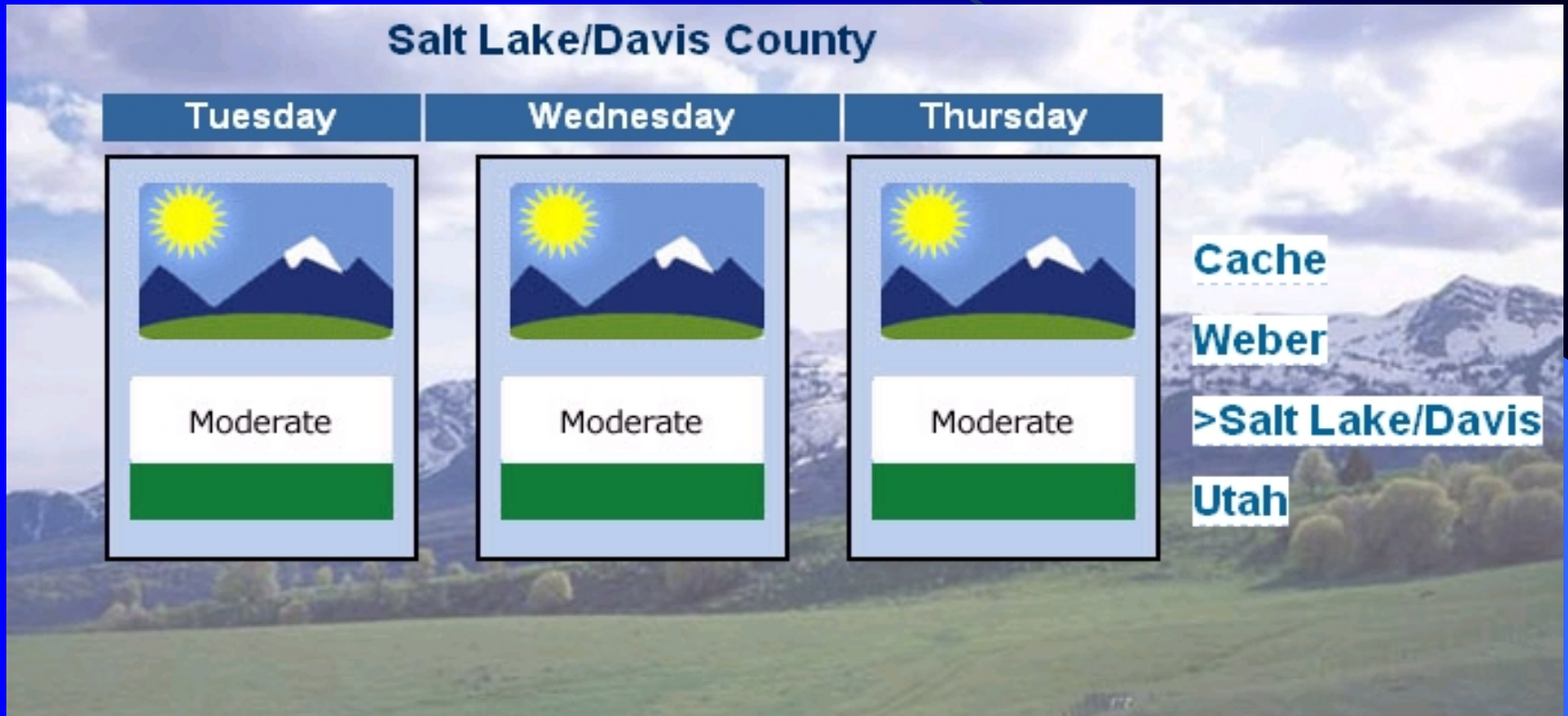


# AIR QUALITY FORECASTING

Air quality forecasts allow the public to make proactive choices about their contributions to the air quality where they live and work



# 3-DAY FORECAST



# Forecast Updates

- Forecast developed early each morning
- Re-evaluated in afternoons or as conditions change.

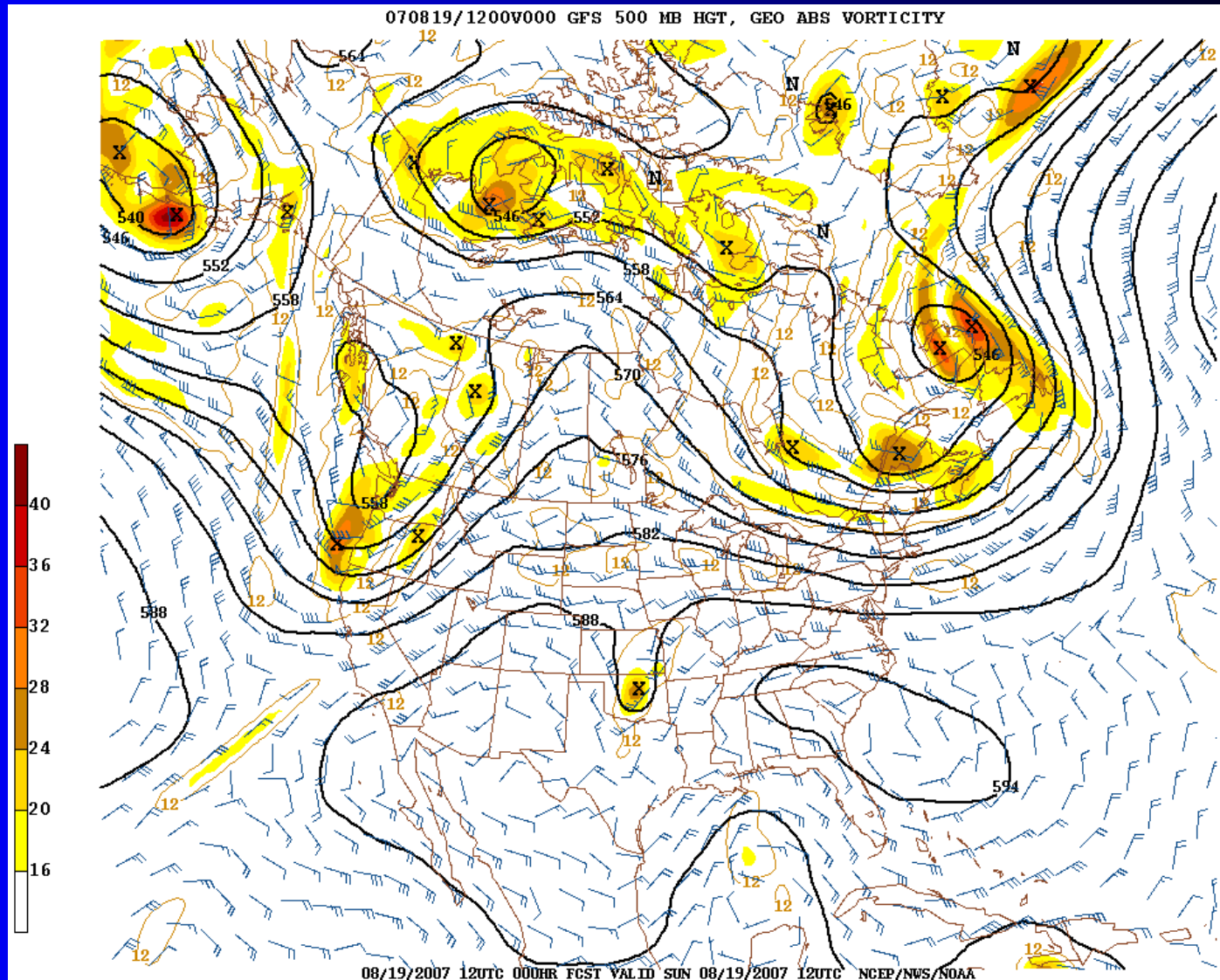
# VARIABLES CONSIDERED

Elements of concern include:

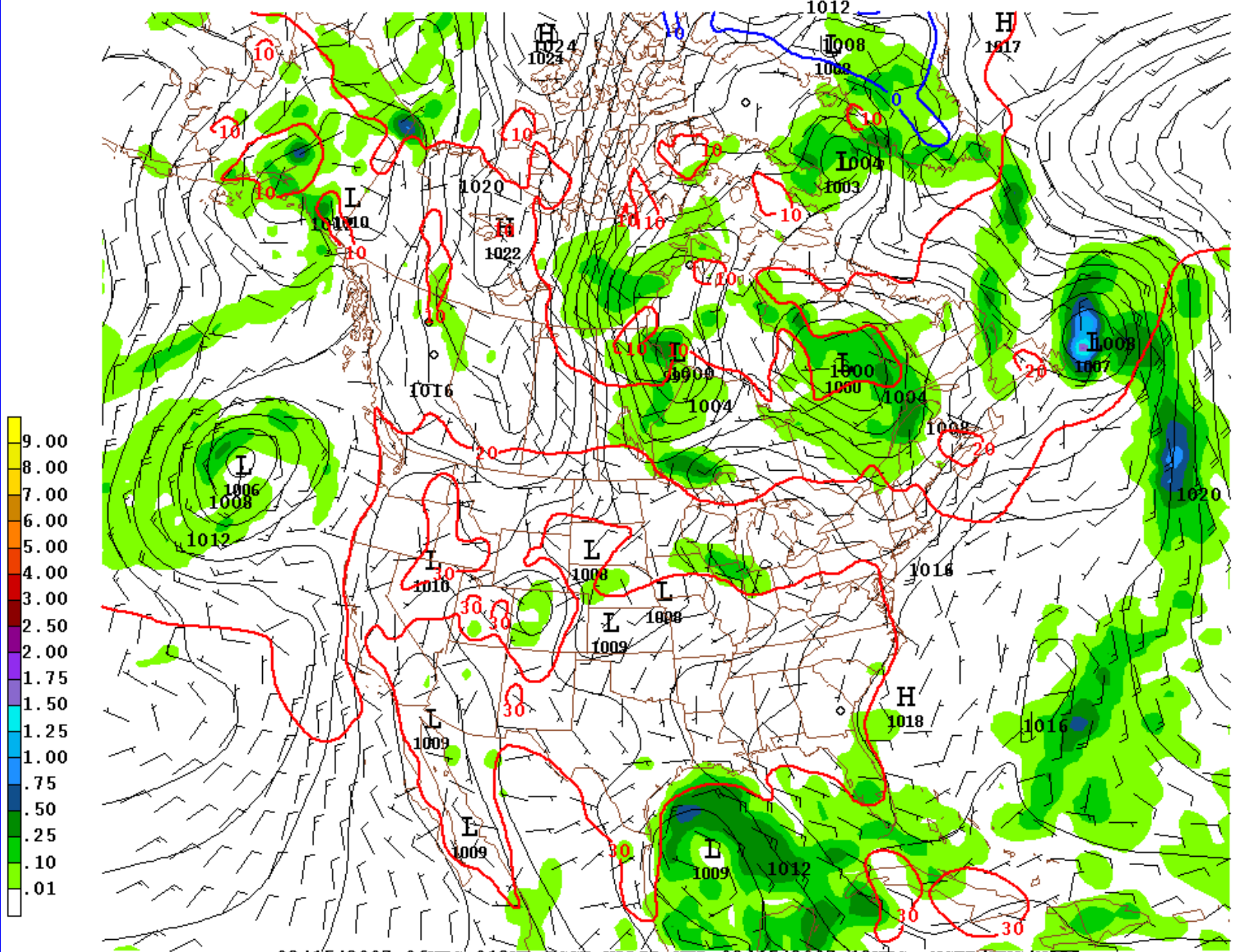
- Meteorological:
  - Approaching weather systems
  - When and where clouds will form
  - Relative Humidity
  - Wind speed and direction
  - Pollution transport
  - Air shed cleansing
  - Temperature
  - Wintertime snow cover
  - Atmospheric stability
    - Lifted Index
    - Clearing Index
    - Soundings
- Pollution concentration trends

# THE TOOLS

- NWS forecast models

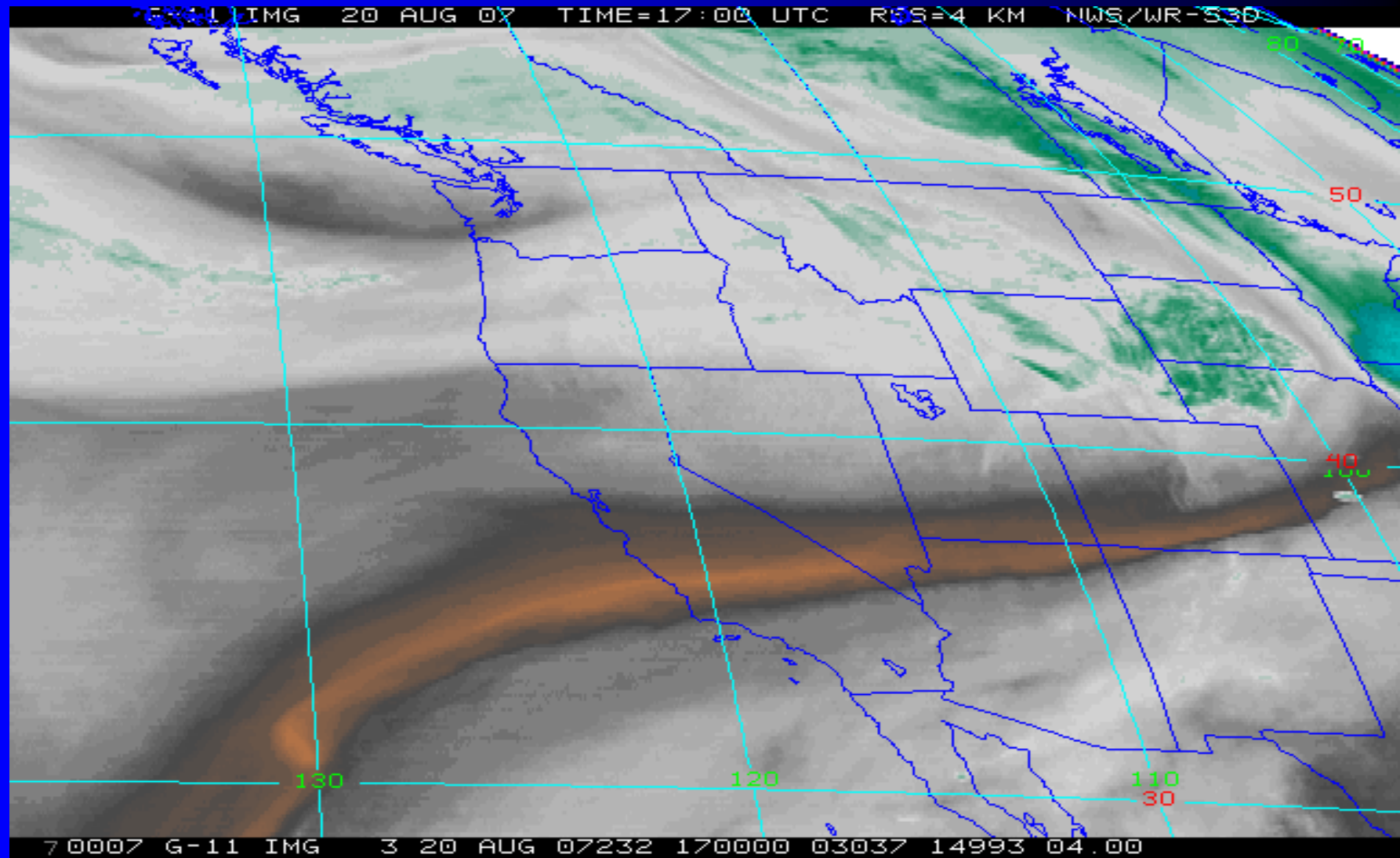


070815/1800V012 GFS MSLP 10M WIND (KNOTS) 2M TEMP (C)

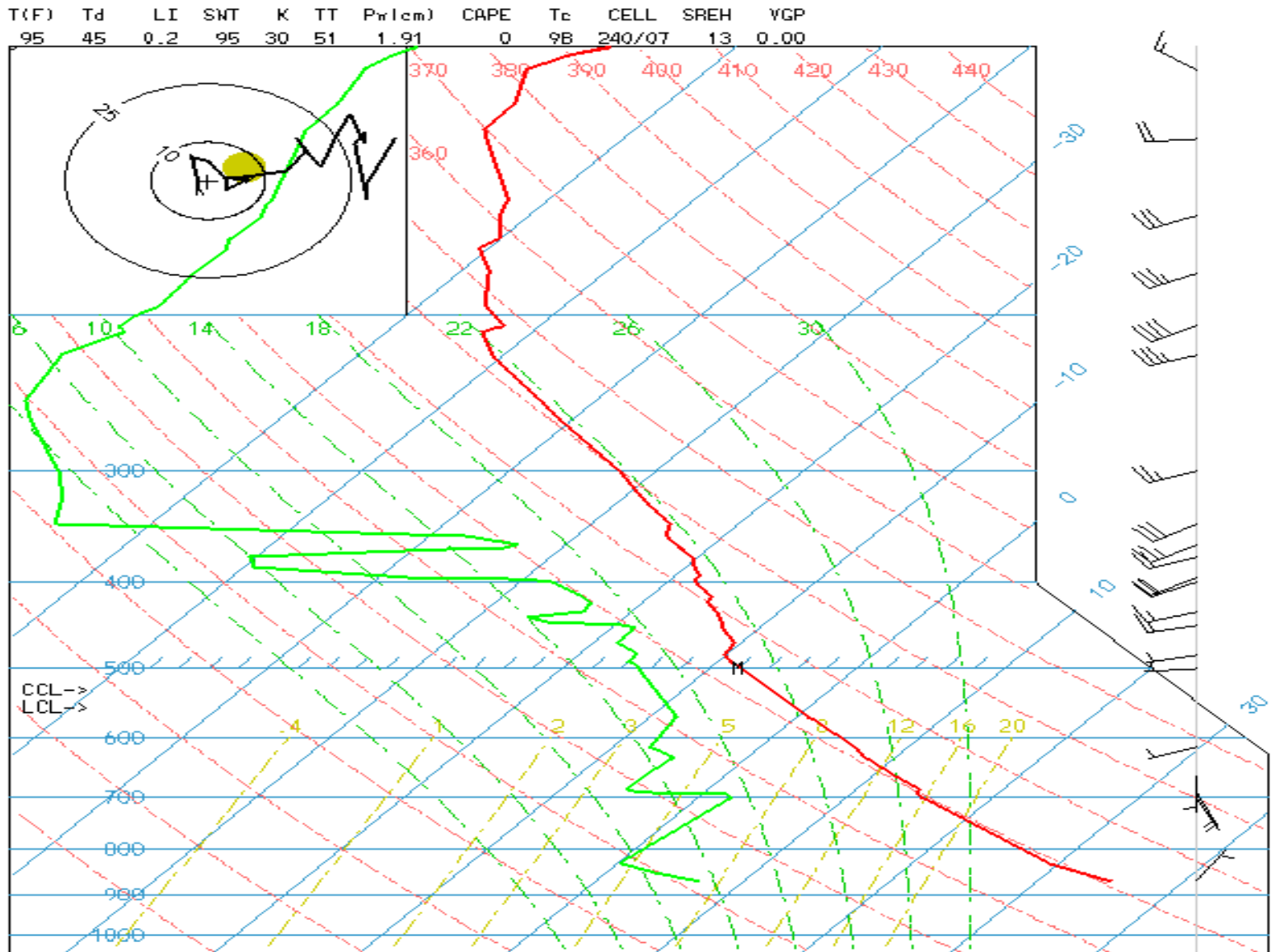


08/15/2007 06UTC 012HR FCST VALID WED 08/15/2007 18UTC NCEP/NWS/NOAA

# Satellite Images



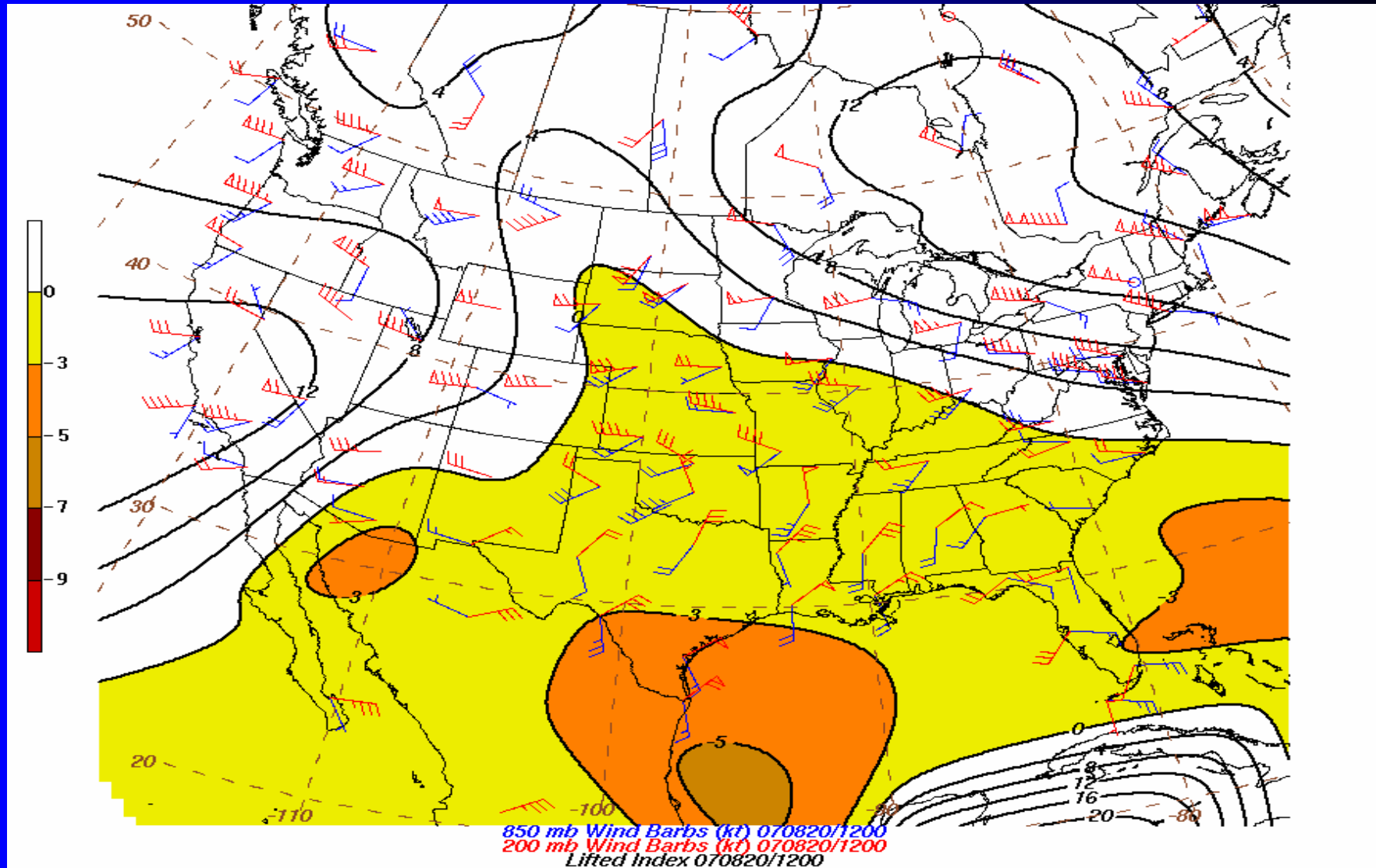
# Atmospheric Stability



SKEN-T/LOG-P VALID 0000 UTC 08/16/2007 KSLC

Lat = 40.78 , Lon = -111.97

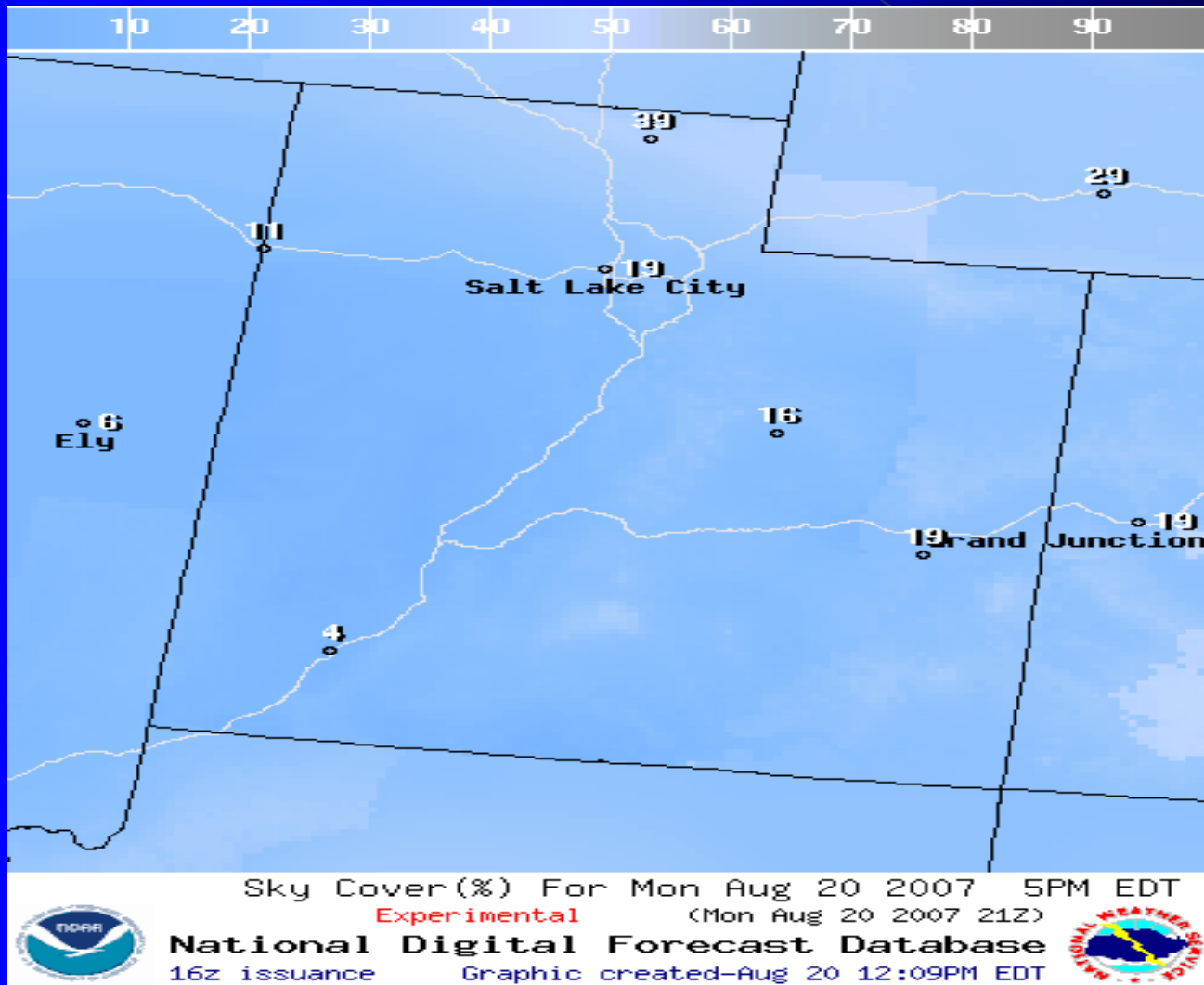
# Lifted Index



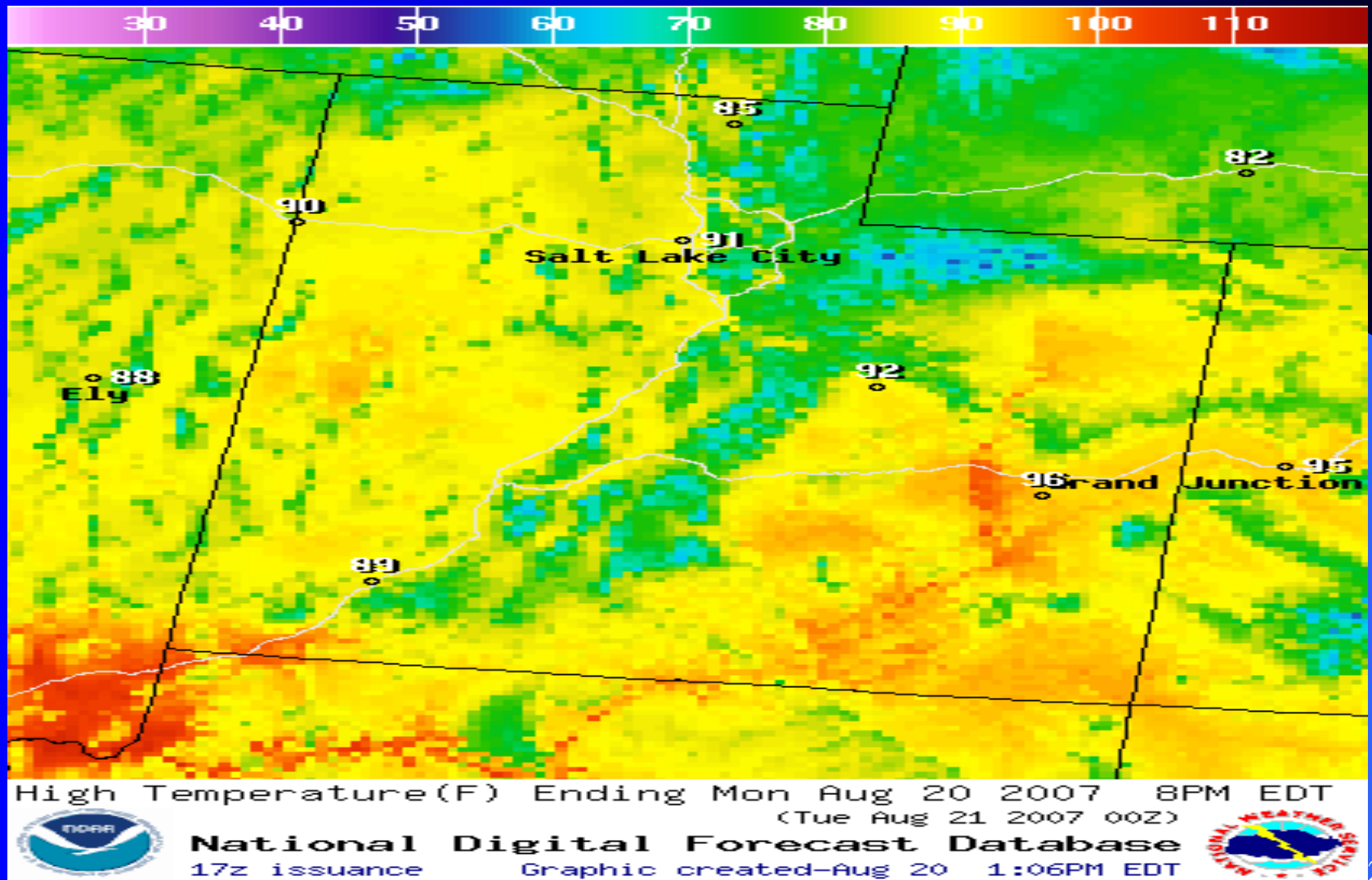
# NWS Clearing Index

- Clearing Indices for Utah for Monday August 20 2007  
Salt Lake City Index = 1000+
- Basin I Average Index = 996
- Basin II Average Index = 1000+
- Basin III Average Index = 1000+
- Yesterday's actual for Salt Lake City = 1000+
- Trend for Basin 1 = Little Change

# NWS Graphic Depiction Models



# Temperature Forecasts

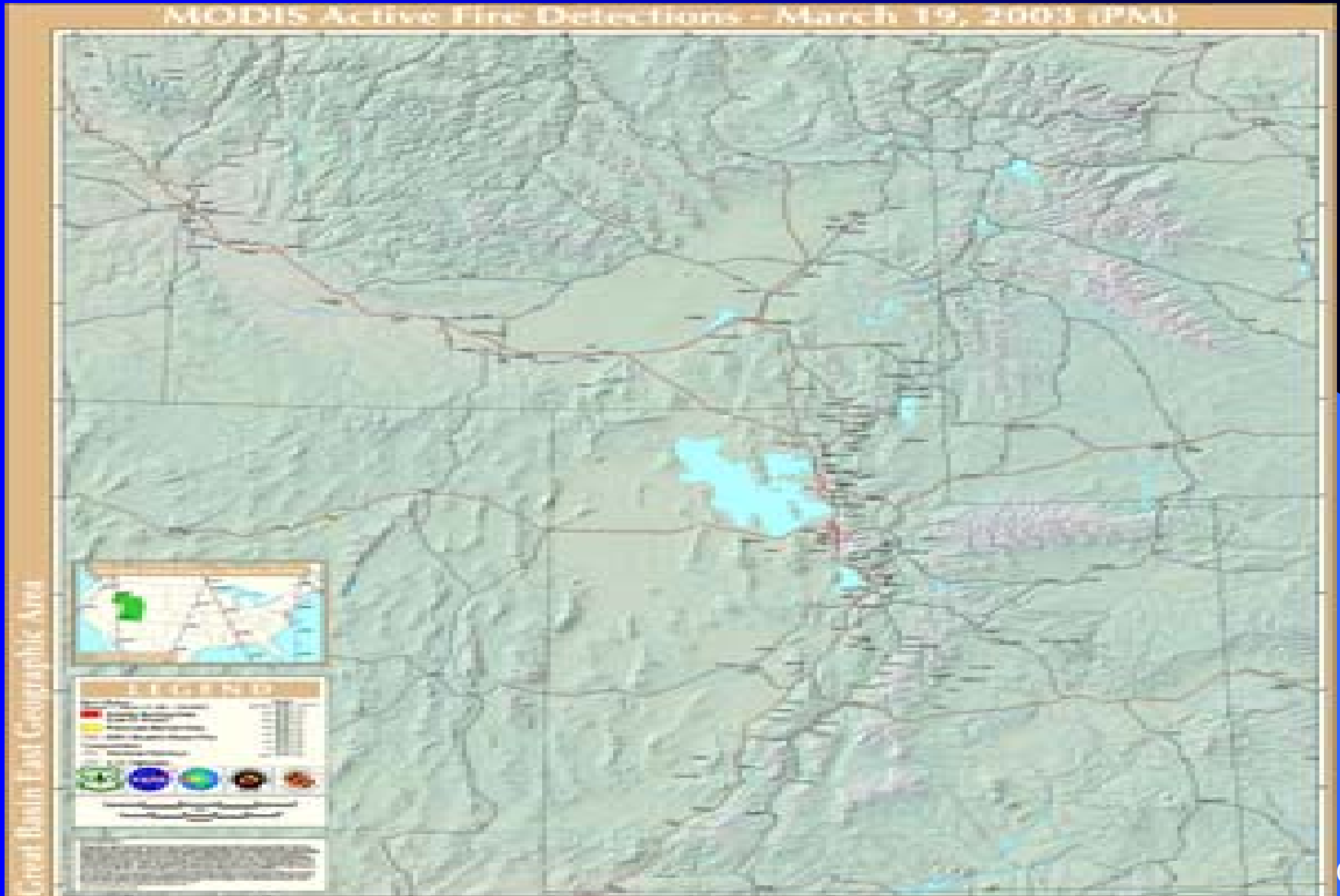


# Weather Cameras

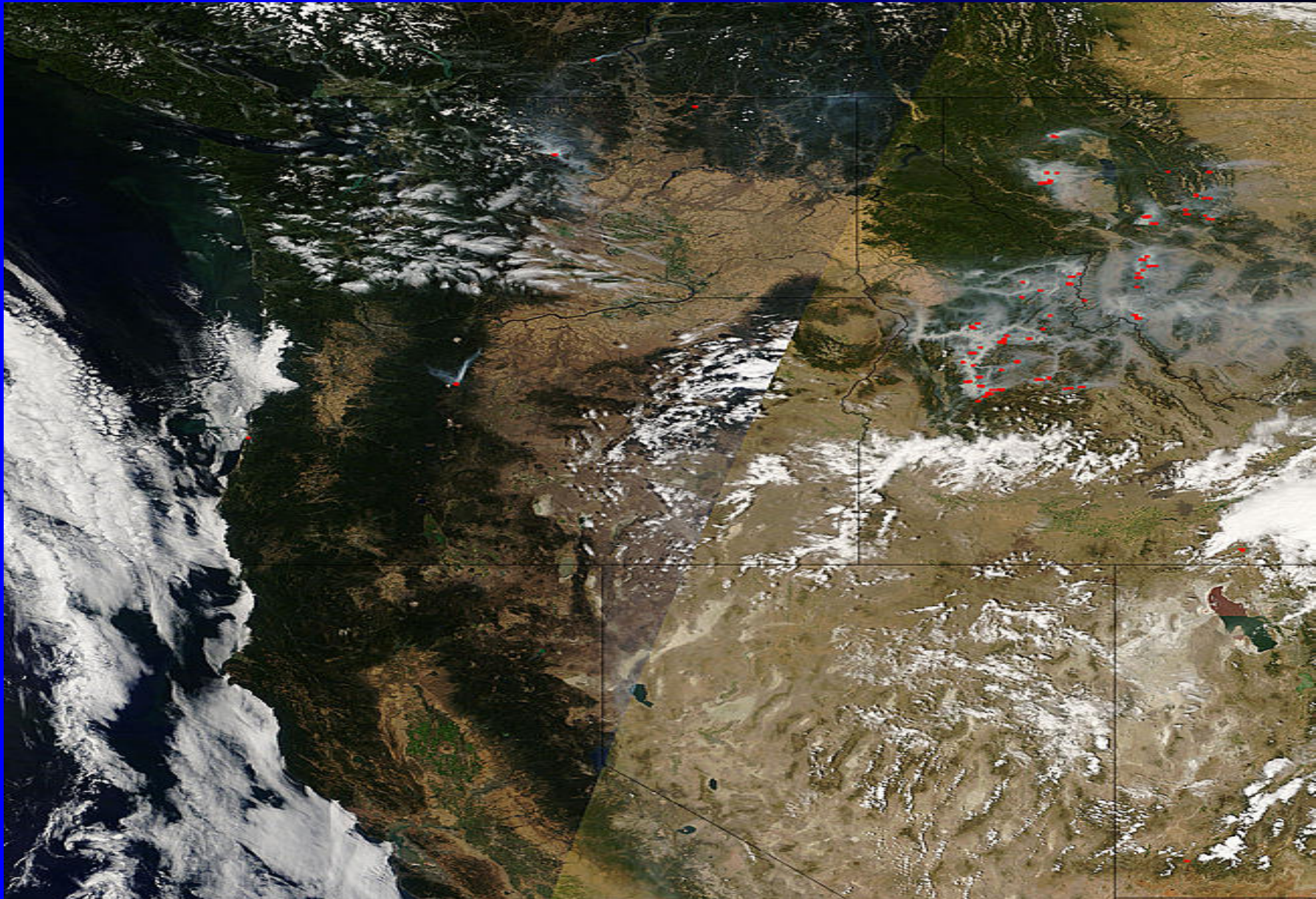
BearRiverBasin.org

11:35:41 Mon Aug 20 2007

# Fire Maps



# Fire Satellite Pics



# Current & Personal Observations

- ASUS45 KSLC 201710  
RWRUT

UTAH REGIONAL WEATHER ROUNDUP  
NATIONAL WEATHER SERVICE SALT LAKE CITY UT  
1100 AM MDT MON AUG 20 2007

UTZ001>011-023>025-201800-

NORTHERN UTAH

CITY	SKY/WX	TMP	DP	RH	WIND	PRES	REMARKS
DUGWAY	SUNNY	77	41	27	NW6	30.13R	
HILL AFB	SUNNY	72	37	28	SE5	30.17R	
LOGAN	SUNNY	69	41	36	VRB5	30.15S	
OGDEN	SUNNY	71	45	39	MISG	30.14R	
PROVO AIRPORT	NOT AVBL						
SALT LAKE CITY	SUNNY	75	39	27	NW5	30.12S	
VERNAL	SUNNY	75	39	27	SE6	30.14R	
WENDOVER	SUNNY	72	37	28	CALM	30.13S	
WEST JORDAN	SUNNY	73	43	33	NW3	30.15R	

# Data Analysis

- E-DAS/ATX US AQI Facility Summary
- Generated: 2007-08-20 12:00:41
  
- Facility: Utah Air Monitoring Center
- Report period: 11-hour period ending 2007-08-20 10:00:00

● Site	Index	Pollutant	Date / Time	Value
● -----	-----	-----	-----	-----
● B4	39	O3-8h	2007-08-20 00:00	.051
● BR	34	O3-1h	2007-08-20 00:00	.044
● BV	30	O3-8h	2007-08-20 00:00	.038
● CW	30	O3-8h	2007-08-20 00:00	.040
● H2	37	O3-8h	2007-08-20 00:00	.048
● HG	38	O3-8h	2007-08-20 00:00	.049
● HV	36	O3-8h	2007-08-20 00:00	.047
● L4	29	O3-8h	2007-08-20 00:00	.037
● NP	33	O3-8h	2007-08-20 00:00	.043
● SF	39	O3-8h	2007-08-20 00:00	.051
● SW	37	O3-8h	2007-08-20 00:00	.048
● T3	36	O3-8h	2007-08-20 00:00	.047
● WT	30	O3-8h	2007-08-20 00:00	.039
● WV	34	O3-8h	2007-08-20 00:00	.044

# EXPERIENCE & PROFESSIONAL CONSULTATION

# Summary

- Forecast is Used by EPA's National Air Now Forecast Effort and USA Today
- Always Error on the Side of Caution
- Always Learning