational awareness.
- Integrate data from numerous sources (both internal and external).
- Allow the user to pick the data feeds and zoom levels that best fit their needs.

# GIS Applications

- Google Earth/KML Services
  - Pros
    - Lower Bandwidth
    - Flexible
  - Cons
    - Need to be configured on the user end
    - Need a fairly high end machine
- Web Mapping Services
  - Pros
    - No setup or special client software needed
    - Interactive
  - Cons
    - Not as flexible for the customer

# Google Earth/KML Services

The background of the slide is a dark, stormy sky. In the upper right, there are large, dark, billowing clouds. In the lower right, a bright, jagged lightning bolt strikes downwards. On the left side, the skeletal structure of a tower or antenna is visible against the dark sky.

# CRH ROC KML Services

- Currently at Central Region Headquarters we are creating KML feeds of:
  - Storm Reports
  - Short Fuse Warnings (SVR, TOR, FFW)
  - Convective Watches
  - Long Fuse Watch, Warnings and Advisories
  - METAR status
  - WSR 88D Status
  - Point and Click netCDF status
  - NOAAnet status

# Product Organization

## High Impact

- Warnings, watches, SPC, Earthquake
- Storm reports, Radar, IMET Deployment

## Equipment Status

- Radar Status
- METAR Status

## Observations

- Mesonet, METAR and Misc Observations
- AHPS, Snow, Fire weather, CoCoRaHS

## Experimental

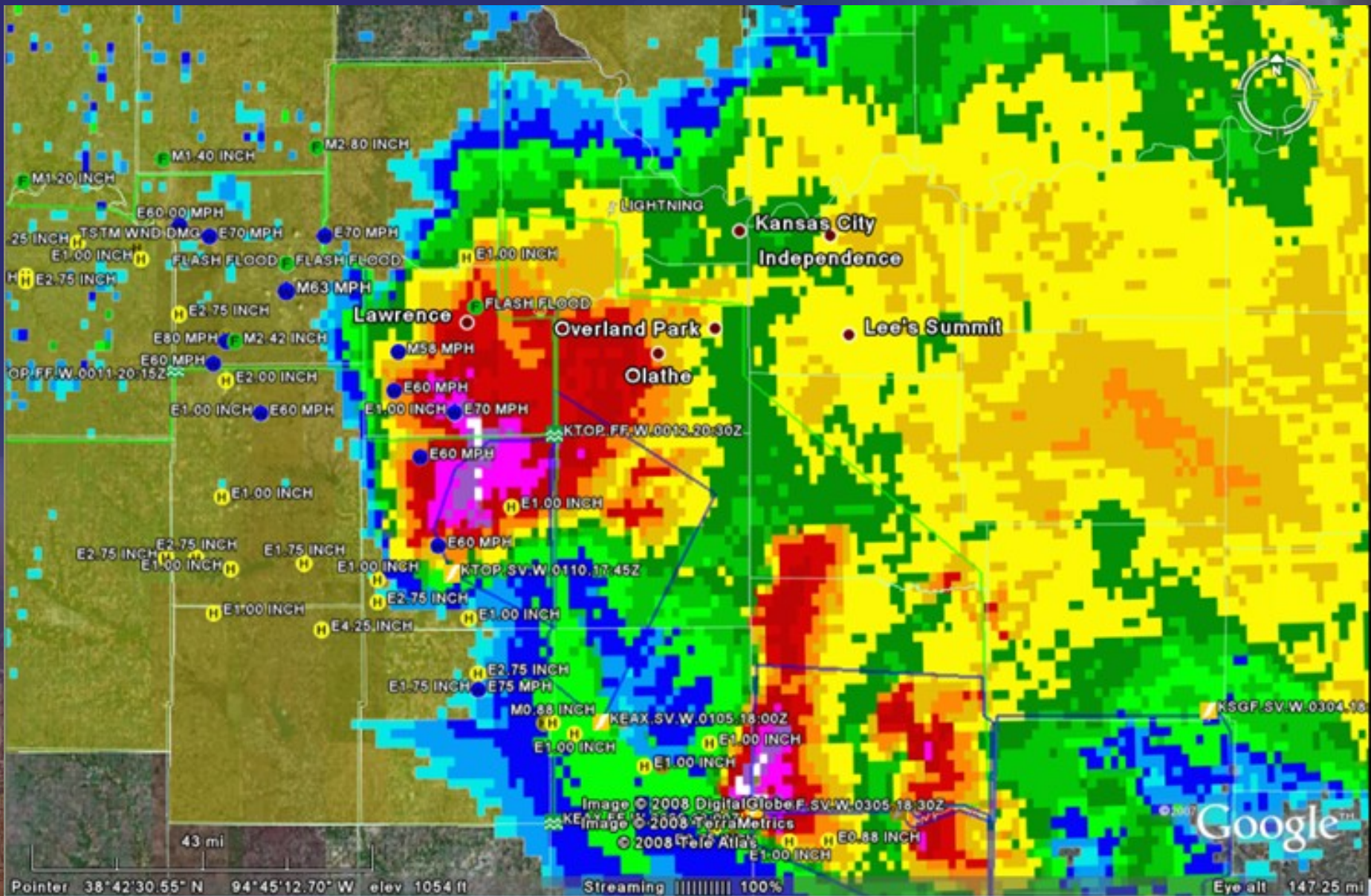
- ArcGIS Server products
- GeoServer products

## Forecasts

- MOS Guidance, Flood Potential Outlook
- AHPS, QPF, FFG, Drought Monitor

# CRSAORD Examples

- *Central Region Situational Awareness Operational Readiness Display*
  - Current Radar/Active Warnings/Latest Storm Reports
  - Storm Report Information Pop-up
  - Active Warnings and Latest Storm Reports
  - Active Flooding
  - Current Spot Requests and IMET Deployments
  - Summary of Storm Reports from the previous 24 hours
  - Radar and METAR Status
  - Radar Status Pop-up
  - Point and Click Status
  - NOAA Net CE Router Status



Pointer 38°42'30.55" N 94°45'12.70" W elev 1054 ft

Streaming ||||| 100%

Eye alt 147.25 mi

Image © 2008 DigitalGlobe F.SV.W.0305.18.30Z  
 Image © 2008 TerraMetrics  
 © 2008 Tele Atlas  
 © 2007

Google™



**E1.00 INCH**

Type: HAL  
Magnitude: E1.00 INCH  
ReportDay: 06/02/08  
ReportTime: 1724  
LocationInfo: 5 NW RANTOUL KS  
Comment: ALSO REPORTED 3 TREES  
DAMAGED DUE TO ESTIMATED 60  
MPH WINDS.

Directions: [To here](#) - [From here](#)

Ottawa

Franklin

E60 MPH

E1.00 INCH

Image © 2008 DigitalGlobe  
Image © 2008 TerraMetrics  
© 2008 Tele Atlas

©2007 Google™

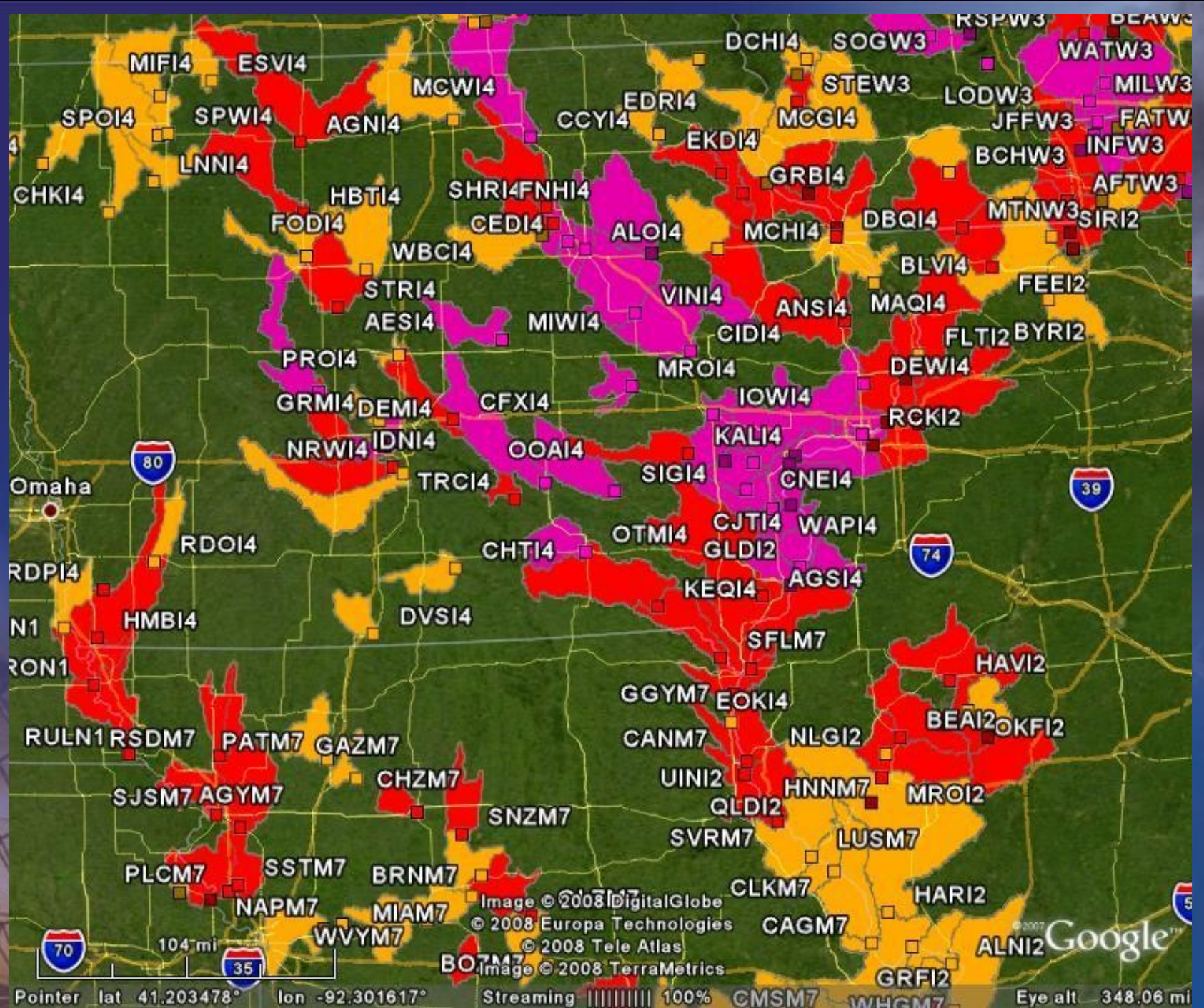
5.21 mi

Pointer 38°35'47.97" N 95°10'43.08" W elev 897 ft

Streaming ||||| 100%

Eye alt 18.43 mi





MIFI4

ESVI4

MCWI4

DCHI4

SOGW3

WATW3

SPOI4

SPWI4

AGNI4

CCYI4

EDRI4

STEW3

LODW3

MILW3

CHKI4

LNNI4

HBTI4

SHRI4

FNHI4

EKDI4

MCGI4

JFFW3

FATW3

FODI4

CEDI4

ALOI4

GRBI4

DBQI4

MTNW3

SIRI2

WBCI4

MIWI4

VINI4

MCHI4

BLVI4

FEEI2

STRI4

AESI4

CFXI4

MROI4

CIDI4

ANSI4

MAQI4

FLT2

BYRI2

PROI4

GRMI4

DEMI4

IDNI4

OTMI4

IOWI4

DEWI4

RCKI2

NRWI4

TRCI4

OOAI4

SIGI4

KALI4

CNEI4

Omaha



RDOI4

CHTI4

CJTI4

WAPI4



RDPI4

HMBI4

DVSI4

GLDI2

AGSI4

N1

RON1

GGYM7

EOKI4

HAVI2

CANM7

NLGI2

BEAI2

OKFI2

RULN1

RSDM7

PATM7

GAZM7

CHZM7

SNZM7

UINI2

QLDI2

HNNM7

MROI2

SJSM7

AGYM7

SVRM7

LUSM7

PLCM7

SSTM7

BRNM7

MIAM7

CLKM7

HARI2

NAPM7

WVYM7

CAGM7

ALNI2



104 mi



BO7M7

CMSM7

WHGM7

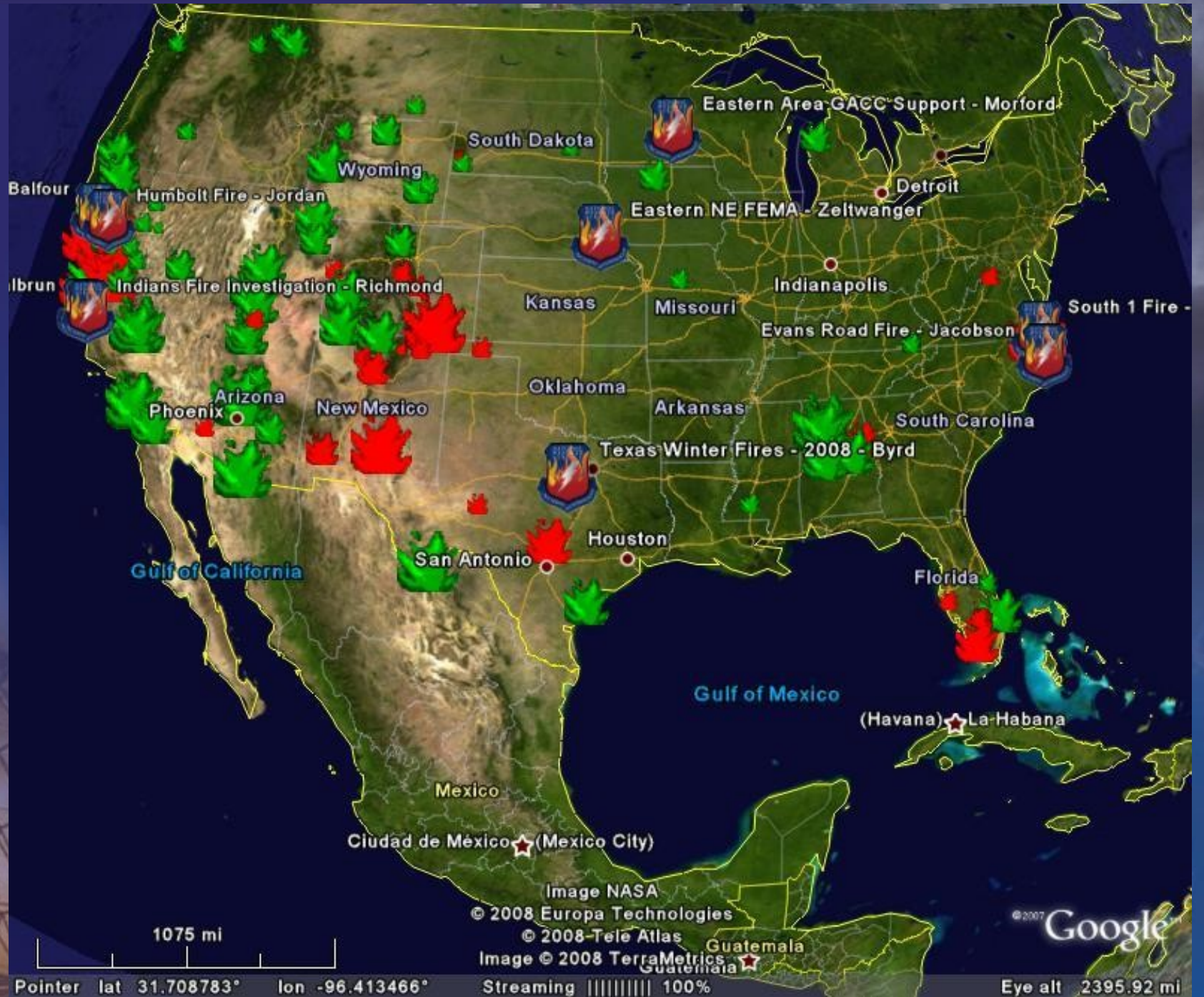
GRFI2

Pointer lat 41.203478° lon -92.301617°

Image © 2008 DigitalGlobe  
© 2008 Europa Technologies  
© 2008 Tele Atlas  
Image © 2008 TerraMetrics

Google

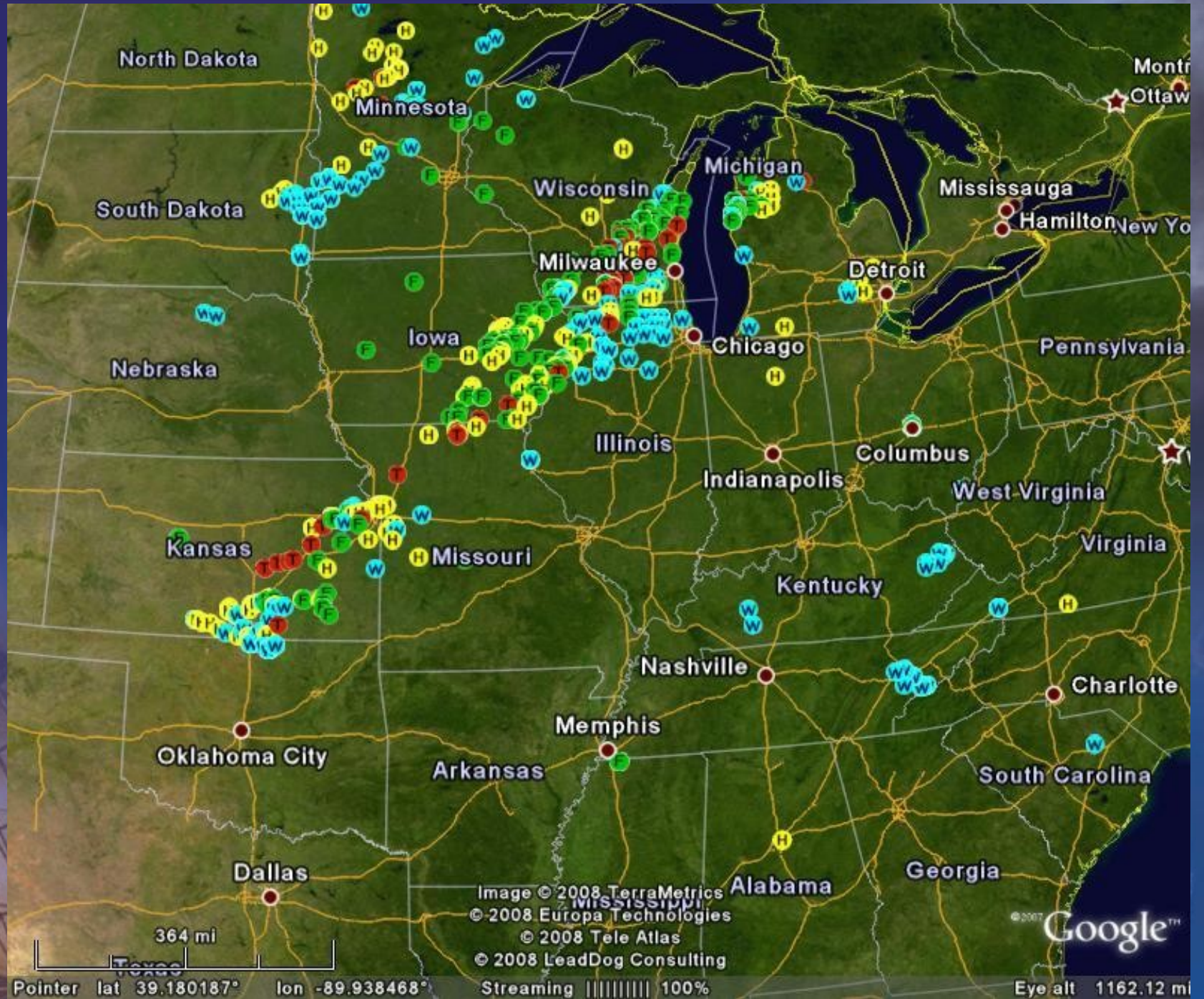
Eye alt 348.06 mi



Pointer lat 31.708783° lon -96.413466°

Streaming ||||| 100%

Eye alt 2395.92 mi



North Dakota

Minnesota

South Dakota

Wisconsin

Michigan

Mississauga

Montreal  
Ottawa

Hamilton  
New York

Milwaukee

Detroit

Nebraska

Iowa

Chicago

Pennsylvania

Illinois

Indianapolis

Columbus

West Virginia

Kansas

Missouri

Virginia

Kentucky

Nashville

Charlotte

Oklahoma City

Arkansas

Memphis

South Carolina

Dallas

Alabama

Georgia

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© 2008 Tele Atlas  
© 2008 LeadDog Consulting

© 2007 Google™

364 mi  
Pointer lat 39.180187° lon -89.938468°

Streaming 100%

Eye alt 1162.12 mi



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© 2008 Europa Technologies  
Image © 2008 TerraMetrics  
© 2008 Tele Atlas

Google

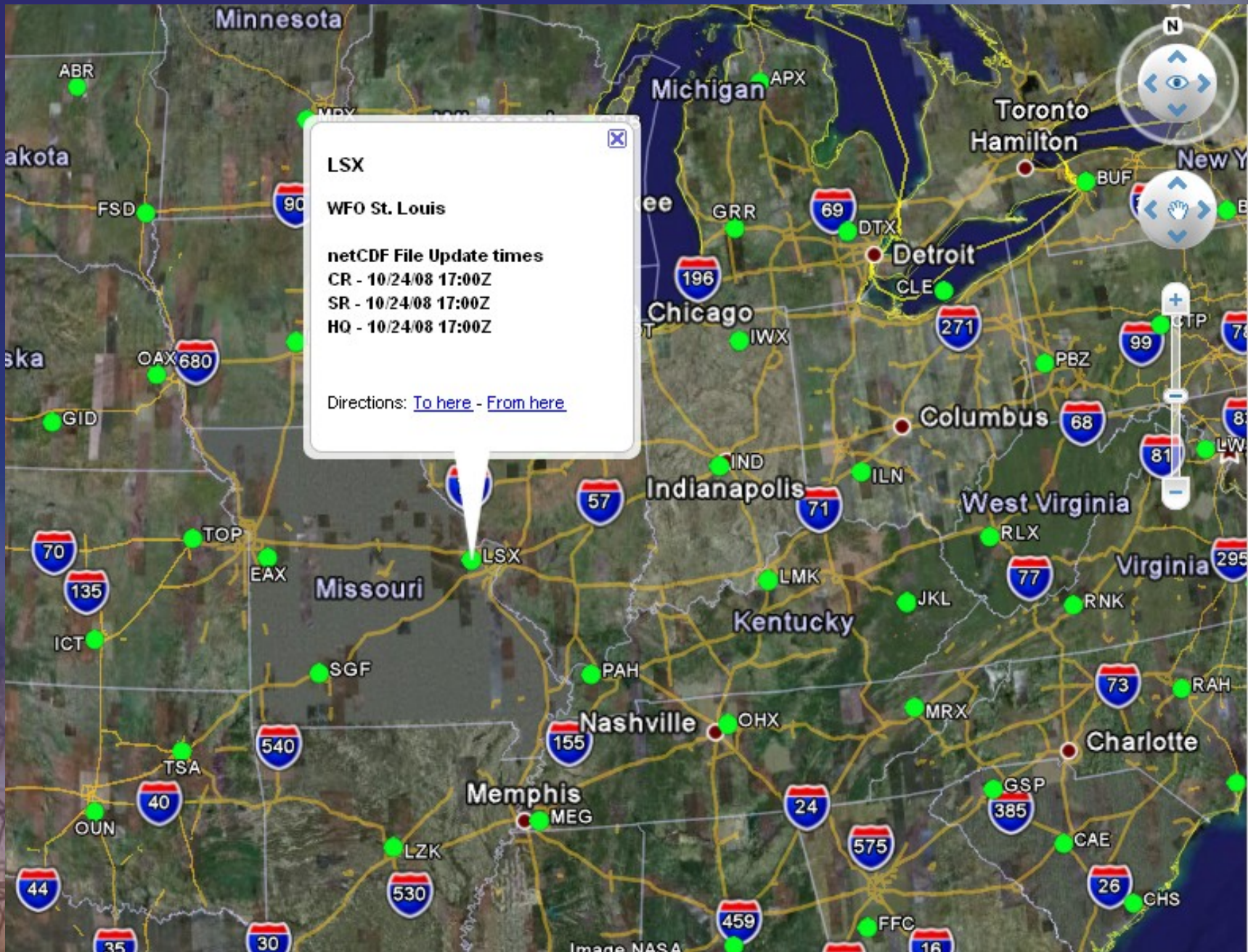
## KPUX

General Status Message For: KPUX  
Pueblo CO 6/13/2008 13L  
Mode of Operation: 1 Clear Air Mode  
RDA Operability Status: 128 Wideband Disconnect  
Volume Coverage Pattern: 32  
Number of Elevation Cuts: 5  
Elevations: 0.5 1.5 2.5 3.5 4.5  
RDA Status 0 Indeterminate  
RDA Alarms: 0 No Alarms  
Data Transmission Enabled: 2 None  
RPG Operability Status: 2 On-line  
RPG Alarms: 1 No Alarms  
RPG Status: 2 Operate  
RPG Narrow Band Status: 0 Operate  
RPG Software Build: 100 10  
RDA Software Build: 100 10  
RDA Channel Number: 0 Single Thread  
Delta System Calibration: 0  
KPUX RADAR WILL BE DOWN FOR ROUTINE MAINTENANCE TODAY, FRIDAY 13, 2008, 1500Z TO 2000Z.  
KPUX WSR-88D RETURNED TO SERVICE AT 1100 AM MDT...1700 UTC...THURSDAY JUNE 12TH.  
ADJACENT RADARS: KFTG...KGLD...KDDC...KAMA...KABX...KGJX.  
KPUX WSR-88D WILL BE DOWN FOR MAINTENANCE TODAY...FRIDAY 13 FROM 0900 MDT (1500Z) TO 200 PM (2000Z)...  
ADJACENT RADARS: KFTG...KGLD...KDDC...KAMA...KABX...KGJX.

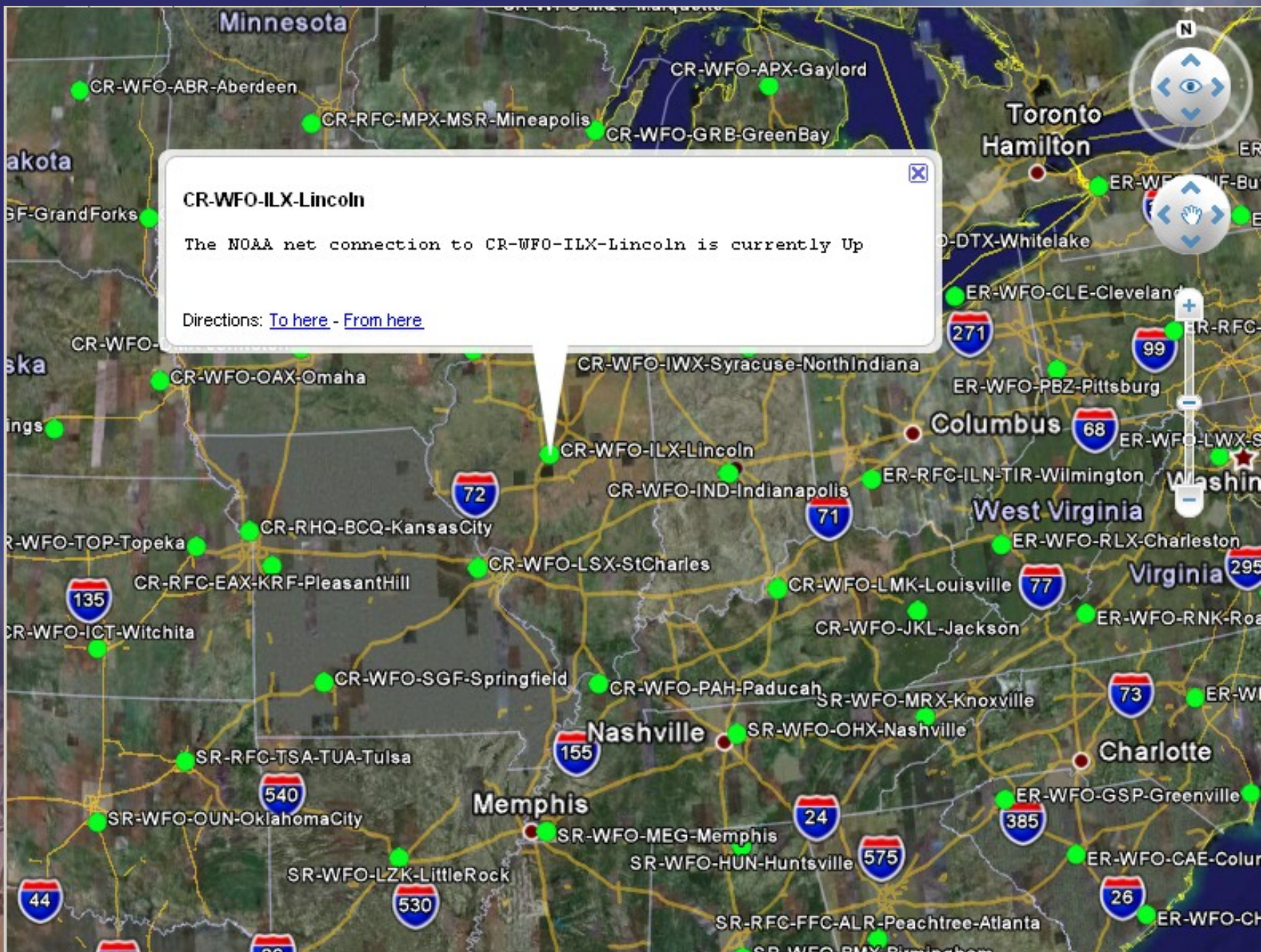
Directions: [To here](#) - [From here](#)

Austin Houston

Image ©:2008 TerraMetrics







**CR-WFO-ILX-Lincoln**

The NOAA net connection to CR-WFO-ILX-Lincoln is currently Up

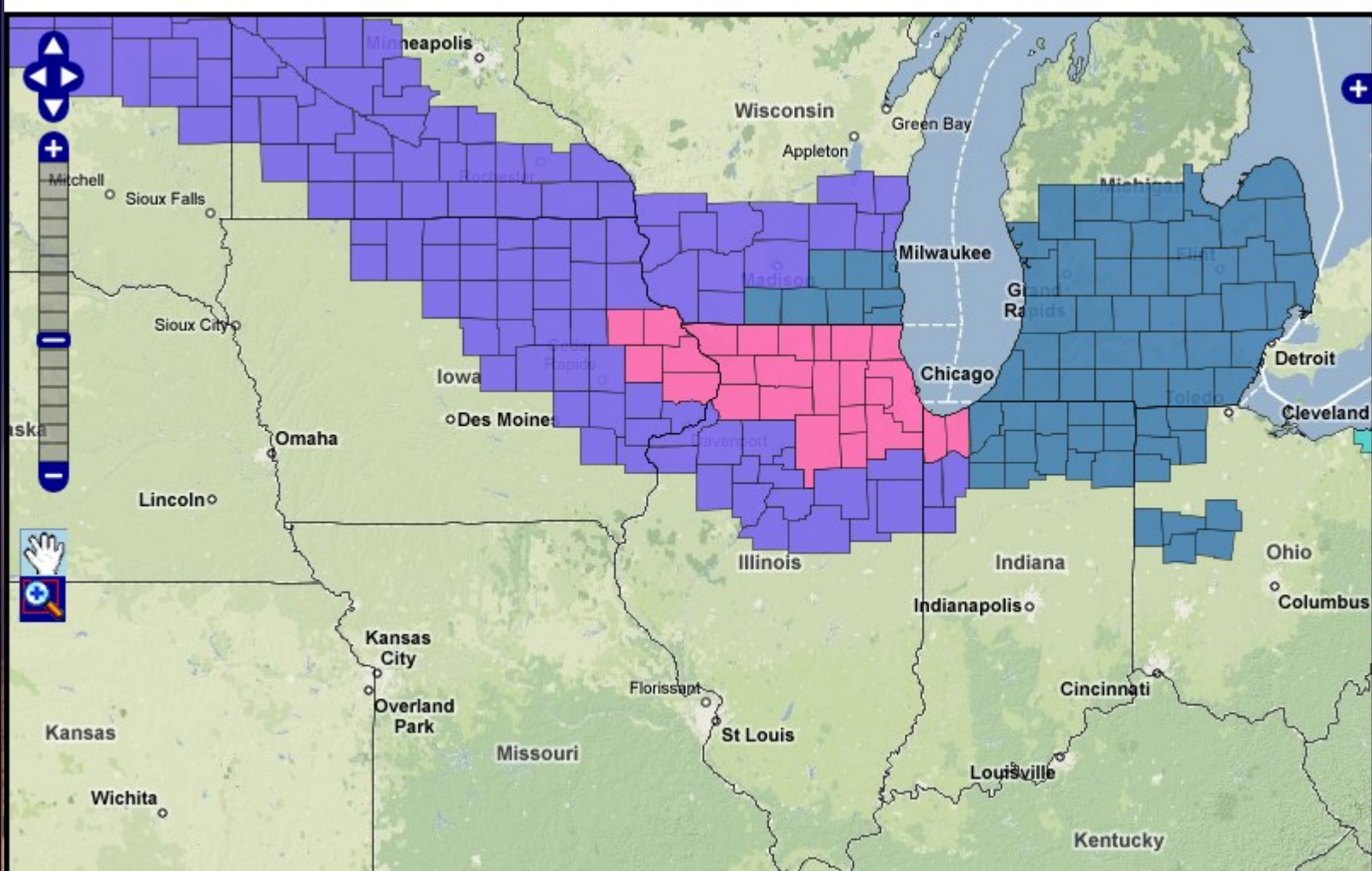
Directions: [To here](#) - [From here](#)

# Web Mapping Services

The background of the slide is a dark blue gradient. On the right side, there is a large, dark, textured cloud with a bright white lightning bolt striking downwards from it. On the left side, there is a tall, metal lattice tower structure, possibly a radio tower or antenna, with a ladder-like structure on its side. The overall scene is atmospheric and somewhat ominous.

# Web Mapping Services

- Winter Weather Decision Support Page
- Severe Weather Decision Support Page
- Verification Assistance
- Hazard Lookup



**Winter Warnings**

- Blizzard Warning
- Winter Storm Warning
- Heavy Snow Warning
- Ice Storm Warning
- Lake Effect Snow Warning
- Freezing Rain Warning

**Winter Watches**

- Blizzard Watch
- Winter Storm Watch
- Lake Effect Snow Watch

**Winter Advisories**

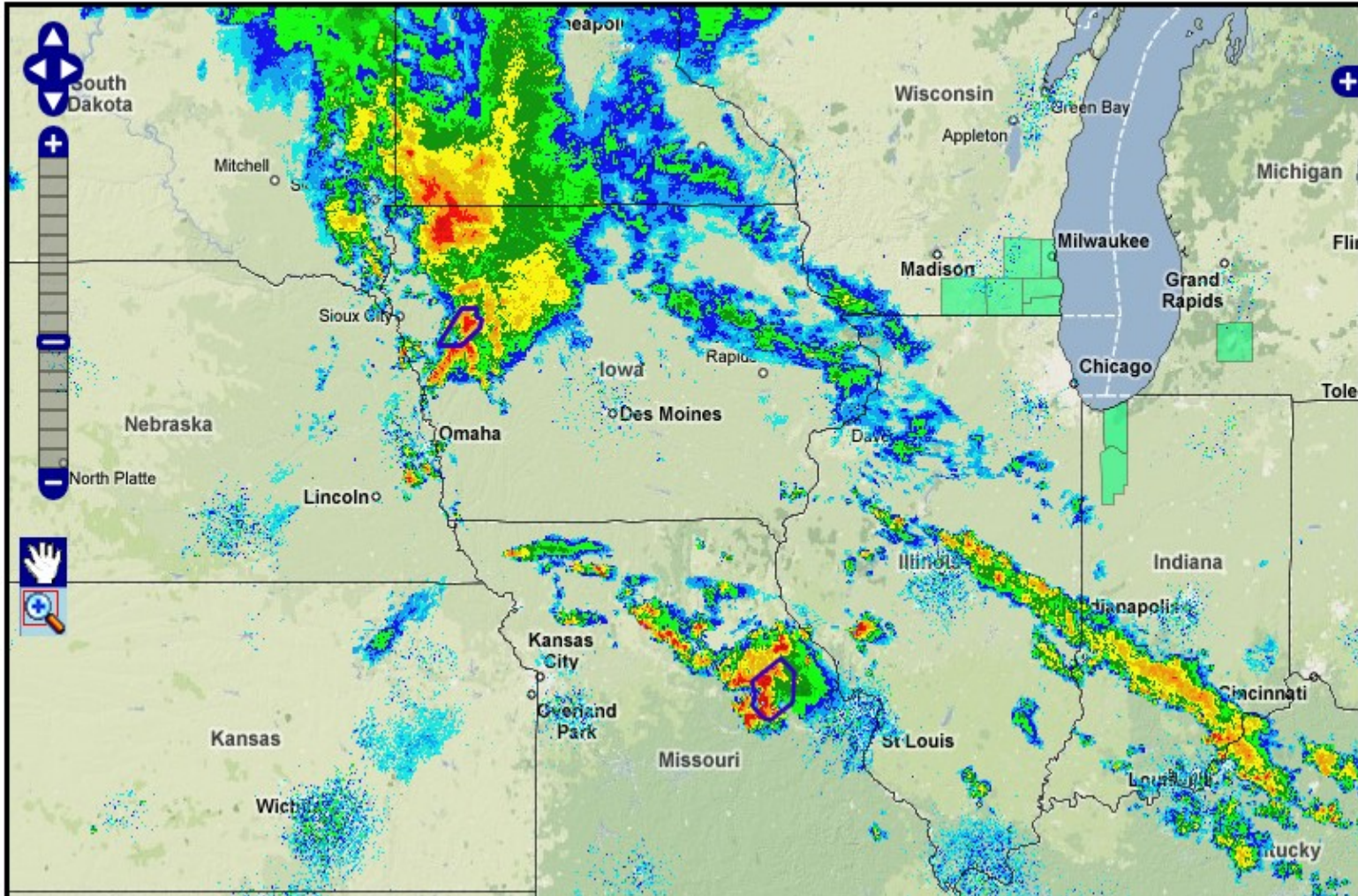
- Blowing Snow Advisory
- Winter Weather Advisory
- Snow Advisory
- Freezing Rain Advisory
- Sleet Advisory
- Lake Effect Snow Advisory
- Snow and Blowing Snow Advisory

**Wind Hazards**

- High Wind Warning
- High Wind Watch

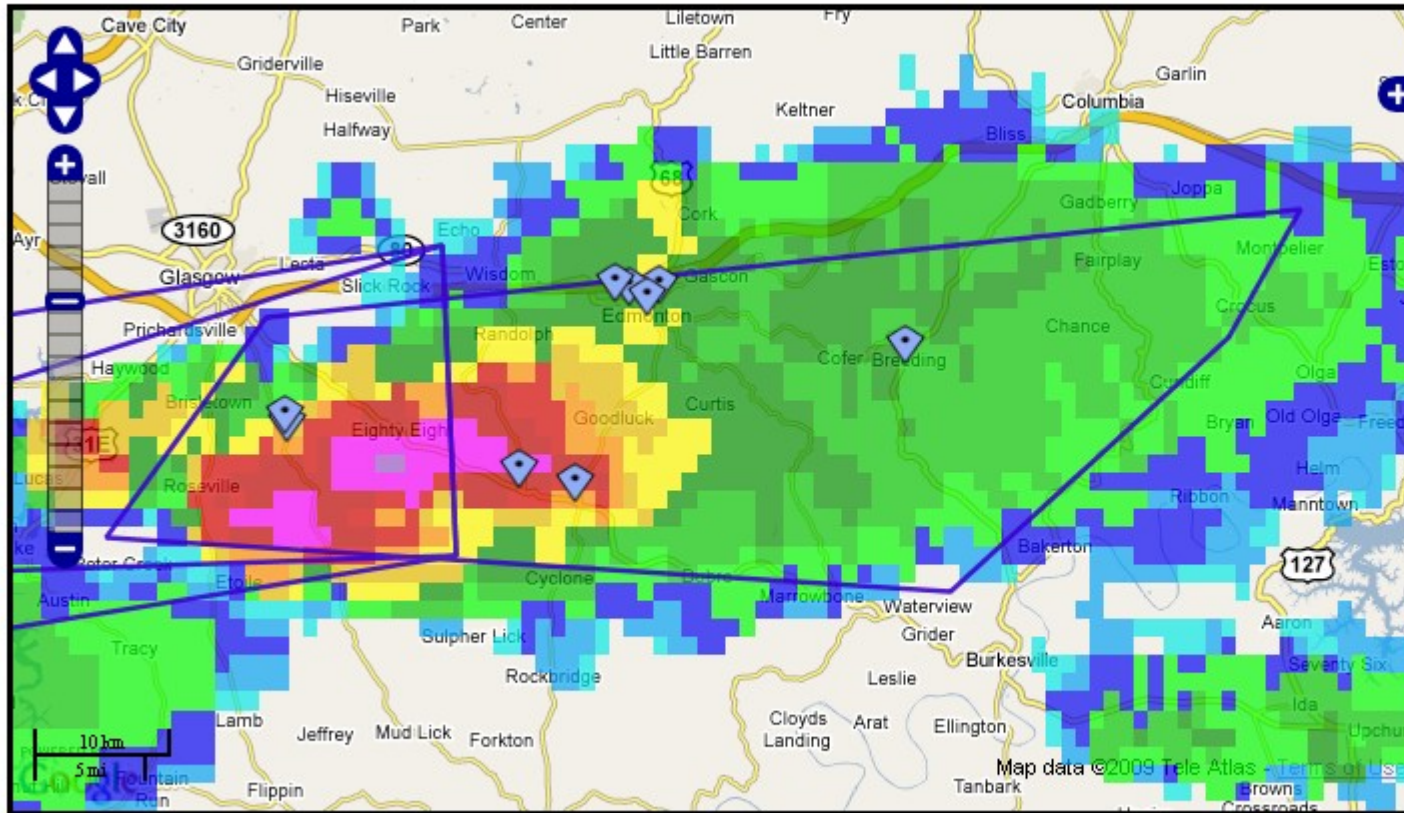
Last Update: 2009-02-26 15:28:39

Radar Opacity:  WWA Opacity:  Warnings Only



- ### Hazards
- SVR T-storm Watch
  - Tornado Watch
  - Tornado Warning
  - SVR T-storm Warning
  - Flash Flood Warning
  - Flash Flood Watch
  - Flooding

Radar Opacity:  Radar Off

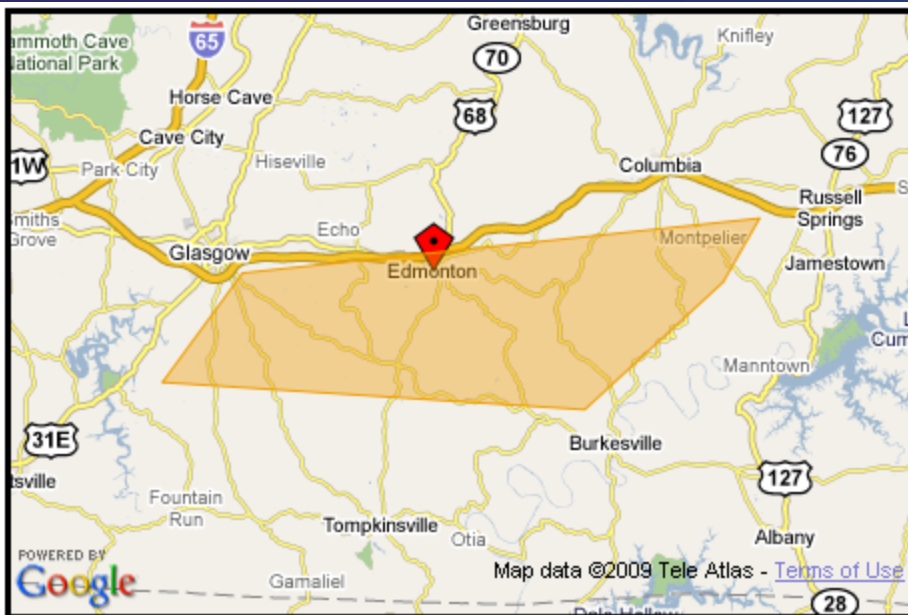


**Selected Warning**  
KLMK.SV.W.NEW.40

**Contact Information**

Ed's Express Inc  
2241 Summer Shade Rd  
Summer Shade, KY  
36.885963, -85.707527  
(270) 428-9930

gas station  Search



Enter an address and click  
**Get Hazards** to begin



Lat/Lon of the point is:  
36.980688 -85.619664




Severe Thunderstorm Warning valid until Wednesday, February 18, 2009 12:15:00 PM

The National Weather Service In Louisville Has Issued A

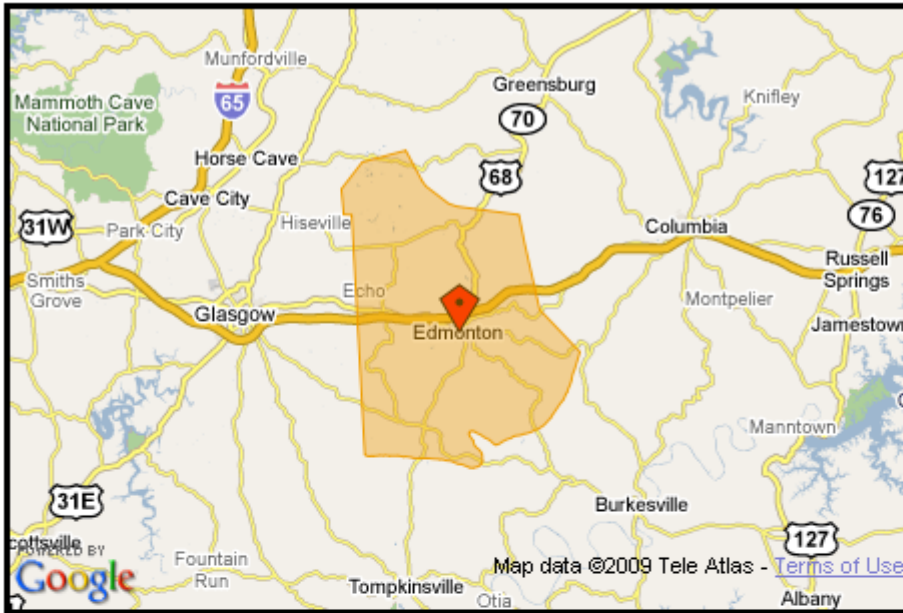
\* Severe Thunderstorm Warning For other Locations In The Path Include Temple Hill, Shade, Subtle, Brecks Store, And Breeding.

A Tornado Watch Remains In Effect For The Warned Area. If A Tornado Is Spotted, Move Quickly To A Place Of Safety In A Sturdy Structure, Such As A Basement Or Small Interior Room.

Report Severe Weather To Local Law Enforcement And Have Them Relay Your Report To The National Weather Service In Louisville.

Lat, Lon 3686 8599 3698 8588 3704 8517 3697 8522  
3683 8541

Time, Mot, Loc 1725z 267deg 44kt 3695 8554 3687 8588



Enter an address and click  
**Get Hazards** to begin



Lat/Lon of the point is:  
36.980688 -85.619664

- Latest Forecast
- Severe Thunderstorm Warning
- Tornado Watch

Tornado Watch valid until Wednesday, February 18, 2009 5:00:00 PM

Kyc001-003-009-021-045-049-053-057-061-079-085-087-093-099-113-  
123-137-151-155-167-169-171-179-207-213-217-227-229-182300-  
/O.new.klwk.to.a.0023.090218t1710z-090218t2300z/

The National Weather Service Has Issued Tornado Watch 23 In  
Effect Until 6 Pm Est /5 Pm Cst/ This Afternoon For The Following  
Areas

In Kentucky This Watch Includes 28 Counties

In East Central Kentucky

Boyle Ky	Clark Ky	Garrard Ky
Jessamine Ky	Madison Ky	Mercer Ky

In North Central Kentucky



# Future Efforts

- Portal to allow EM's to enter “areas of interest”
  - Could be a point or a polygon
  - Would show up on WFO SA displays
- Improved Local Storm Report Entry
  - More accurate placement of reports



Questions?