OK-FIRE: A Weather-Based Operational Decision Support System for Wildland Fire Management

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Wildfires
SUMNER


Prescribed Burns


Smoke


OK-FIRE
Started in 2005 with Joint Fire Science Program Grant
Now a Program of the Oklahoma Mesonet

What is "OK-FIRE" ?

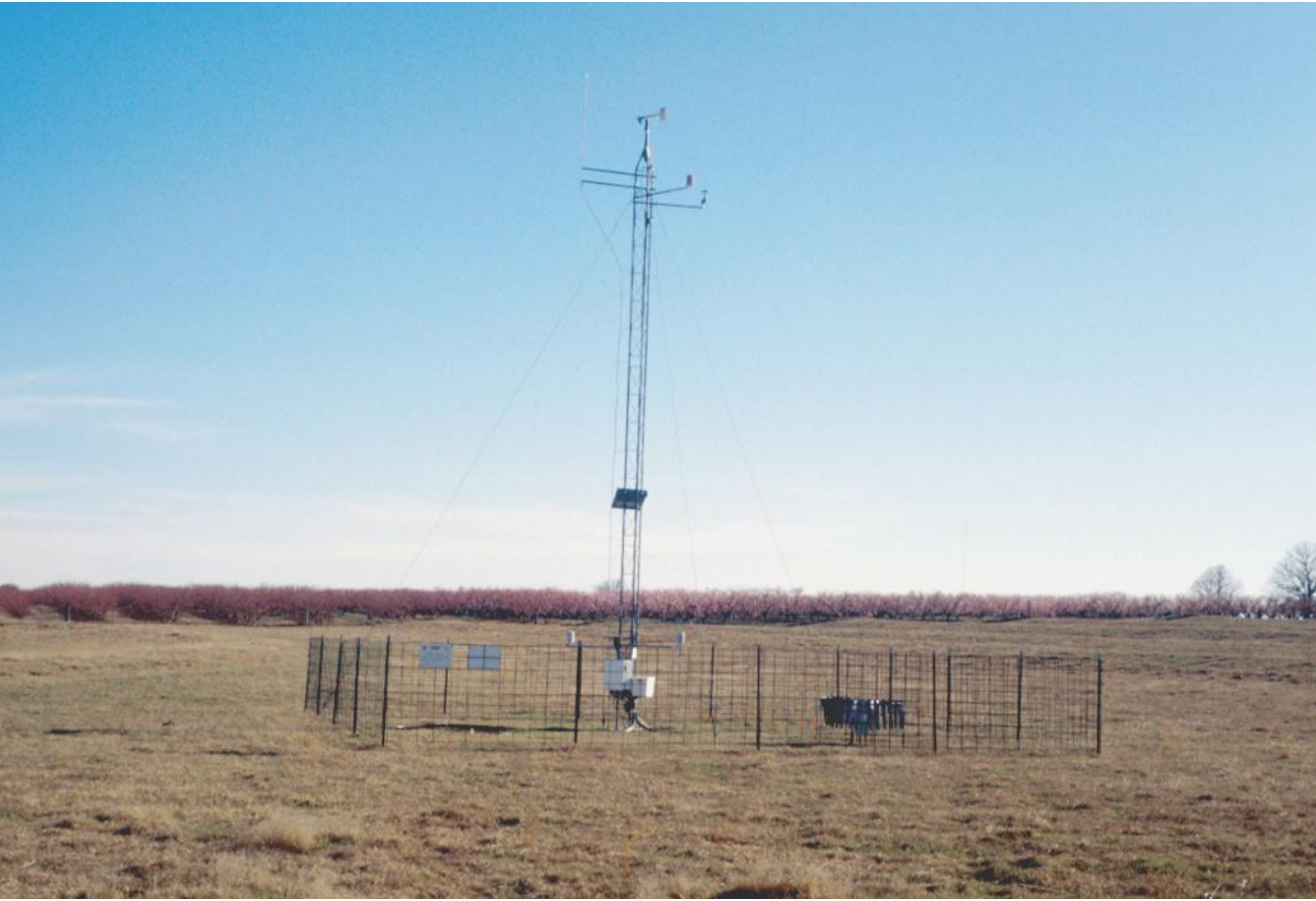
- Suite of *weather-based products* developed for wildland fire management in Oklahoma
- Stand-alone wildland fire management *web site*
- *Regional training and support* for users

OK-FIRE User Groups

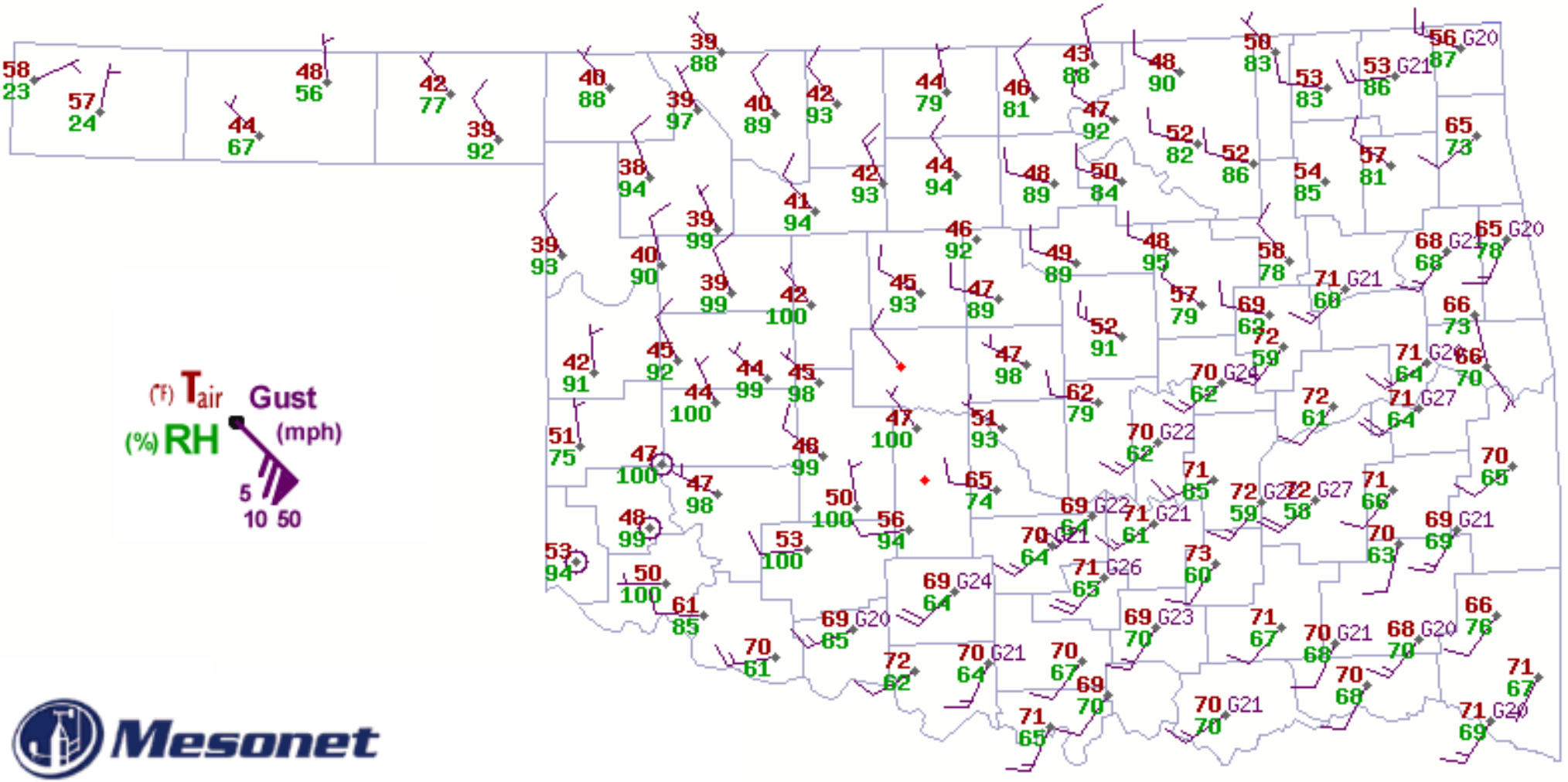
- US Forest Service
- Bureau of Indian Affairs
- US Army Corps of Engineers
- National Park Service
- US Fish and Wildlife Service
- Natural Resources Conservation Service
- Oklahoma Forestry Services
- Oklahoma Dept. of Wildlife Conservation
- The Nature Conservancy
- Fire Departments / Emergency Managers
- Private Landowners

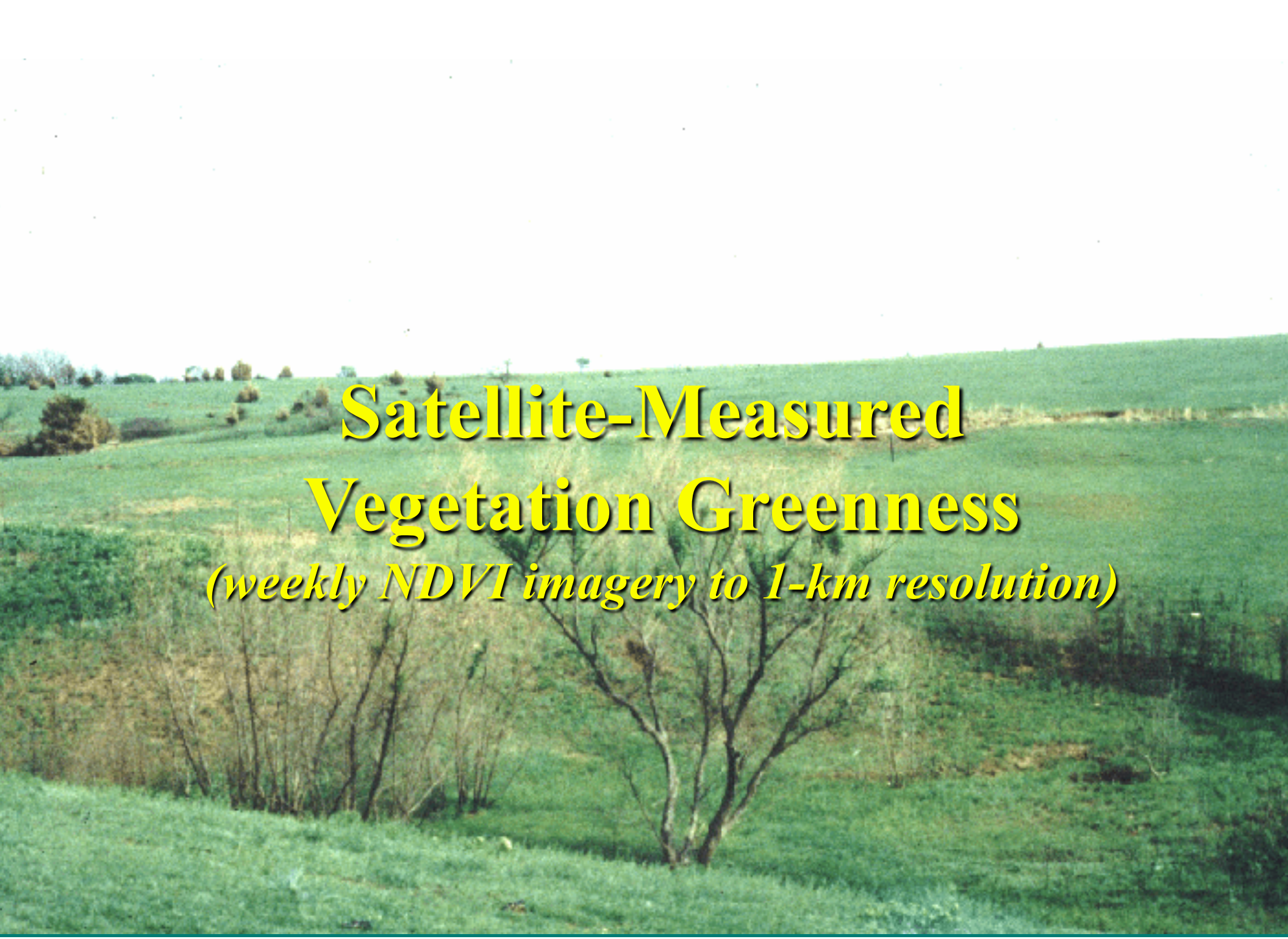

Data Sources

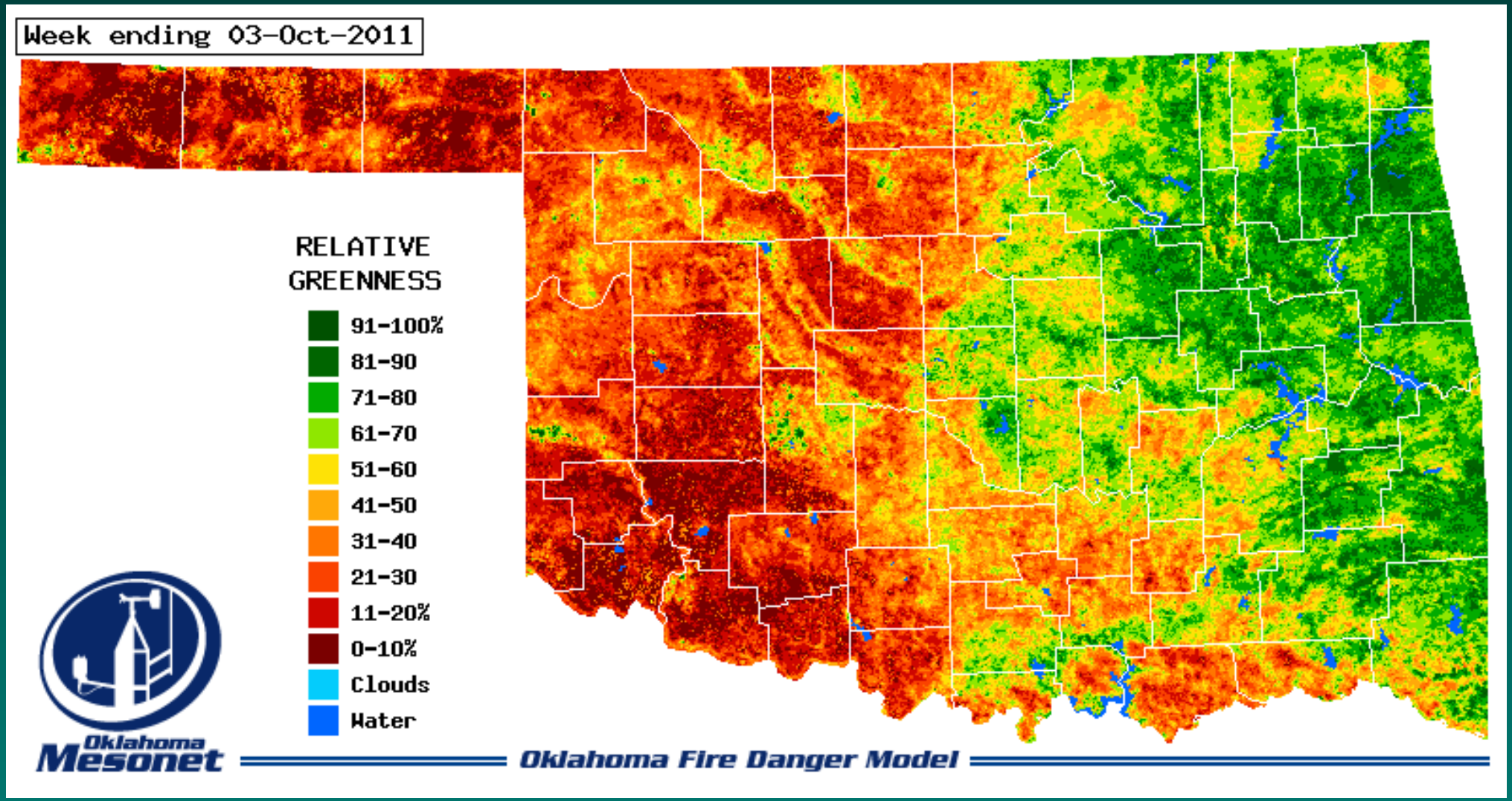

The OKLAHOMA MESONET
(current and past weather conditions)

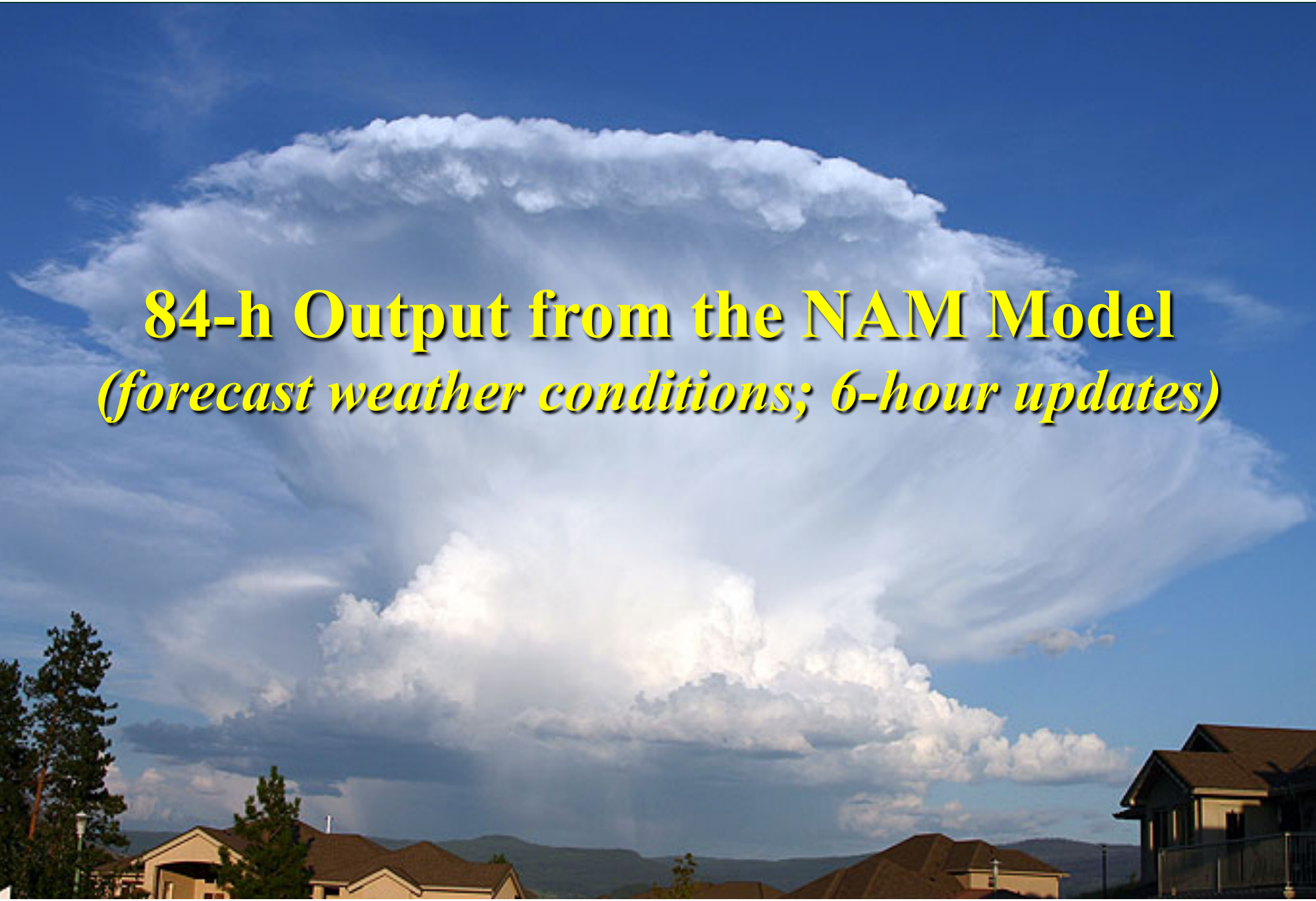


Oklahoma Mesonet Tower Locations


(°F) Tair
Gust
(%) RH
(mph)
5
10 50
Mesonet
Current Fire Weather Conditions
1:00 pm January 17, 2000 CST


Satellite-Measured
Vegetation Greenness
(weekly NDVI imagery to 1-km resolution)


Week ending 03-Oct-2011
RELATIVE GREENNESS
91-100%
81-90
71-80
61-70
51-60
41-50
31-40
21-30
11-20%
0-10%
Clouds
Water
Oklahoma Mesonet
Oklahoma Fire Danger Model


84-h Output from the NAM Model
(forecast weather conditions; 6-hour updates)


“OK-FIRE” PRODUCTS

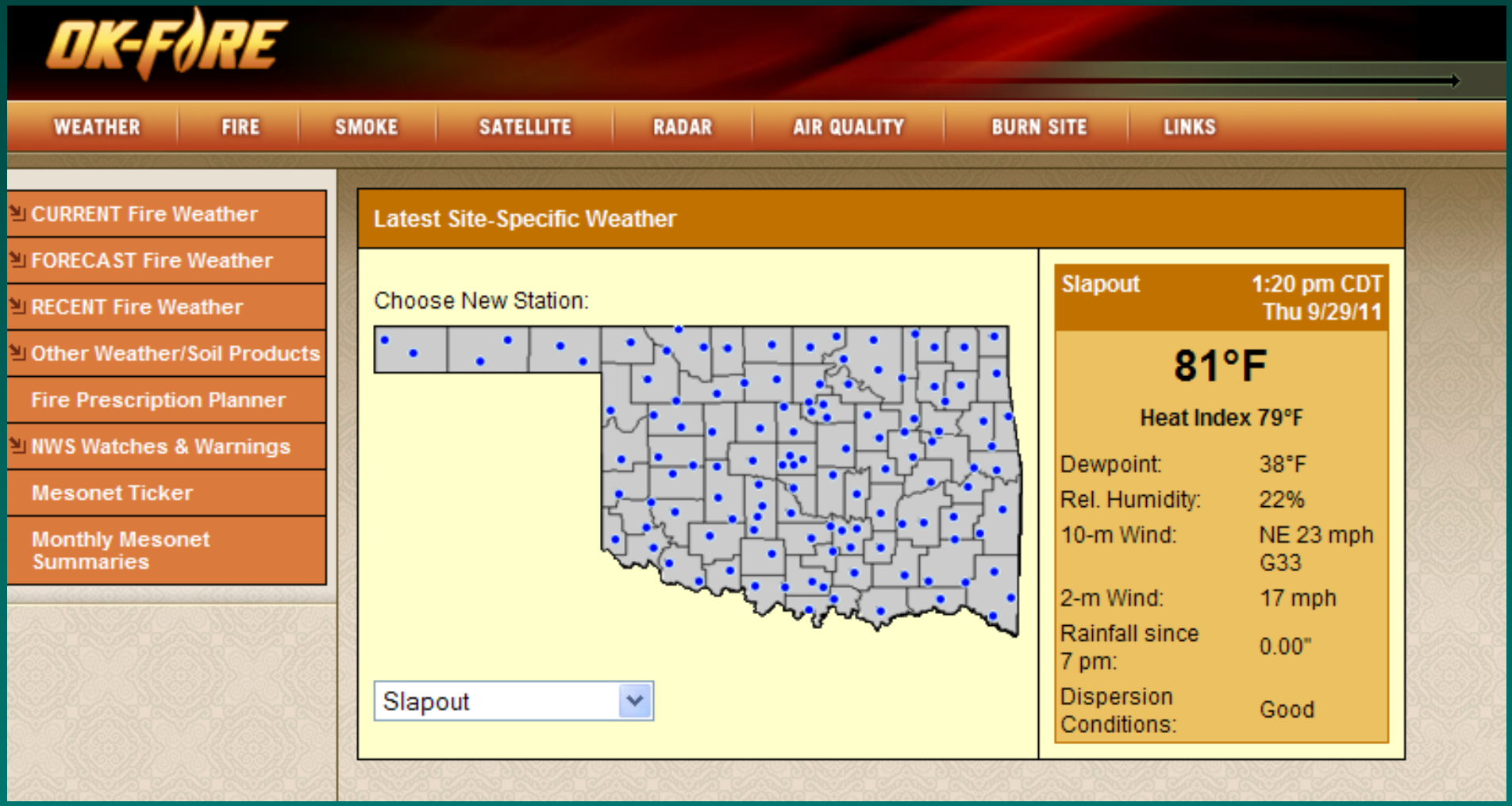

Time Modes of Products

Time Modes of Products

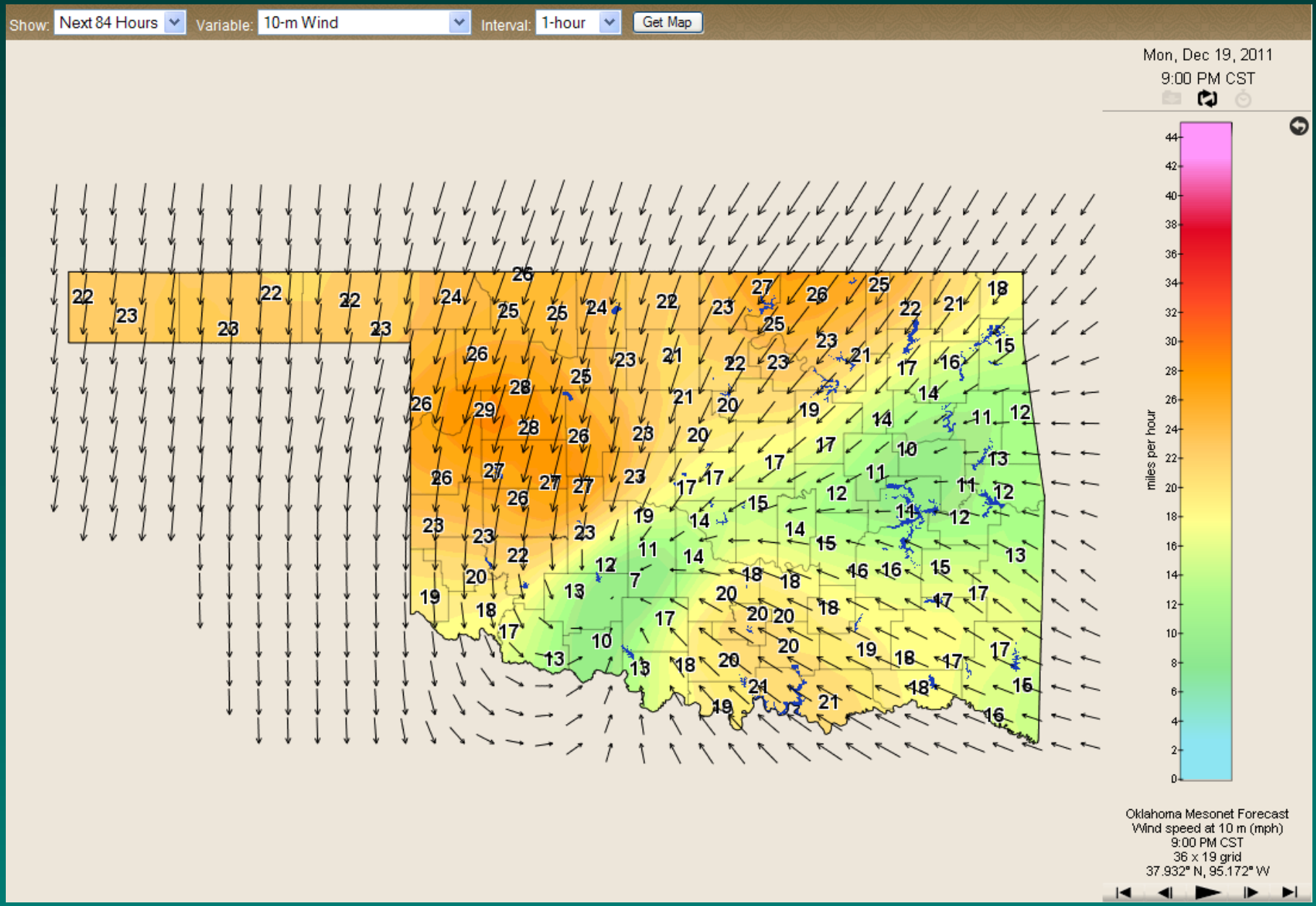
- **Past *(going back 30 days; weekly products, 1 year)***
- **Current *(most recent)***
- **Forecast *(through end of 84-h forecast period)***

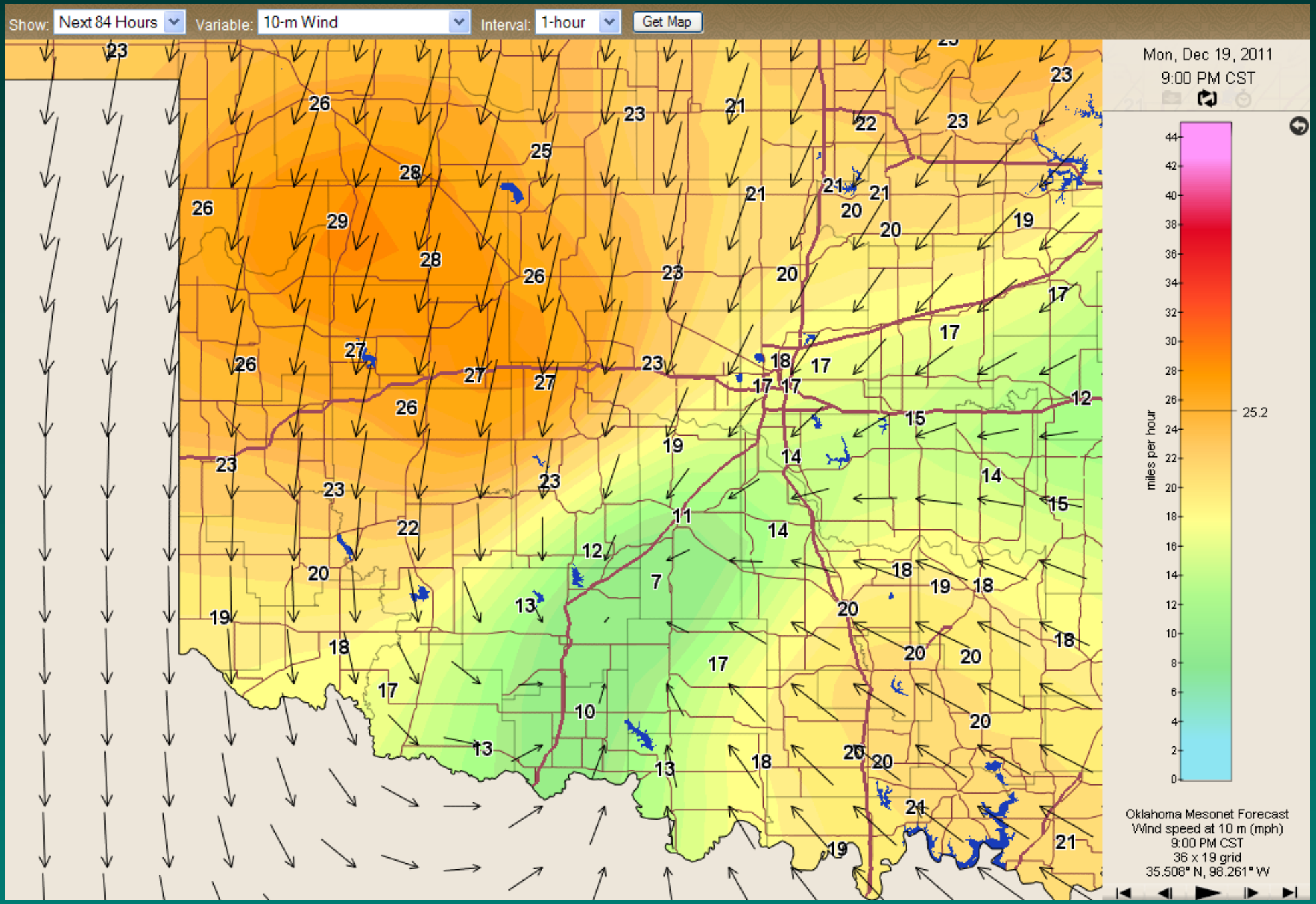

Types of Products

Site-Specific Data Boxes

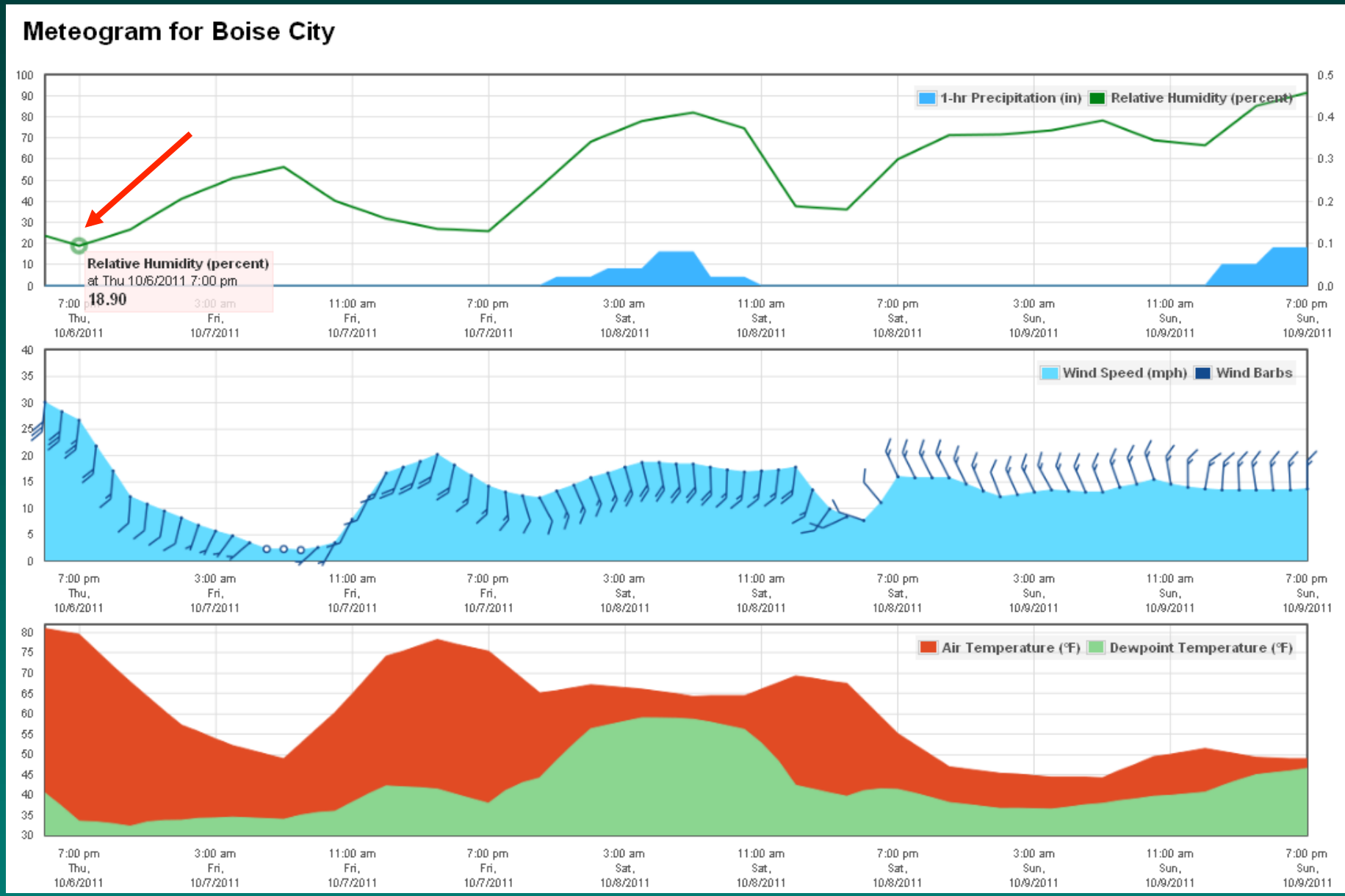


Dynamic Maps




Show: Next 84 Hours
Variable: 10-m Wind
Interval: 1-hour
Get Map
Mon, Dec 19, 2011
9:00 PM CST
miles per hour
25.2
Oklahoma Mesonet Forecast
Wind speed at 10 m (mph)
9:00 PM CST
36 x 19 grid
35.508° N, 98.261° W

Site-Specific Charts



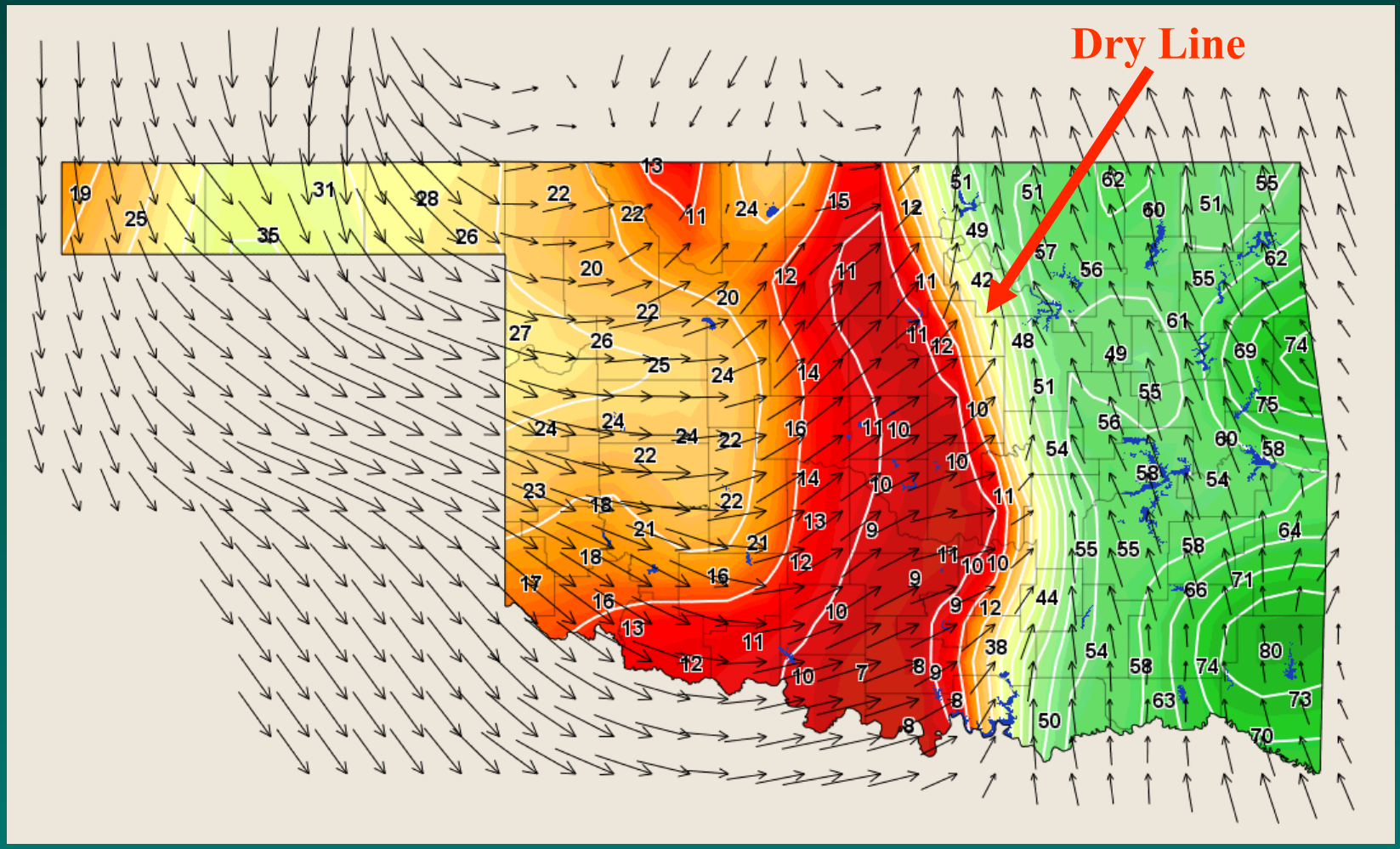
Site-Specific Tables

Site-Specific Forecast Table for Boise City								
DATE TIME	TAIR	TDEW	RELH	WDIR	WSPD	1-hr PRECIP	SRAD	CLOUD
Thu Oct 06, 2011 5:00 pm CDT	81°F	40°F	24%	S	30 mph	0.00 in.	431 W/m2	67%
Thu Oct 06, 2011 6:00 pm CDT	80°F	37°F	21%	S	28 mph	0.00 in.	248 W/m2	34%
Thu Oct 06, 2011 7:00 pm CDT	80°F	34°F	19%	S	27 mph	0.00 in.	65 W/m2	2%
Thu Oct 06, 2011 8:00 pm CDT	76°F	33°F	21%	S	22 mph	0.00 in.	0 W/m2	1%
Thu Oct 06, 2011 9:00 pm CDT	72°F	33°F	24%	S	17 mph	0.00 in.	0 W/m2	1%
Thu Oct 06, 2011 10:00 pm CDT	68°F	32°F	27%	S	12 mph	0.00 in.	0 W/m2	0%
Thu Oct 06, 2011 11:00 pm CDT	64°F	33°F	32%	S	11 mph	0.00 in.	0 W/m2	0%
Fri Oct 07, 2011 12:00 am CDT	61°F	34°F	36%	S	9 mph	0.00 in.	0 W/m2	0%
Fri Oct 07, 2011 1:00 am CDT	57°F	34°F	41%	SSW	8 mph	0.00 in.	0 W/m2	0%
Fri Oct 07, 2011 2:00 am CDT	56°F	34°F	44%	SSW	7 mph	0.00 in.	0 W/m2	0%
Fri Oct 07, 2011 3:00 am CDT	54°F	34°F	48%	SSW	6 mph	0.00 in.	0 W/m2	0%
Fri Oct 07, 2011 4:00 am CDT	52°F	35°F	51%	SW	5 mph	0.00 in.	0 W/m2	0%
Fri Oct 07, 2011 5:00 am CDT	51°F	34°F	53%	SW	3 mph	0.00 in.	0 W/m2	6%
Fri Oct 07, 2011 6:00 am CDT	50°F	34°F	54%	WSW	2 mph	0.00 in.	0 W/m2	11%
Fri Oct 07, 2011 7:00 am CDT	49°F	34°F	56%	WNW	2 mph	0.00 in.	0 W/m2	17%
Fri Oct 07, 2011 8:00 am CDT	53°F	35°F	51%	W	2 mph	0.00 in.	148 W/m2	21%
Fri Oct 07, 2011 9:00 am CDT	56°F	36°F	46%	SW	2 mph	0.00 in.	296 W/m2	26%
Fri Oct 07, 2011 10:00 am CDT	60°F	36°F	40%	SSW	3 mph	0.00 in.	444 W/m2	31%
Fri Oct 07, 2011 11:00 am CDT	65°F	38°F	37%	SSW	8 mph	0.00 in.	566 W/m2	21%
Fri Oct 07, 2011 12:00 pm CDT	69°F	40°F	35%	SSW	12 mph	0.00 in.	687 W/m2	10%
DATE TIME	TAIR	TDEW	RELH	WDIR	WSPD	1-hr PRECIP	SRAD	CLOUD
Fri Oct 07, 2011 1:00 pm CDT	74°F	42°F	32%	SSW	17 mph	0.00 in.	808 W/m2	0%
Fri Oct 07, 2011 2:00 pm CDT	75°F	42°F	30%	SSW	18 mph	0.00 in.	751 W/m2	1%
Fri Oct 07, 2011 3:00 pm CDT	77°F	42°F	29%	SSW	19 mph	0.00 in.	694 W/m2	1%
Fri Oct 07, 2011 4:00 pm CDT	78°F	41°F	27%	SSW	20 mph	0.00 in.	637 W/m2	2%
Fri Oct 07, 2011 5:00 pm CDT	77°F	40°F	27%	SSW	18 mph	0.00 in.	445 W/m2	1%
Fri Oct 07, 2011 6:00 pm CDT	76°F	39°F	26%	S	16 mph	0.00 in.	252 W/m2	1%
Fri Oct 07, 2011 7:00 pm CDT	75°F	38°F	26%	S	14 mph	0.00 in.	59 W/m2	0%
Fri Oct 07, 2011 8:00 pm CDT	72°F	41°F	33%	S	13 mph	0.00 in.	0 W/m2	30%
Fri Oct 07, 2011 9:00 pm CDT	69°F	43°F	40%	SSE	12 mph	0.00 in.	0 W/m2	60%
Fri Oct 07, 2011 10:00 pm CDT	65°F	44°F	47%	SSE	12 mph	0.00 in.	0 W/m2	90%
Fri Oct 07, 2011 11:00 pm CDT	66°F	48°F	54%	SSE	13 mph	0.02 in.	0 W/m2	91%


Subject Areas

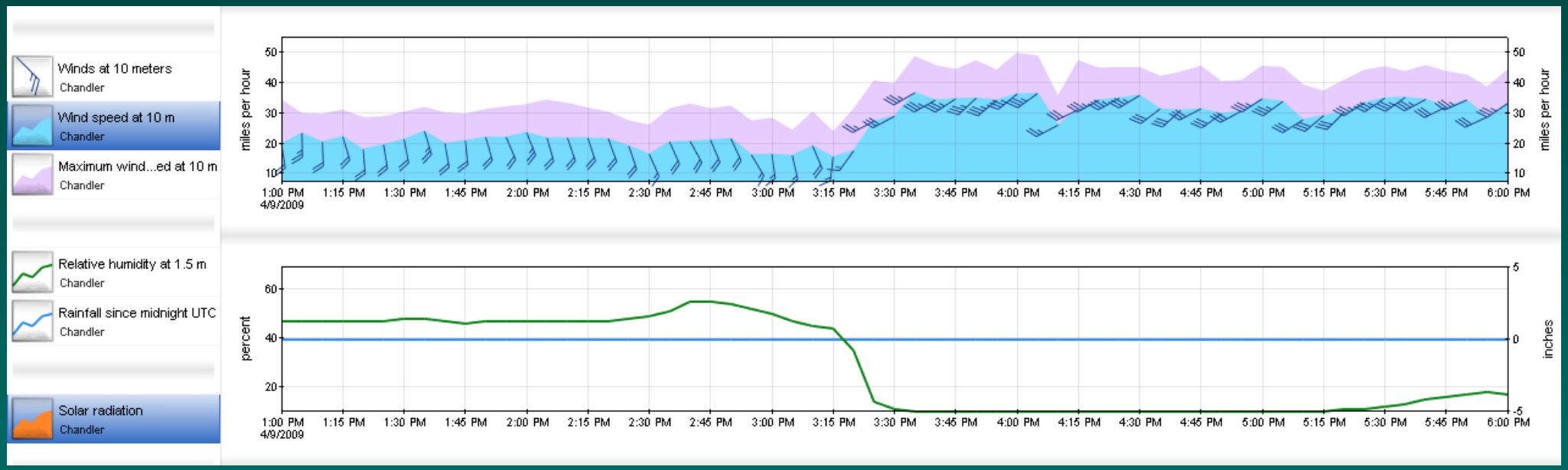

Fire Weather
SUMNER

Maps



Relative Humidity & Wind Vectors (4 p.m. April 9, 2009)

Site-Specific Charts



Wind and relative humidity at Chandler, showing passage of the dry line around 3:20 p.m. April 9, 2009


Fire Danger

Fire Danger Model

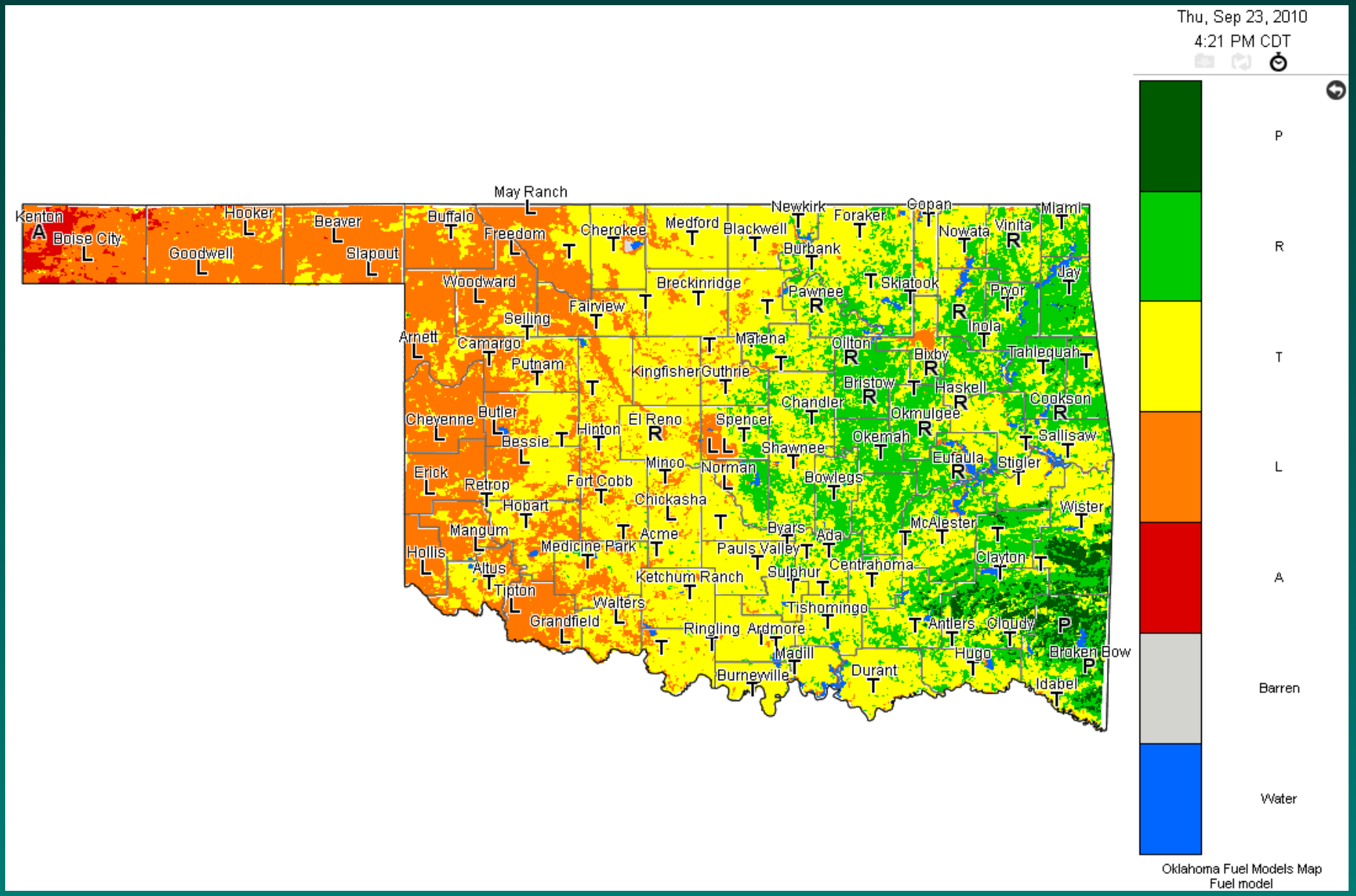
- National Fire Danger Rating System
- Nelson Model *(dead fuel moisture)*
- Weekly Satellite-Measured NDVI *(live fuel moisture; live/dead fuel load distribution)*

FUEL MODEL + GREENNESS LEVEL + WEATHER

FIRE DANGER MODEL

FIRE DANGER

Oklahoma Default Fuel Models



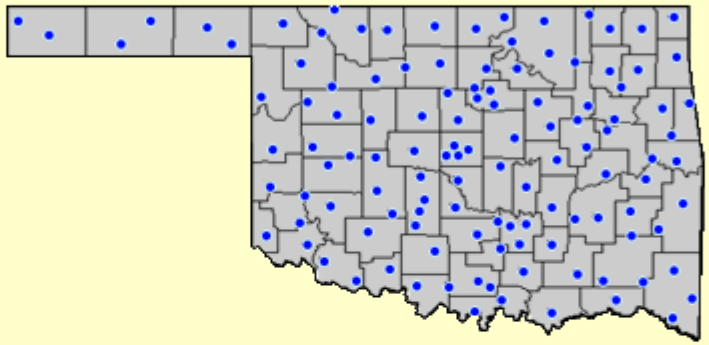
OK-FIRE

WEATHER | FIRE | SMOKE | SATELLITE | RADAR | AIR QUALITY | BURN SITE | LINKS

- CURRENT Fire Danger
- FORECAST Fire Danger
- RECENT Fire Danger
- Relative Greenness Map
- Station Fuel Model Options
- Default Fuel Models Map
- Fire Prescription Planner
- NWS Fire Watches/Warnings
- Fire Weather Forecasts
- Satellite Fire Detection
- Current/Past Fire Activity
- County Burn Bans

Fuel Model Selection

Click on the map to choose a site.



Station: Woodward

Default Fuel Model: **L - Western perennial grasses**

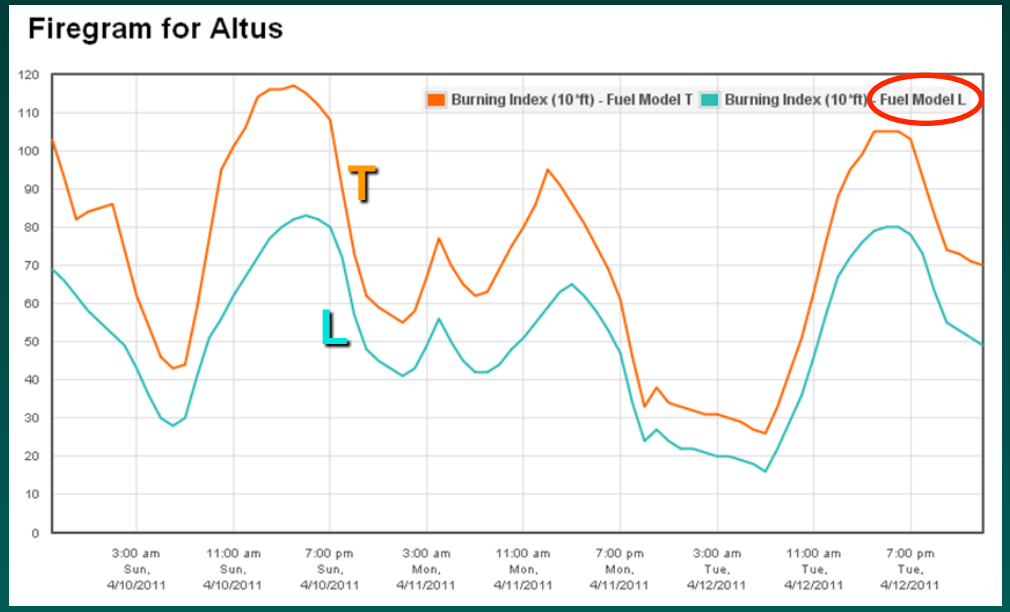
Current Fuel Model: **L - Western perennial grasses**

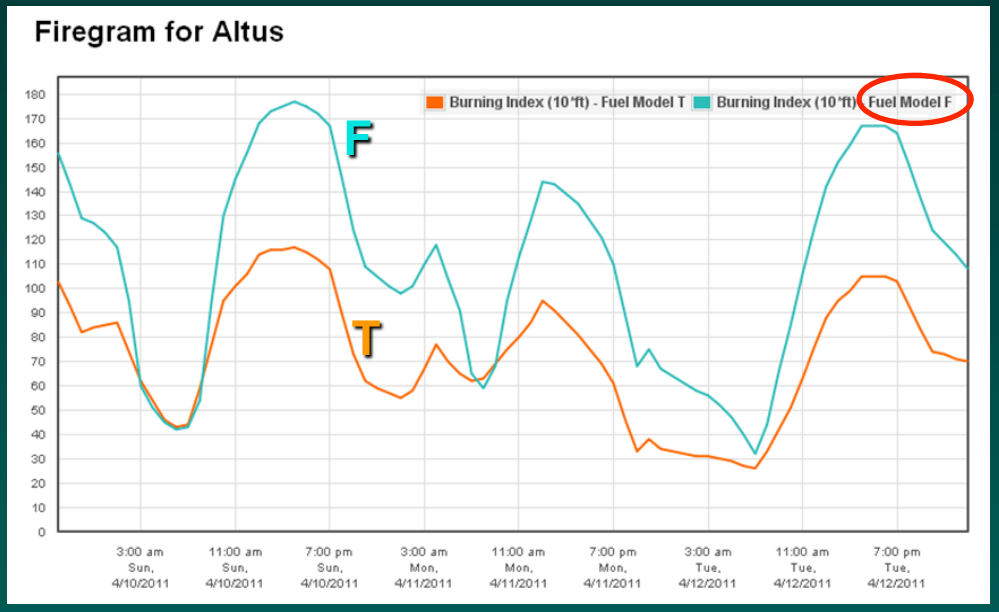
Fuel Model Descriptions

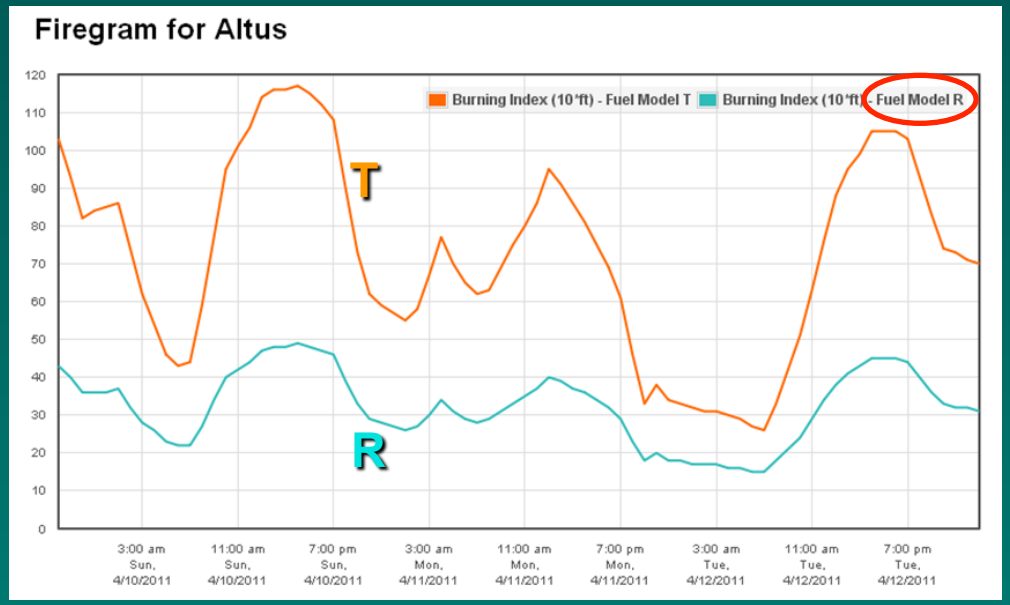
Change Current Fuel Model to: A - Western annual grasses

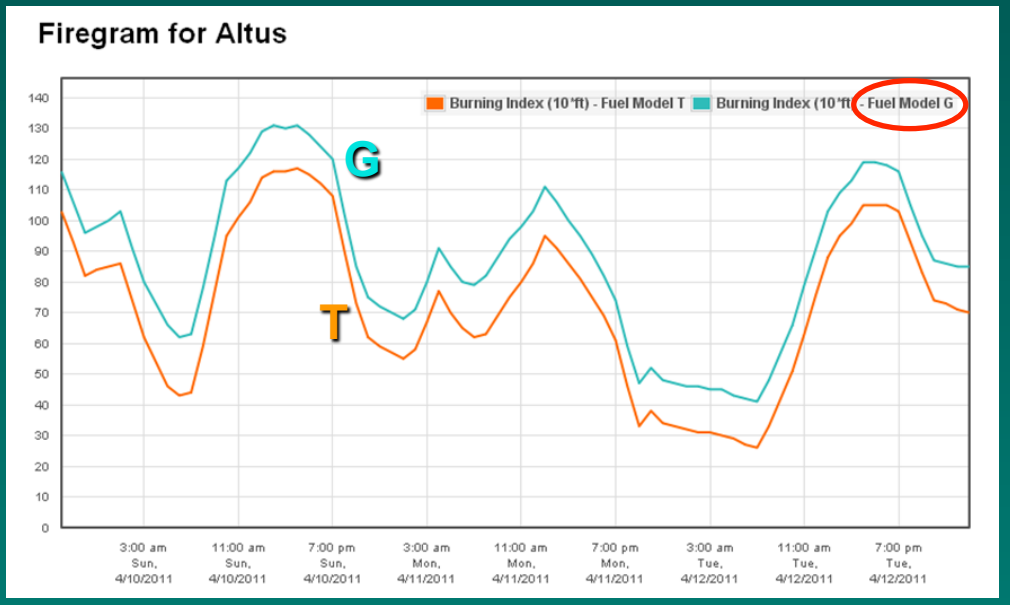
- A - Western annual grasses
- D - Southern rough brush
- F - Intermediate brush
- G - Forest with heavy downed fuels
- K - Light slash
- L - Western perennial grasses
- N - Sawgrass
- P - Southern pine forest
- R - Hardwood forest
- T - Tallgrass with brush

Save Fue


Firegram for Altus
Burning Index (10*ft) - Fuel Model T
Burning Index (10*ft) - Fuel Model L
T
L
3:00 am Sun, 4/10/2011
11:00 am Sun, 4/10/2011
7:00 pm Sun, 4/10/2011
3:00 am Mon, 4/11/2011
11:00 am Mon, 4/11/2011
7:00 pm Mon, 4/11/2011
3:00 am Tue, 4/12/2011
11:00 am Tue, 4/12/2011
7:00 pm Tue, 4/12/2011


Firegram for Altus
Burning Index (10*ft) - Fuel Model T
Burning Index (10*ft) - Fuel Model F
F
T
3:00 am Sun, 4/10/2011
11:00 am Sun, 4/10/2011
7:00 pm Sun, 4/10/2011
3:00 am Mon, 4/11/2011
11:00 am Mon, 4/11/2011
7:00 pm Mon, 4/11/2011
3:00 am Tue, 4/12/2011
11:00 am Tue, 4/12/2011
7:00 pm Tue, 4/12/2011

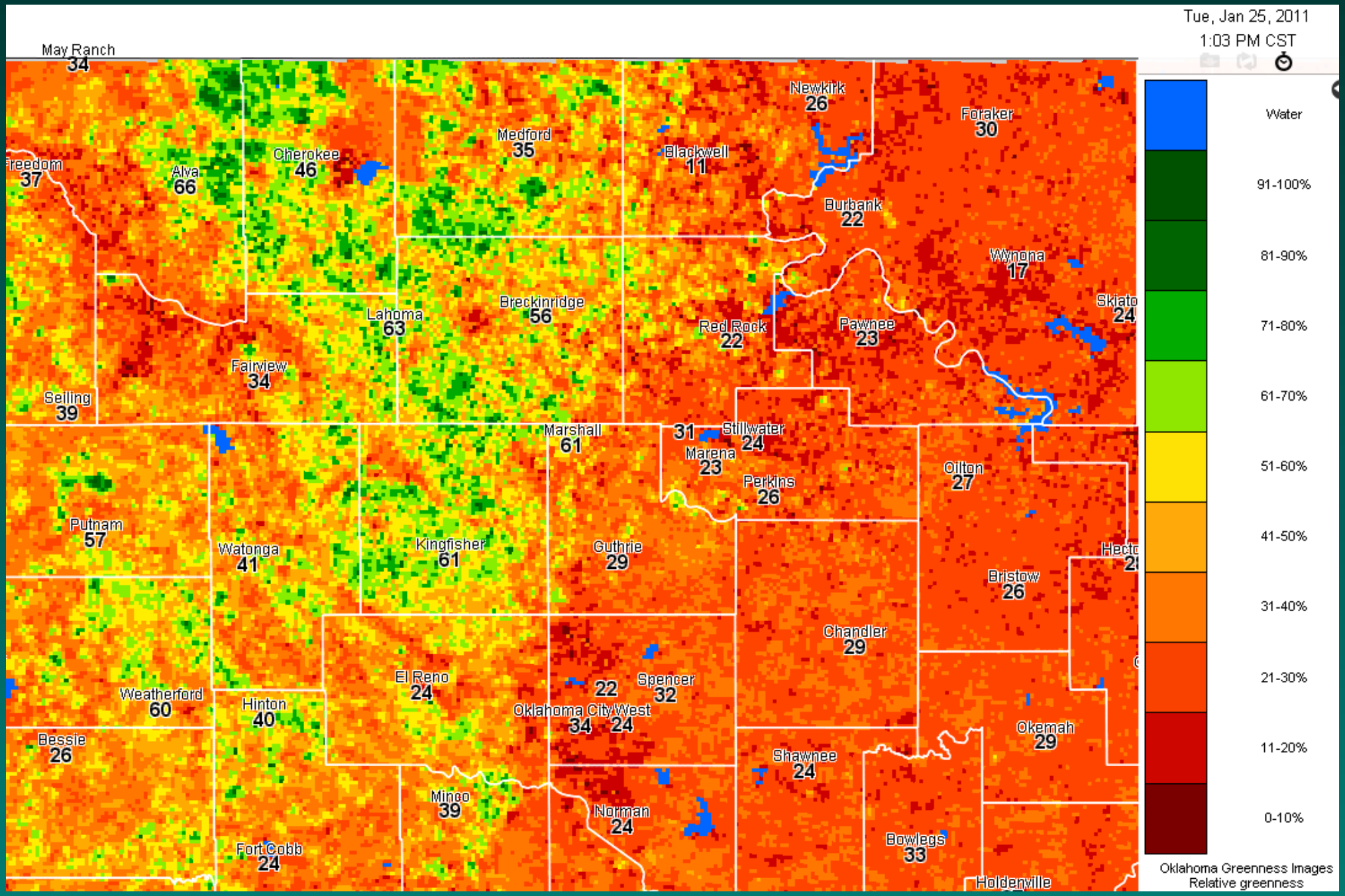

Firegram for Altus
Burning Index (10*ft) - Fuel Model T
Burning Index (10*ft) - Fuel Model R
T
R
3:00 am Sun, 4/10/2011
11:00 am Sun, 4/10/2011
7:00 pm Sun, 4/10/2011
3:00 am Mon, 4/11/2011
11:00 am Mon, 4/11/2011
7:00 pm Mon, 4/11/2011
3:00 am Tue, 4/12/2011
11:00 am Tue, 4/12/2011
7:00 pm Tue, 4/12/2011


Firegram for Altus
Burning Index (10*ft) - Fuel Model T
Burning Index (10*ft) - Fuel Model G
G
T
3:00 am Sun, 4/10/2011
11:00 am Sun, 4/10/2011
7:00 pm Sun, 4/10/2011
3:00 am Mon, 4/11/2011
11:00 am Mon, 4/11/2011
7:00 pm Mon, 4/11/2011
3:00 am Tue, 4/12/2011
11:00 am Tue, 4/12/2011
7:00 pm Tue, 4/12/2011

FUEL MODEL + GREENNESS LEVEL + WEATHER

FIRE DANGER MODEL

FIRE DANGER


Tue, Jan 25, 2011
1:03 PM CST
May Ranch
34
Freedom
37
Alva
66
Cherokee
46
Medford
35
Newkirk
26
Blackwell
11
Foraker
30
Burbank
22
Wynona
17
Skiato
24
Lahoma
63
Breckinridge
56
Red Rock
22
Pawnee
23
Fairview
34
Seiling
39
Marshall
61
31
Stillwater
24
Marena
23
Perkins
26
Oilton
27
Putnam
57
Watonga
41
Kingfisher
61
Guthrie
29
Bristow
26
Chandler
29
El Reno
24
22
Spencer
32
Oklahoma City West
34
24
Weatherford
60
Hinton
40
Okemah
29
Bessie
26
Shawnee
24
Minco
39
Norman
24
Bowlegs
33
Fort Cobb
24
Holdenville
Water
91-100%
81-90%
71-80%
61-70%
51-60%
41-50%
31-40%
21-30%
11-20%
0-10%
Oklahoma Greenness Images
Relative greenness

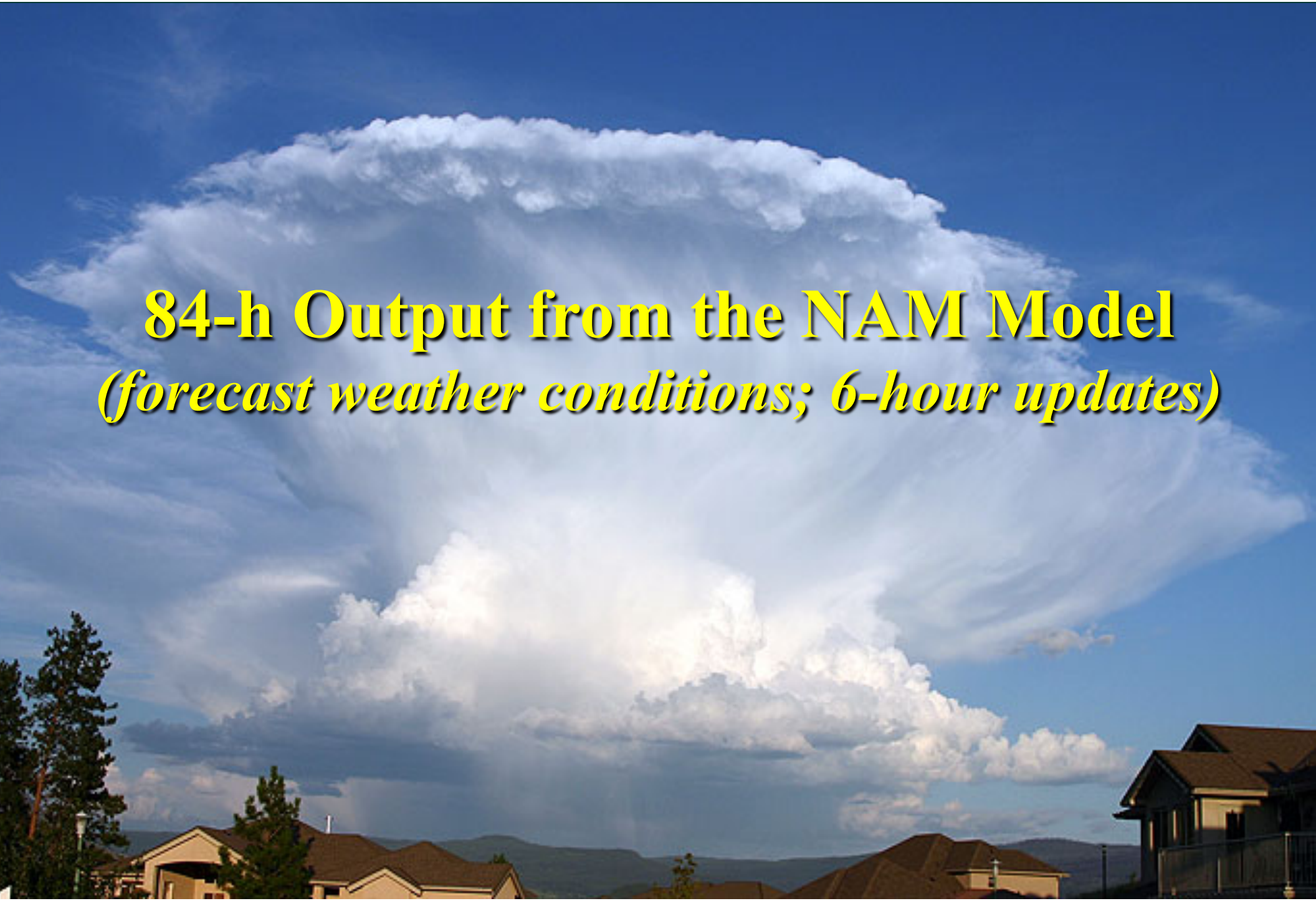

Weekly Relative Greenness Value
Affects Fire Danger Level
(ratio of live/dead fuels; live fuel moisture)

FUEL MODEL + GREENNESS LEVEL + WEATHER

OKLAHOMA FIRE DANGER MODEL

FIRE DANGER


The OKLAHOMA MESONET
(current and past weather conditions)


84-h Output from the NAM Model
(forecast weather conditions; 6-hour updates)

FUEL MODEL + GREENNESS LEVEL + WEATHER

FIRE DANGER MODEL

FIRE DANGER

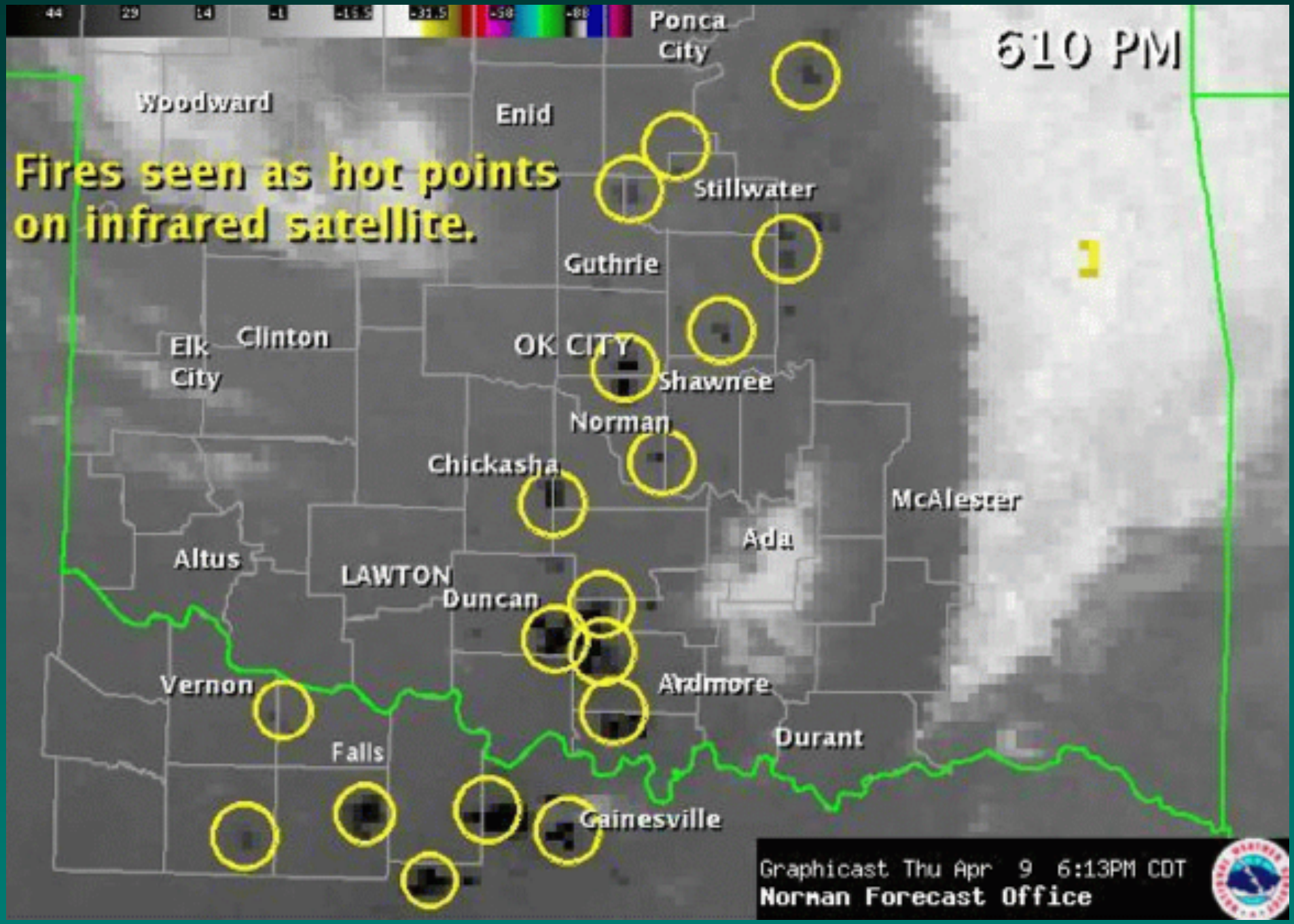
Fire Danger Model Output (NFDRS)

- Spread Component
- Energy Release Component
- Burning Index
- Ignition Component

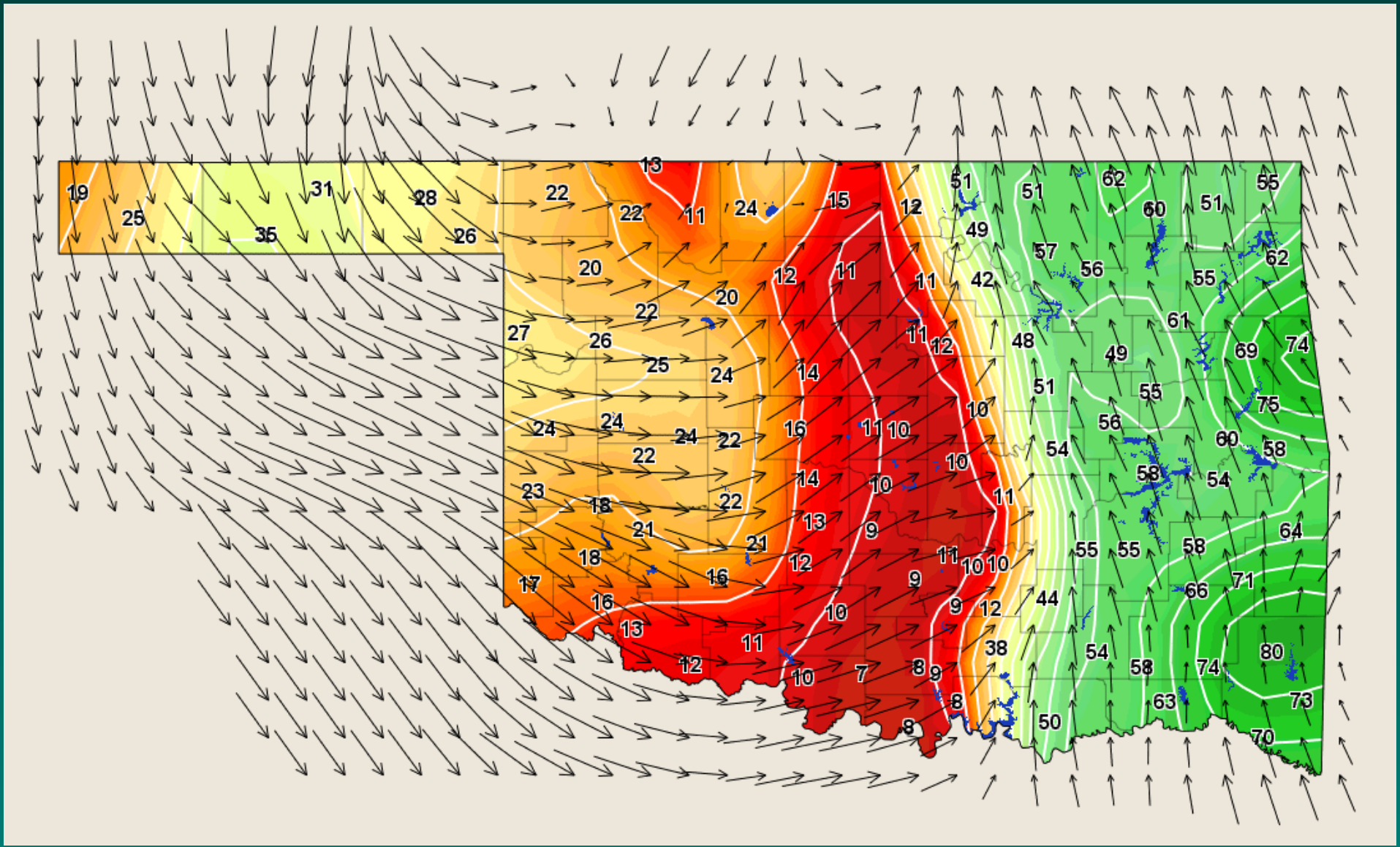

April 9, 2009

Wildfire Outbreak of April 9-10, 2009

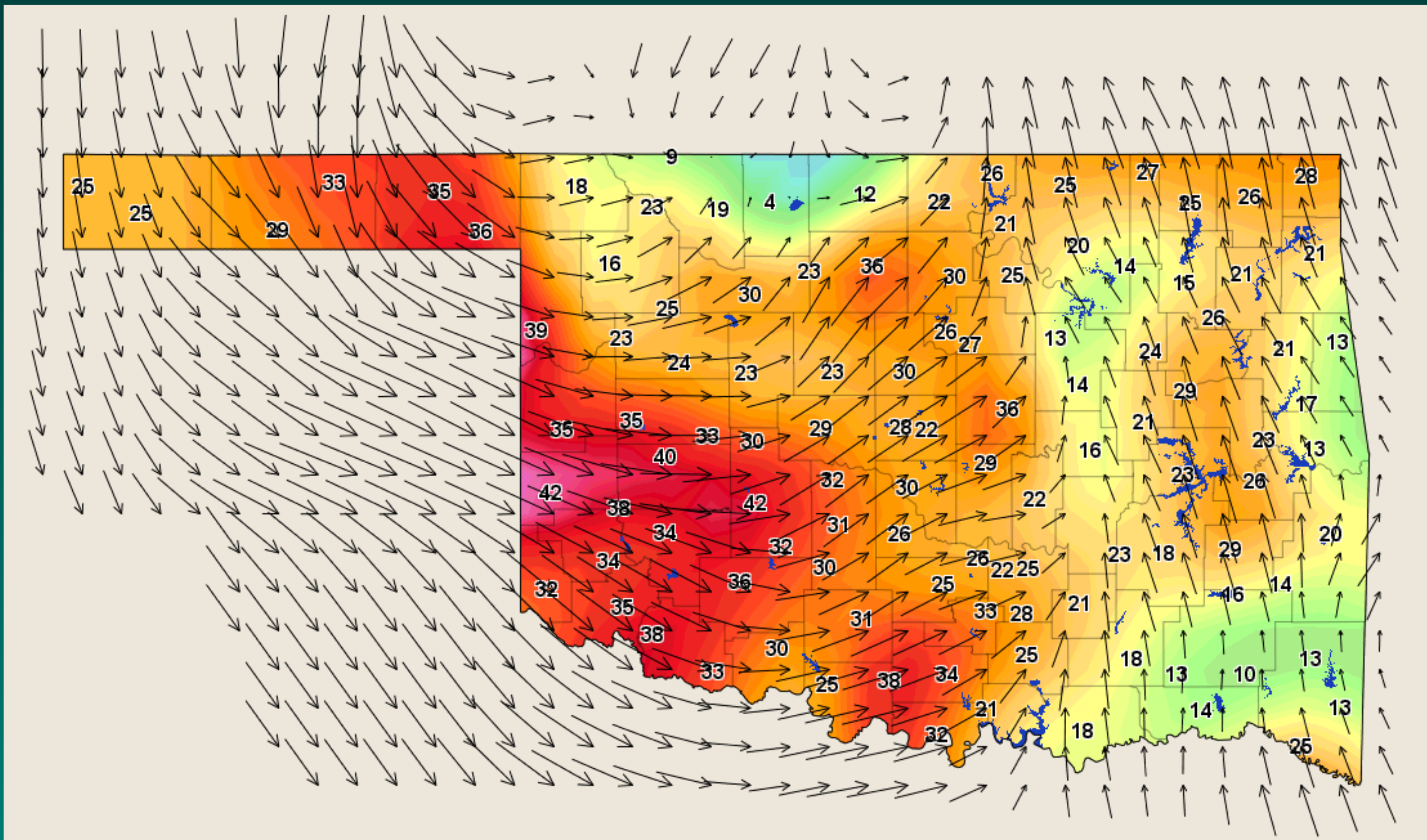
- At least 14 wildfires
- Stephens Co. fire – 57,000 acres
- 117,000 acres burned
- 62 people injured
- 228 structures destroyed, including 160 homes
- $30 Million in losses


44
29
14
-1
-16.5
-31.5
-50
-80
Ponca City
610 PM
Woodward
Enid
Fires seen as hot points on infrared satellite.
Stillwater
Guthrie
Elk City
Clinton
OK CITY
Shawnee
Norman
Chickasha
McAlester
Ada
Altus
LAWTON
Duncan
Ardmore
Vernon
Durant
Falls
Gainesville
Graphicast Thu Apr 9 6:13PM CDT
Norman Forecast Office

Relative Humidity/Wind Vectors – 4 p.m.

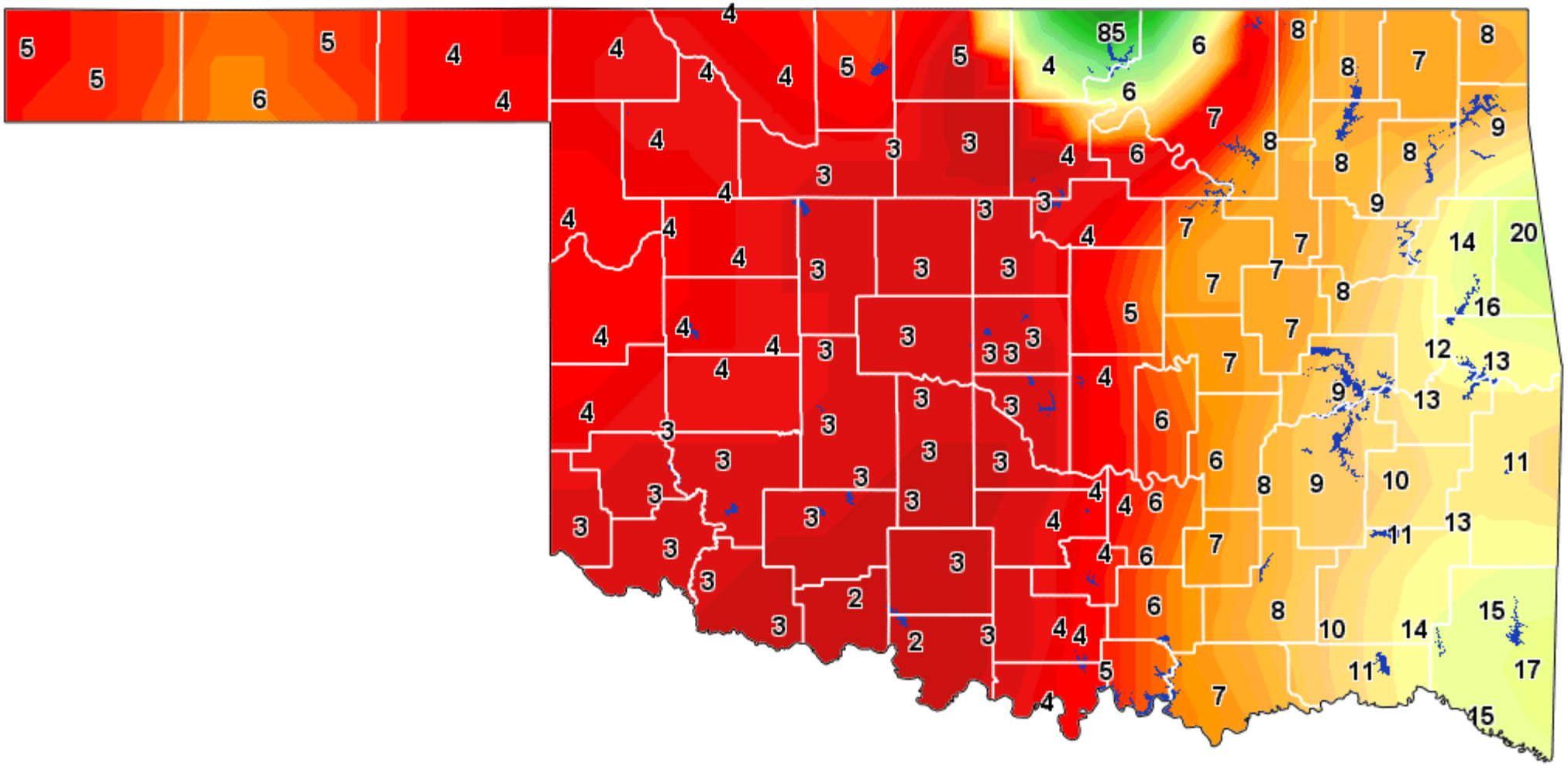


Winds – 4 p.m.

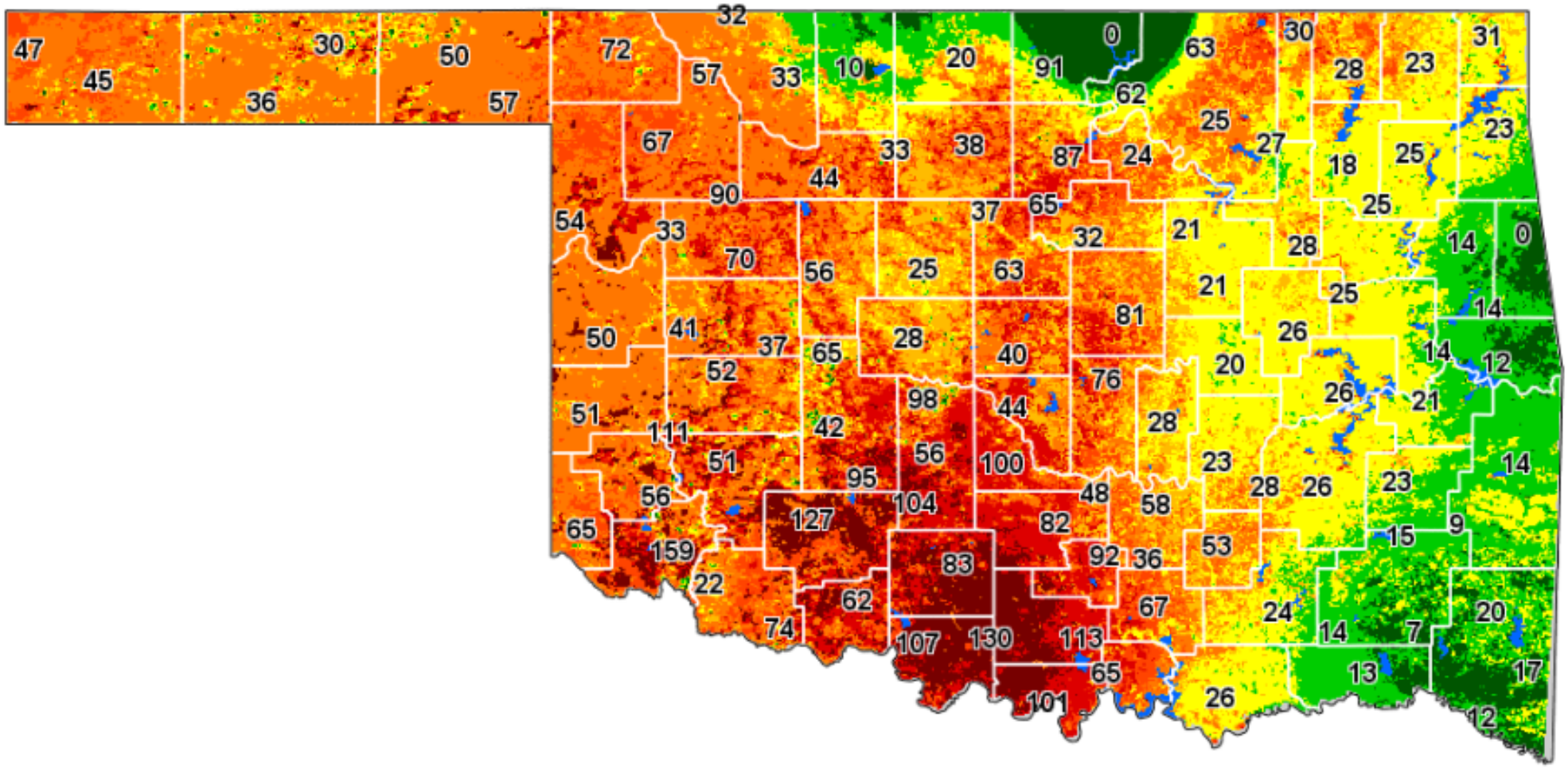


25 33 35 9 18 23 19 4 12 22 26 25 27 25 26 28
25 29 36 21 20 14 15 21 21
16 23 36 30 25 30
25 39 23 26 27 13 24 26 21 13
24 23 23 30 14 29
36 17 35 35 33 30 29 28 22 21 16 23 13
40 29 32 30 42 42 38 22 23 26
34 31 26 32 30 20 34 23 18 29
32 36 26 22 25 25 16 14 35 33 28 21
38 31 30 25 18 13 10 13 33 25 38 34 21 14 13
32 18 25

1-Hour Dead Fuel Moisture – 4 p.m.



Burning Index – 4 p.m.

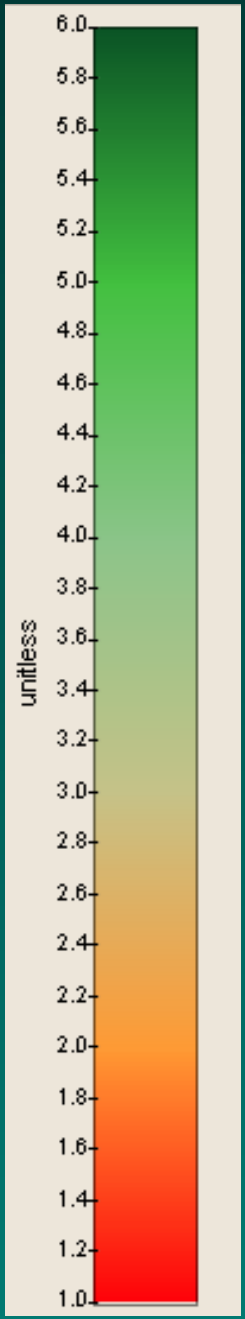



Smoke Dispersion

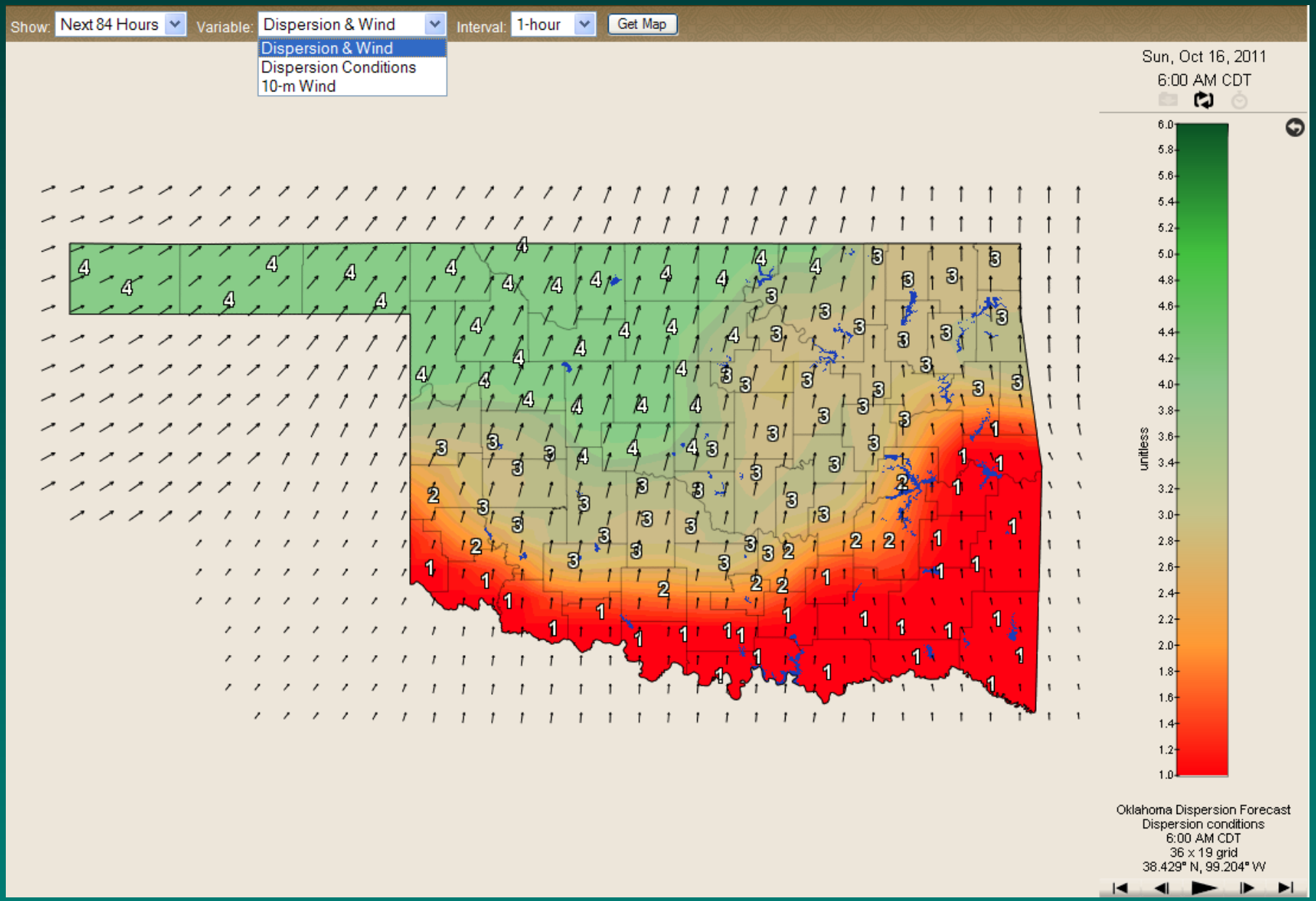

The Oklahoma Dispersion Model

Six Dispersion Categories

- Excellent = 6.0 (“EX”; dark green)
- Good = 5.0 (“G”; green)
- Moderately Good = 4.0 (“MG”’ ; light green)
- Moderately Poor = 3.0 (“MP”; beige)
- Poor = 2.0 (“P”; orange)
- Very Poor = 1.0 (“VP”; red)



Dispersion & Wind Conditions



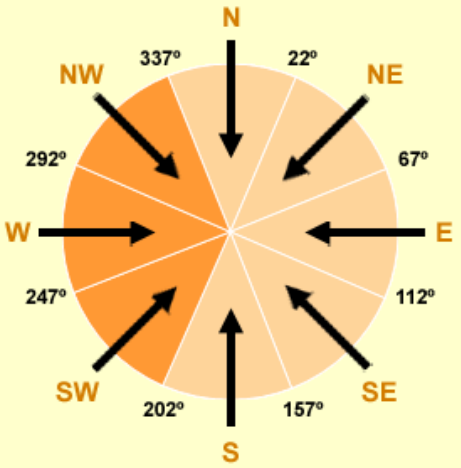

“Fire Prescription Planner”


Prescribed Burn Example

FIRE PRESCRIPTION PLANNER

Prescription Forecast Element	Lower Limit	Upper Limit
Air Temperature (F)		
Relative Humidity (%)	30	60
Wind Speed (mph)	5	15
1-hour Precipitation (inches)		
Dispersion Conditions	Moderately Good	
1-hour Dead Fuel Moisture (%)	7	20
10-hour Dead Fuel Moisture (%)	7	15
Burning Index (10*ft)		
Ignition Component (%)		
Spread Component (ft/min)		
Energy Release Component (BTU/ft2)		
KBDI (0-800)		

Wind Direction

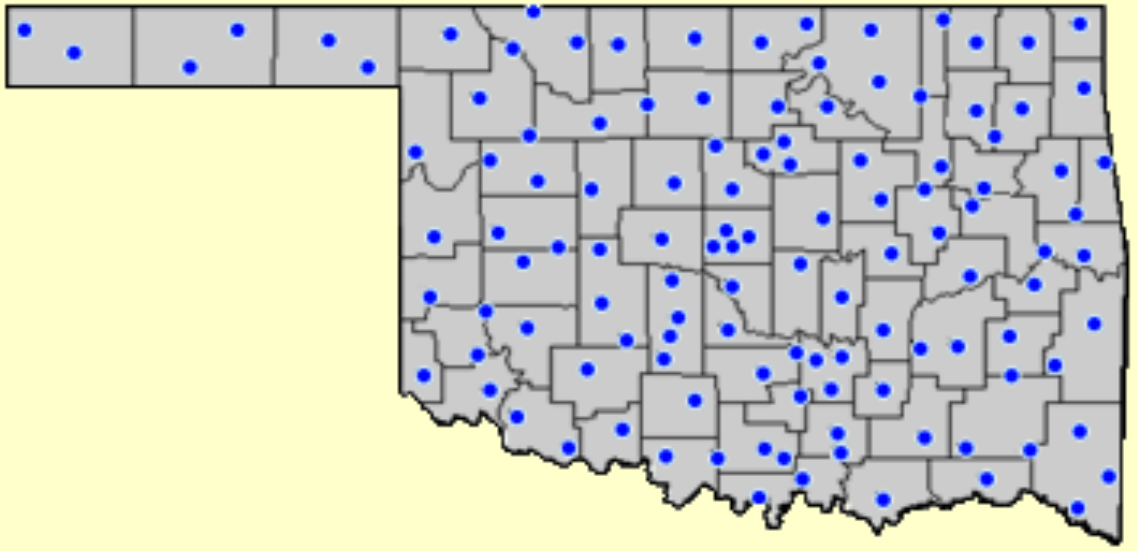


click on the sectors you wish to prescribe

Help Reset Next

FIRE PRESCRIPTION PLANNER

Click on map to choose a site.



Station: Skiatook

Show: Next 84 Hours

Show Prescribed Variables Only

Back

Get Data

Fire Prescription Table for Skiatook
(NFDRS Fuel Model T - Tallgrass with brush)

Disclaimer: *This forecast table, as with other OK-FIRE products, is based soley on output from the latest 84-h NAM forecast. As no weather forecast model is perfect, users are encouraged to check the official forecasts of the National Weather Service for consistency or discrepancies in the weather variable portion of this forecast. In particular, consult the "National Weather Service" or "NWS Prescription Planner" links in the Weather/Forecasts section of the OK-FIRE web site.*

Change Prescription

Change Station

DATE TIME	Criteria Met?	RELH	WDIR	WSPD	DISPERSION	1h DFM	10h DFM	TAIR	RAIN_1H	BI	IC	SC	ERC	KBDI
Nov 07, 2008 5:00 pm CST	No	35%	WNW	11 mph	4 (MG)	6%	9%	57°F	0.00 in.	16	12%	8	5	3
Nov 07, 2008 6:00 pm CST	No	37%	WNW	8 mph	2 (P)	6%	9%	55°F	0.00 in.	13	9%	5	5	3
Nov 07, 2008 7:00 pm CST	No	38%	WNW	7 mph	1 (VP)	7%	9%	54°F	0.00 in.	12	7%	4	5	3
Nov 07, 2008 8:00 pm CST	No	40%	WNW	6 mph	1 (VP)	7%	9%	52°F	0.00 in.	10	6%	3	5	3
Nov 07, 2008 9:00 pm CST	No	41%	W	5 mph	1 (VP)	7%	9%	51°F	0.00 in.	9	5%	2	5	3
Nov 07, 2008 10:00 pm CST	No	43%	W	5 mph	1 (VP)	7%	9%	50°F	0.00 in.	9	5%	2	5	3
Nov 07, 2008 11:00 pm CST	No	44%	W	5 mph	1 (VP)	8%	9%	49°F	0.00 in.	9	5%	2	4	3
Nov 08, 2008 12:00 am CST	No	46%	W	6 mph	1 (VP)	8%	9%	48°F	0.00 in.	10	5%	3	4	3
Nov 08, 2008 1:00 am CST	No	48%	W	6 mph	1 (VP)	8%	10%	46°F	0.00 in.	10	4%	3	4	3
Nov 08, 2008 2:00 am CST	No	50%	WNW	6 mph	1 (VP)	9%	10%	45°F	0.00 in.	10	4%	3	4	3
Nov 08, 2008 3:00 am CST	No	51%	WNW	6 mph	1 (VP)	9%	10%	44°F	0.00 in.	10	4%	3	4	3
Nov 08, 2008 4:00 am CST	No	53%	WNW	6 mph	1 (VP)	10%	10%	42°F	0.00 in.	10	4%	3	4	3
Nov 08, 2008 5:00 am CST	No	55%	WNW	7 mph	1 (VP)	10%	10%	41°F	0.00 in.	10	4%	4	3	3
Nov 08, 2008 6:00 am CST	No	57%	WNW	7 mph	1 (VP)	10%	10%	40°F	0.00 in.	10	3%	4	3	3
Nov 08, 2008 7:00 am CST	No	55%	WNW	8 mph	3 (MP)	10%	10%	41°F	0.00 in.	11	4%	5	3	3
Nov 08, 2008 8:00 am CST	Yes	54%	WNW	10 mph	5 (G)	10%	10%	43°F	0.00 in.	13	5%	6	4	3
Nov 08, 2008 9:00 am CST	Yes	53%	WNW	12 mph	4 (MG)	9%	9%	44°F	0.00 in.	14	6%	7	4	3
Nov 08, 2008 10:00 am CST	Yes	50%	WNW	13 mph	4 (MG)	9%	9%	46°F	0.00 in.	15	7%	8	4	3
Nov 08, 2008 11:00 am CST	Yes	47%	WNW	14 mph	4 (MG)	8%	9%	49°F	0.00 in.	17	8%	9	4	3
Nov 08, 2008 12:00 pm CST	Yes	43%	WNW	15 mph	4 (MG)	7%	8%	51°F	0.00 in.	18	10%	10	5	3
DATE TIME	Criteria Met?	RELH	WDIR	WSPD	DISPERSION	1h DFM	10h DFM	TAIR	RAIN_1H	BI	IC	SC	ERC	KBDI
Nov 08, 2008 1:00 pm CST	Yes	42%	WNW	14 mph	4 (MG)	7%	8%	52°F	0.00 in.	18	11%	10	5	3
Nov 08, 2008 2:00 pm CST	Yes	42%	WNW	14 mph	4 (MG)	7%	8%	54°F	0.00 in.	18	11%	10	5	3
Nov 08, 2008 3:00 pm CST	Yes	41%	WNW	13 mph	4 (MG)	7%	8%	55°F	0.00 in.	18	11%	9	5	3
Nov 08, 2008 4:00 pm CST	Yes	43%	WNW	11 mph	5 (G)	7%	8%	53°F	0.00 in.	16	10%	7	5	4
Nov 08, 2008 5:00 pm CST	No	45%	WNW	8 mph	3 (MP)	7%	8%	52°F	0.00 in.	13	7%	5	5	4
Nov 08, 2008 6:00 pm CST	No	48%	WNW	6 mph	1 (VP)	8%	8%	51°F	0.00 in.	10	5%	3	5	4
Nov 08, 2008 7:00 pm CST	No	50%	NW	5 mph	1 (VP)	8%	8%	49°F	0.00 in.	9	4%	2	4	4
Nov 08, 2008 8:00 pm CST	No	52%	NW	5 mph	1 (VP)	9%	9%	48°F	0.00 in.	8	4%	2	4	4


“OK-FIRE” WEB SITE

http://okfire.mesonet.org


“OK-FIRE” TRAINING


KIMMICH TECHNOLOGY CENTER

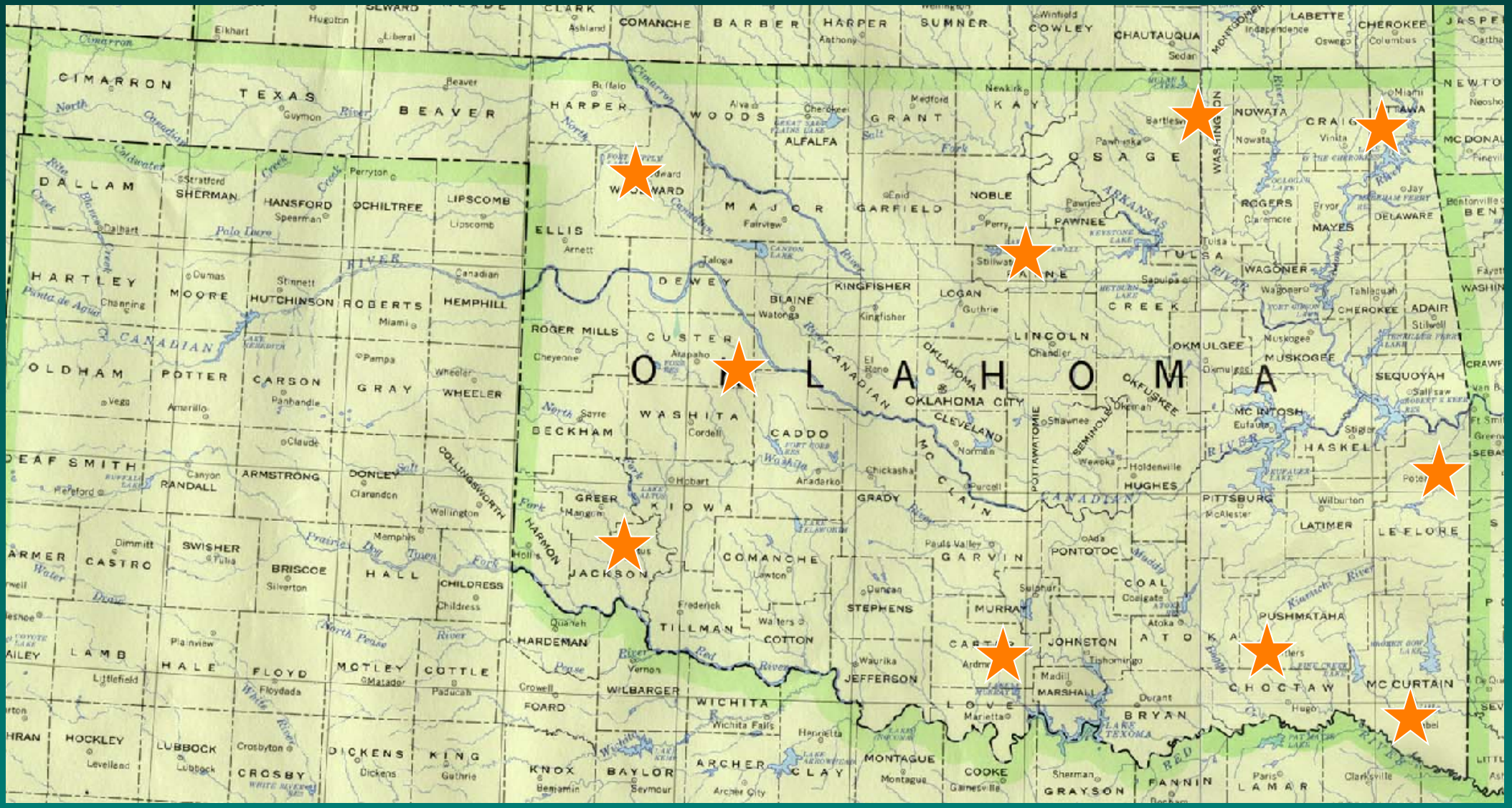

Windows XP
Professional
ViewSonic


OK-FIRE
Lenovo

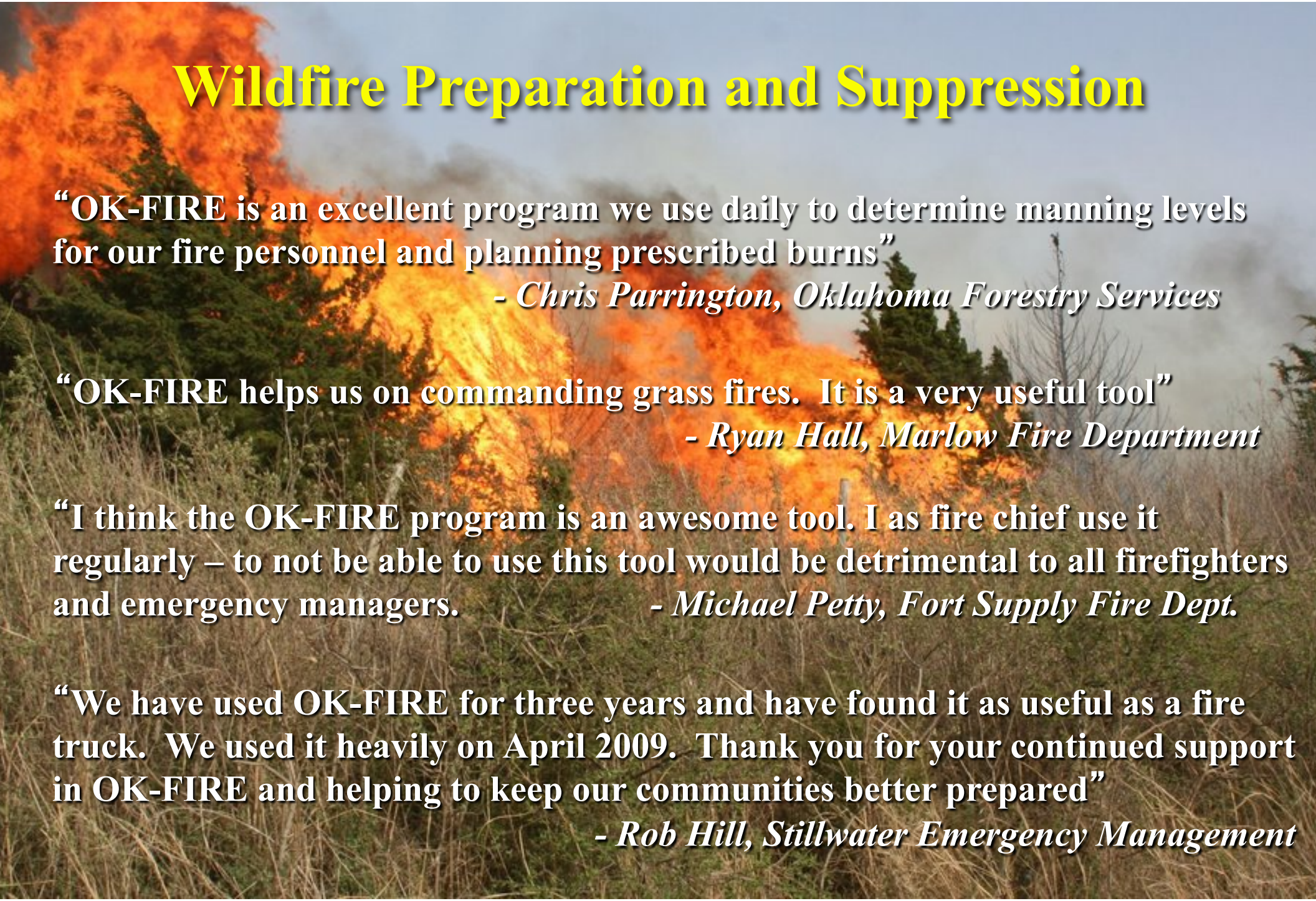
WOODWARD

ANTLERS

Locations of Fall 2012 Workshops




Impacts



Wildfire Preparation and Suppression

"OK-FIRE is an excellent program we use daily to determine manning levels for our fire personnel and planning prescribed burns"

- Chris Parrington, Oklahoma Forestry Services

"OK-FIRE helps us on commanding grass fires. It is a very useful tool"

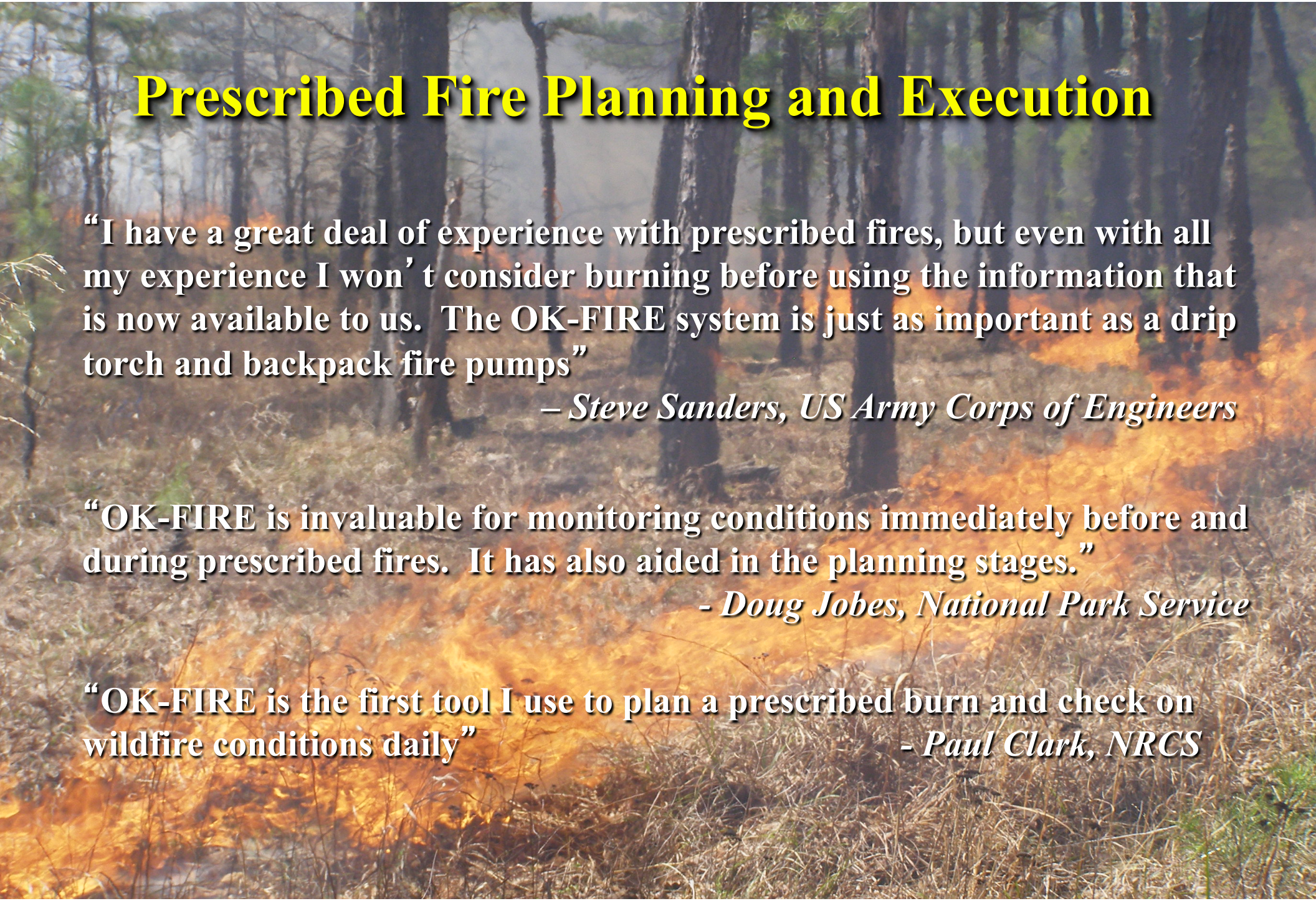
- Ryan Hall, Marlow Fire Department

"I think the OK-FIRE program is an awesome tool. I as fire chief use it regularly – to not be able to use this tool would be detrimental to all firefighters and emergency managers.

- Michael Petty, Fort Supply Fire Dept.

"We have used OK-FIRE for three years and have found it as useful as a fire truck. We used it heavily on April 2009. Thank you for your continued support in OK-FIRE and helping to keep our communities better prepared"

- Rob Hill, Stillwater Emergency Management



Prescribed Fire Planning and Execution

"I have a great deal of experience with prescribed fires, but even with all my experience I won't consider burning before using the information that is now available to us. The OK-FIRE system is just as important as a drip torch and backpack fire pumps"

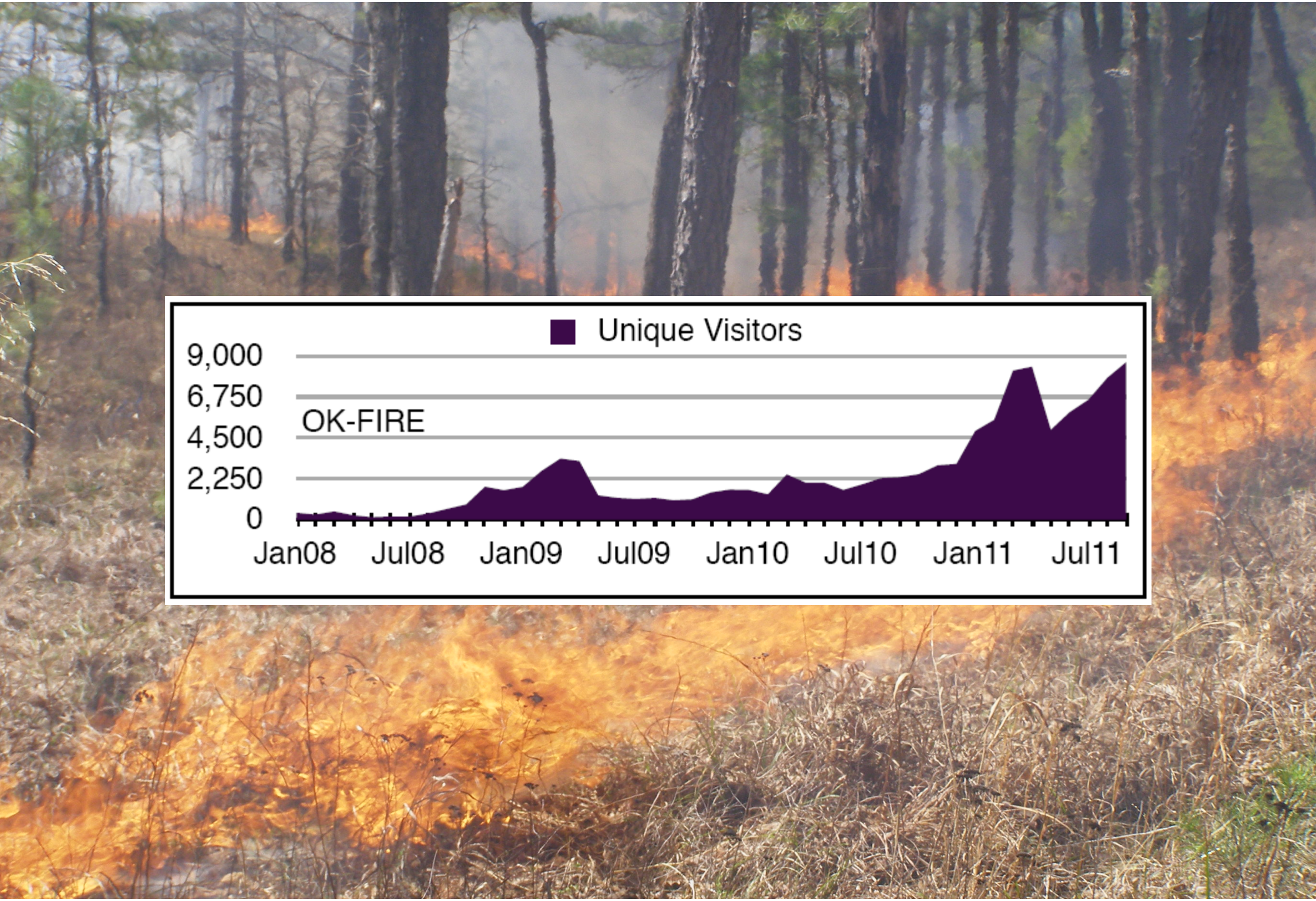
– Steve Sanders, US Army Corps of Engineers

"OK-FIRE is invaluable for monitoring conditions immediately before and during prescribed fires. It has also aided in the planning stages."

- Doug Jobes, National Park Service

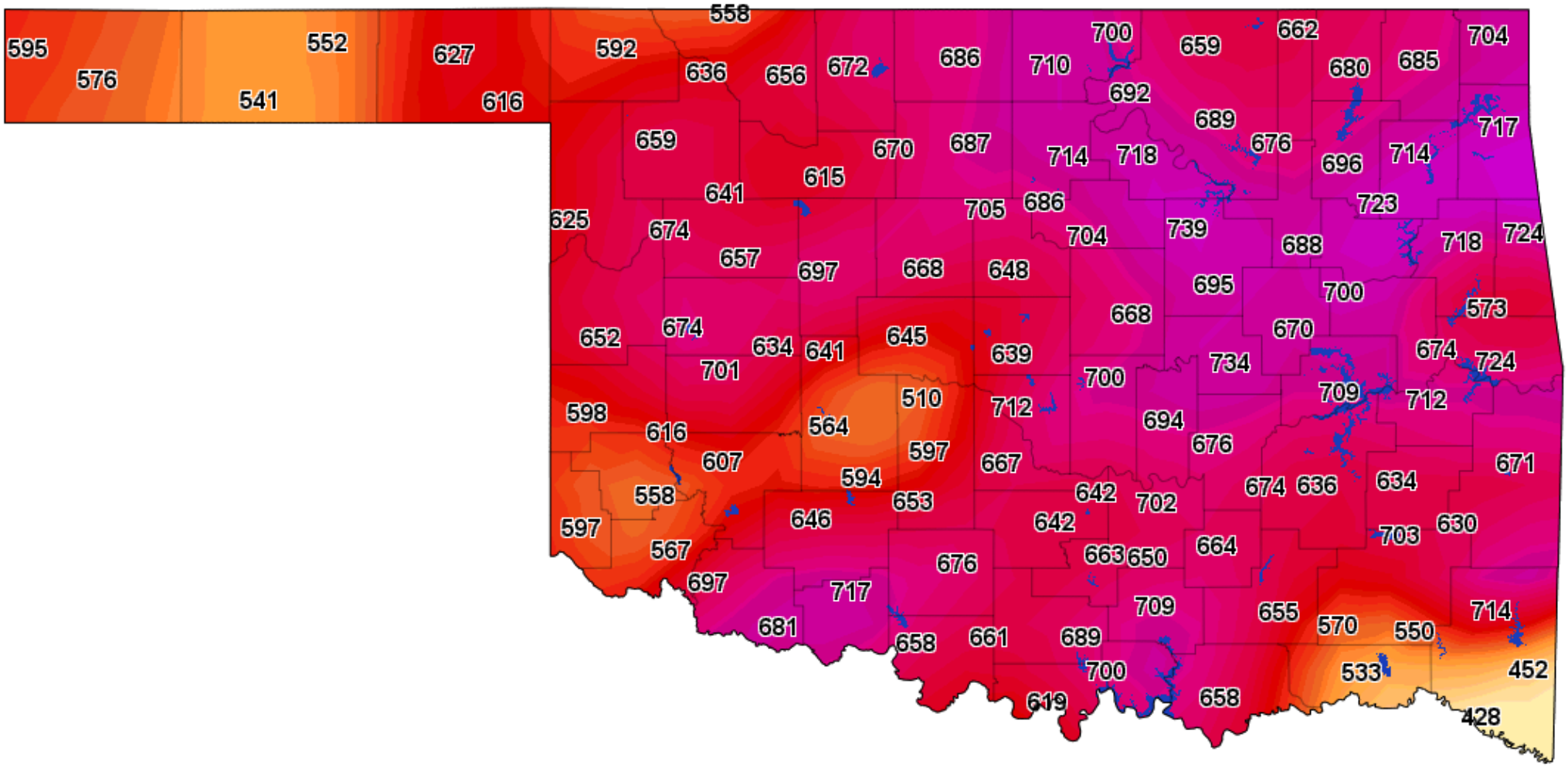
"OK-FIRE is the first tool I use to plan a prescribed burn and check on wildfire conditions daily"

- Paul Clark, NRCS


Unique Visitors
9,000
6,750
4,500
2,250
0
OK-FIRE
Jan08
Jul08
Jan09
Jul09
Jan10
Jul10
Jan11
Jul11


August 4, 2012
"Glencoe" fire: 2000 acres (809 ha), 17 homes destroyed

KBDI – Aug. 4


595
576
552
541
627
616
558
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636
656
672
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710
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689
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663
650
664
697
717
709
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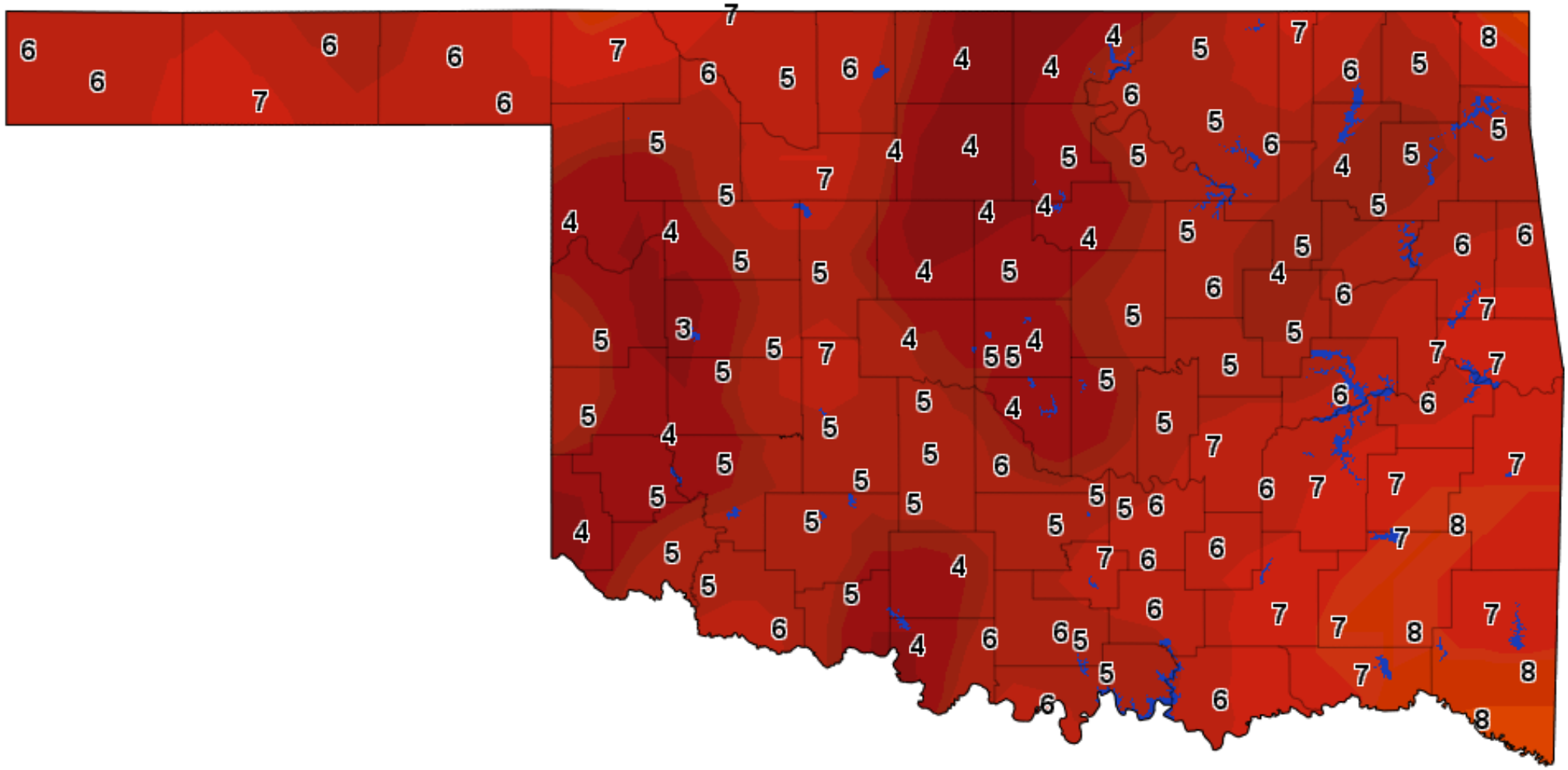
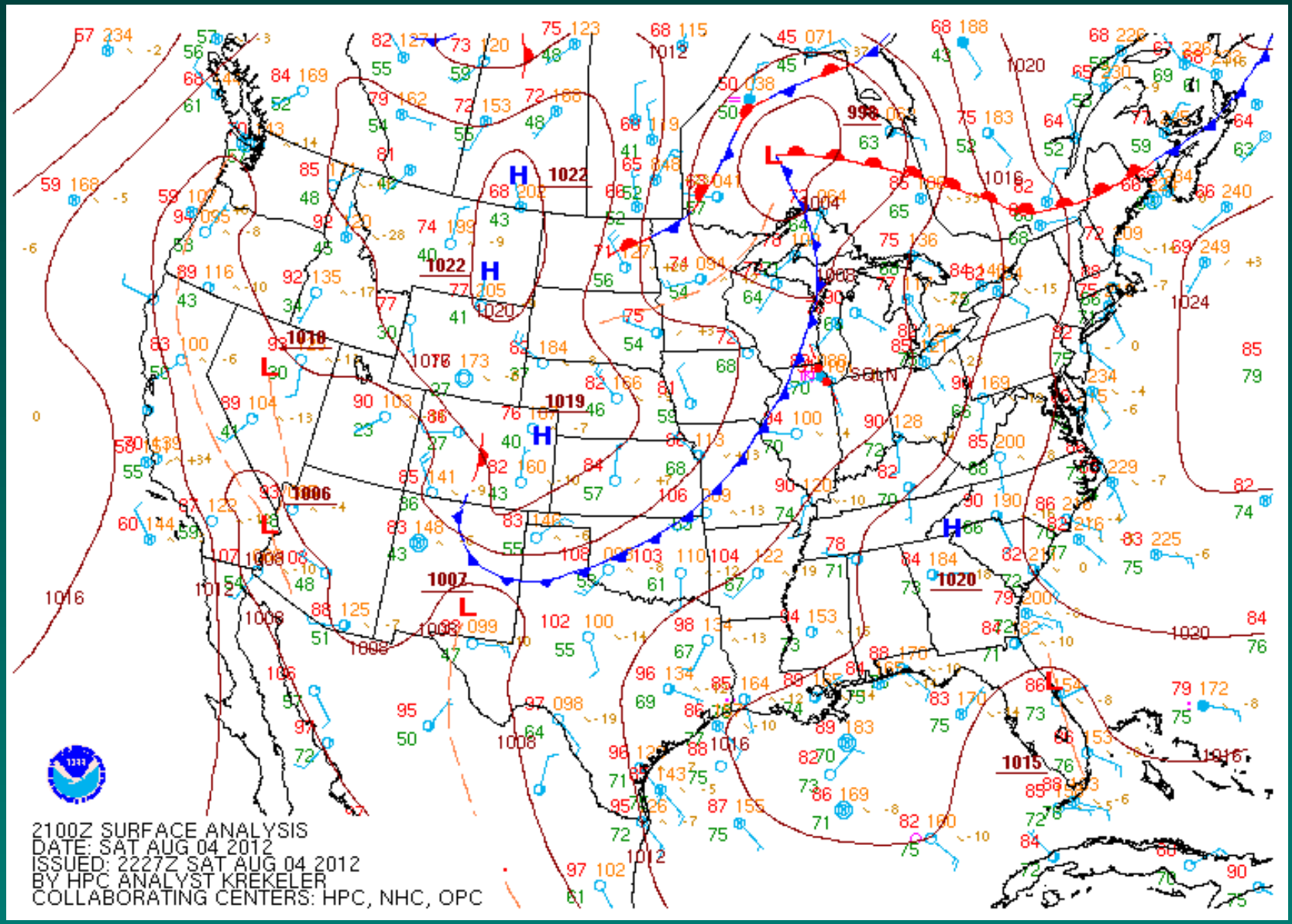
714
681
658
661
689
570
550
700
533
452
619
658
428

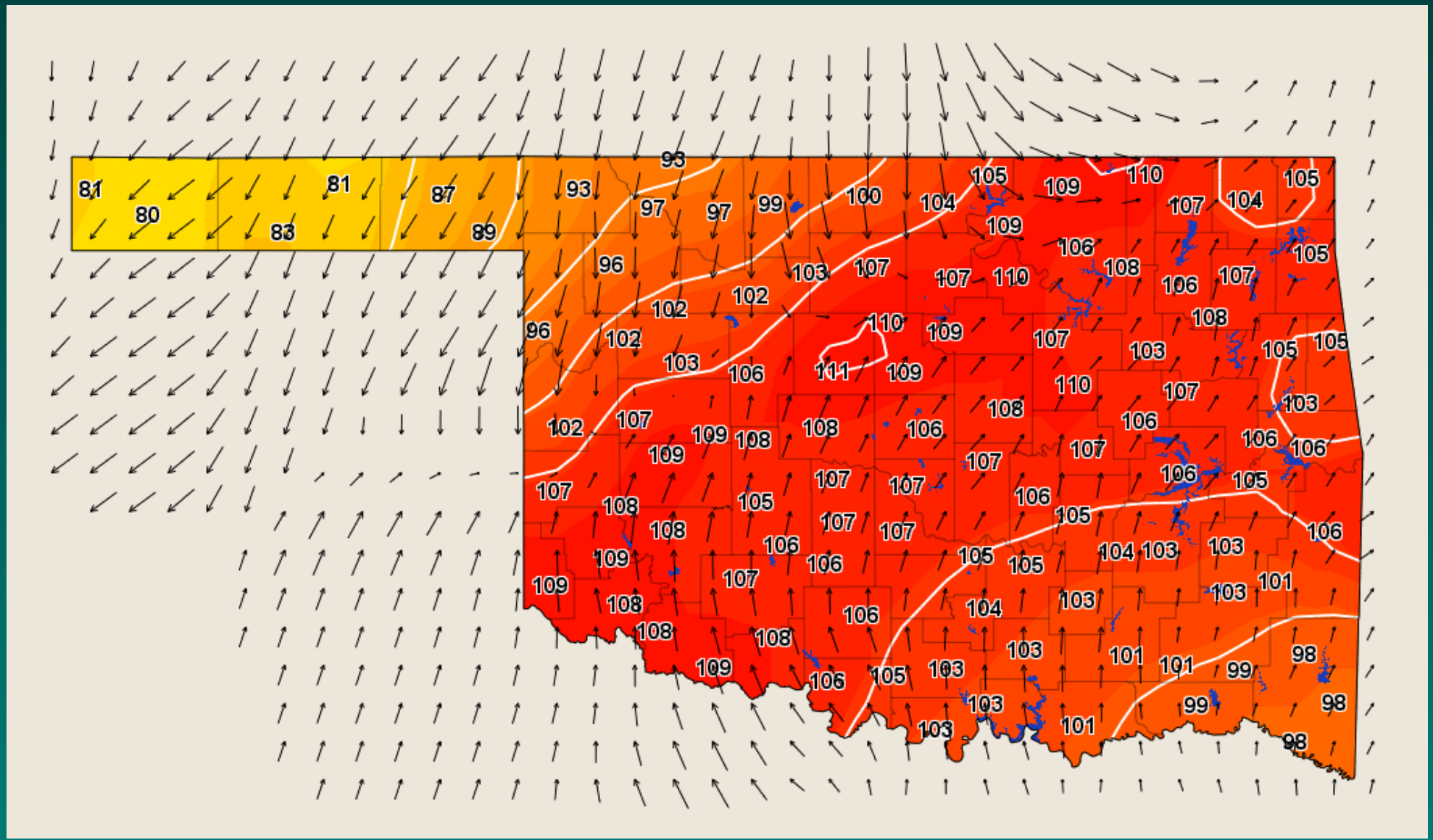
1000-h Dead Fuel Moisture – Aug. 4



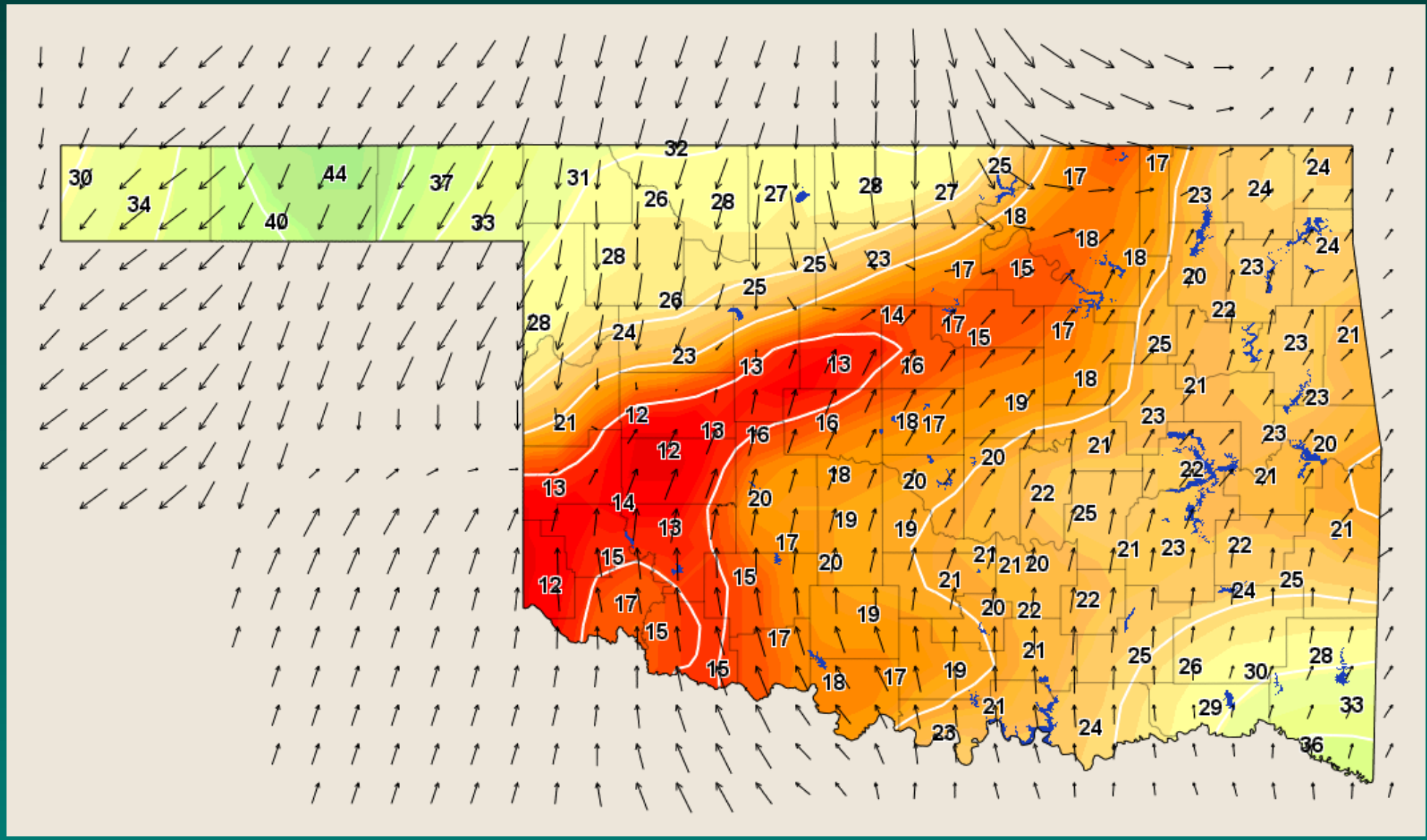
4 p.m. August 4, 2012



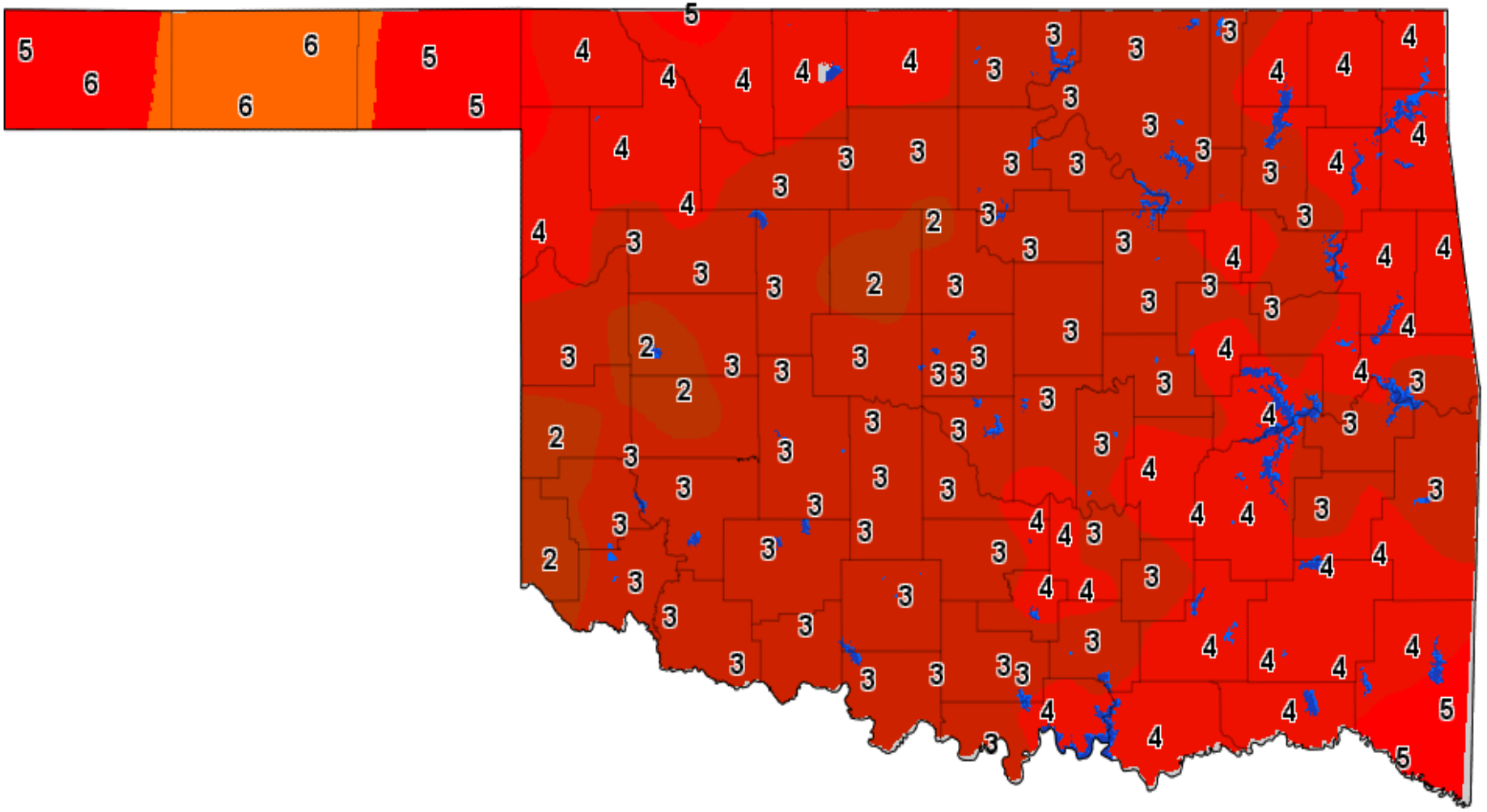
Temperature and Winds – 5 p.m.



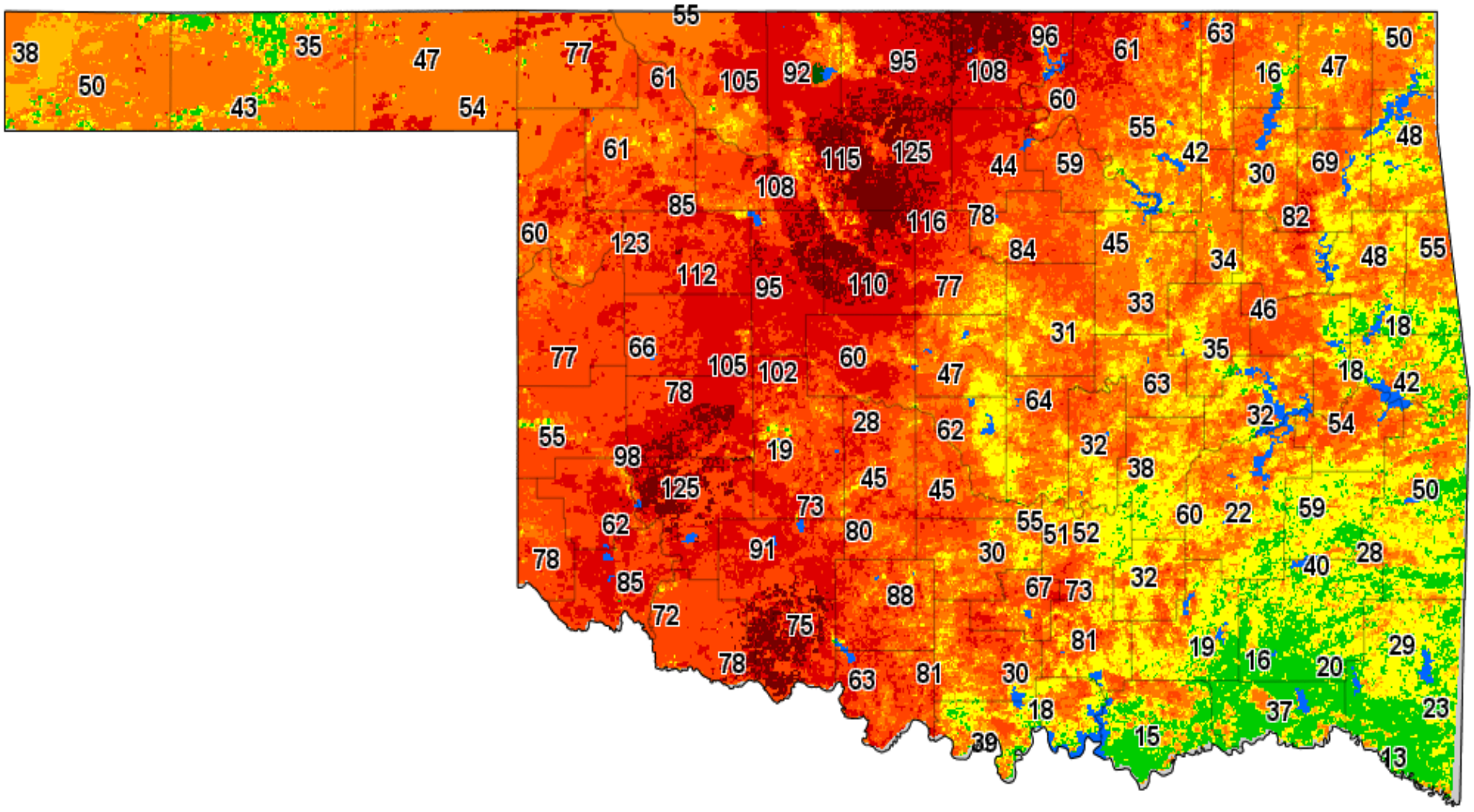
Relative Humidity and Winds – 5 p.m.



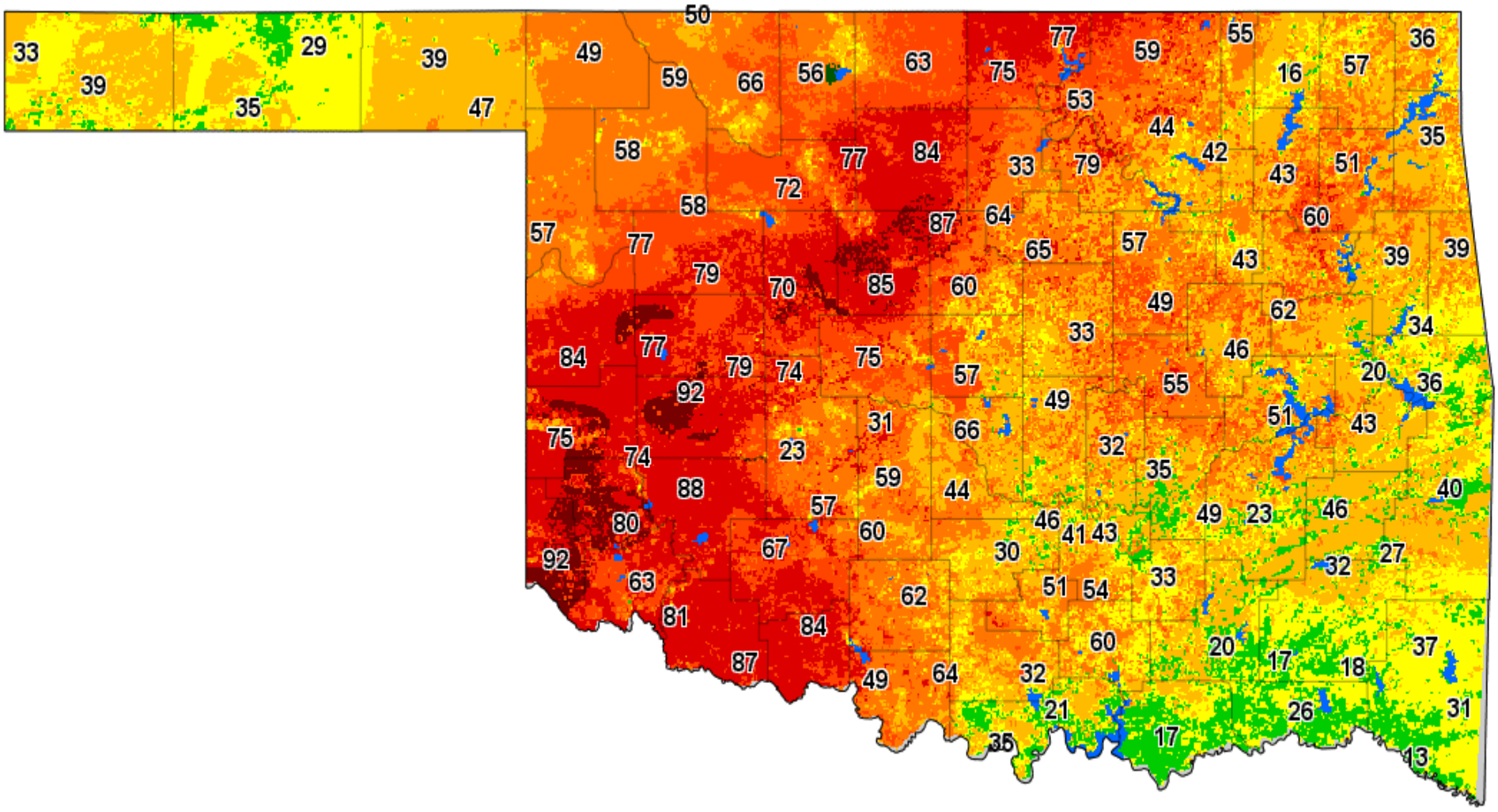
1-Hour Dead Fuel Moisture – 5 p.m.



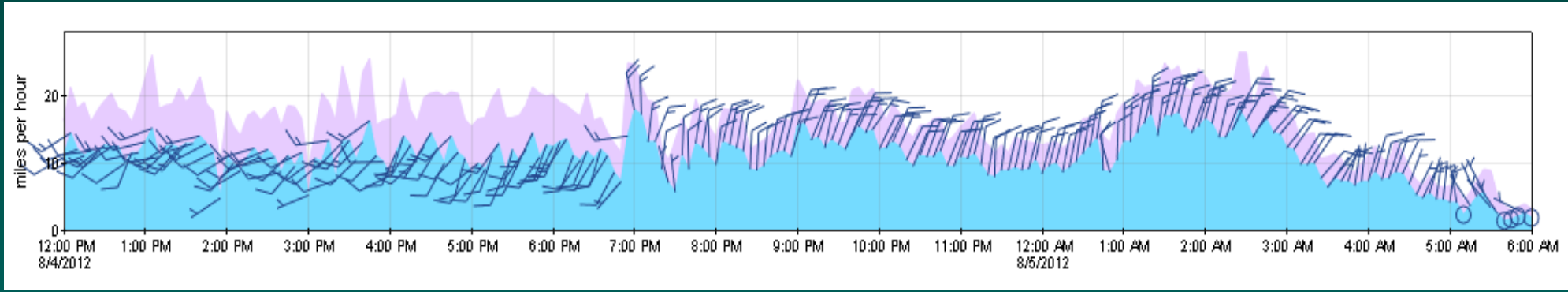
Burning Index – 5 p.m.

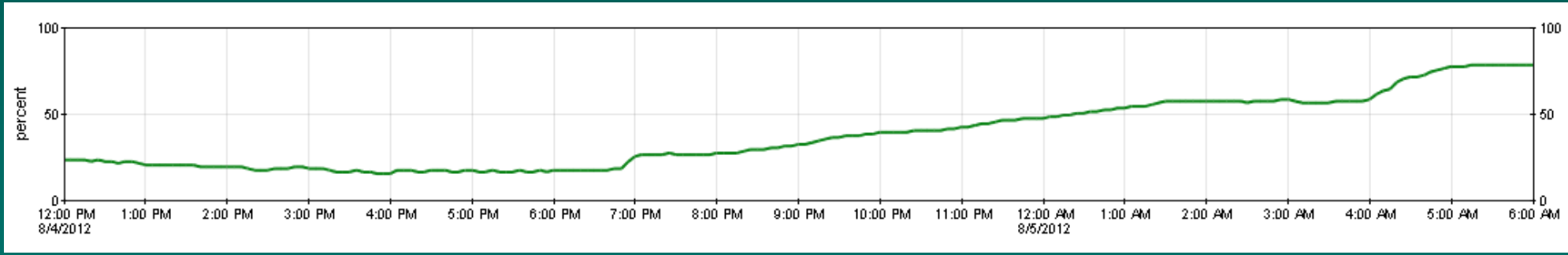


Ignition Component – 5 p.m.



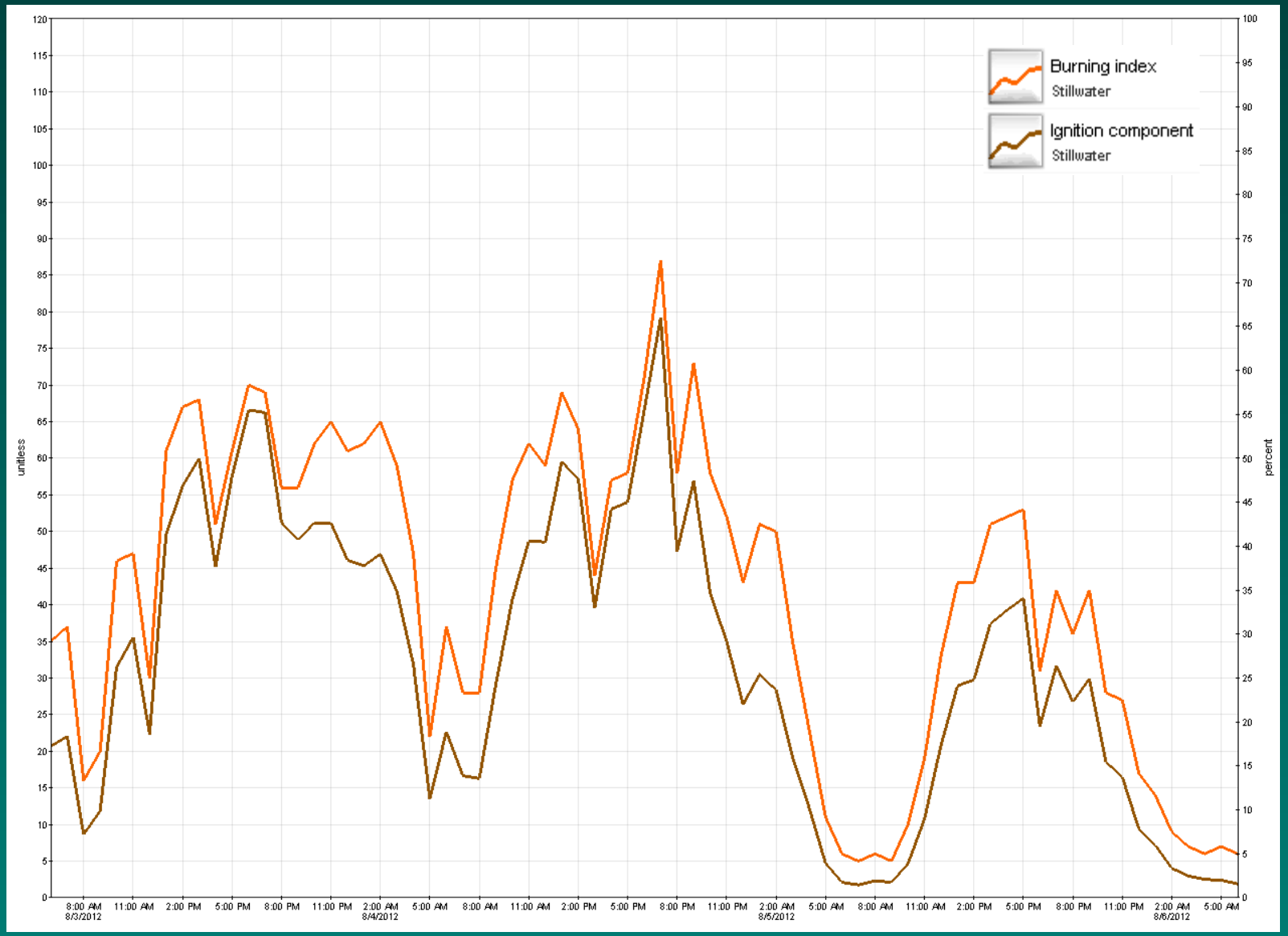
Stillwater : Aug 4-5, 2012
(Winds and Relative Humidity)





Stillwater : Aug 3-5, 2012
(Burning Index and Ignition Component)

BI

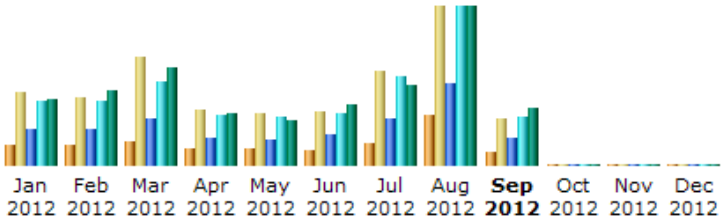


IC

“I use OK-FIRE for strategic decisions when we have an incident. The biggest and most recent example was the Glencoe fire on Aug. 4th. Due to the weather forecast, I was aware of the upcoming wind shift in the evening before we even responded in the late morning. I had also glanced at KBDI and ignition component so was aware of the likelihood of spot fires and extreme fire behavior. Once we determined that initial attack crews and responding mutual aid could not contain the fire, my overall plan was to protect structures first then completely extinguish the south flank of the fire. Unfortunately, we did not have enough resources to accomplish it all … OK-FIRE is a fantastic resource and I appreciate you (and others) making it available to us.”

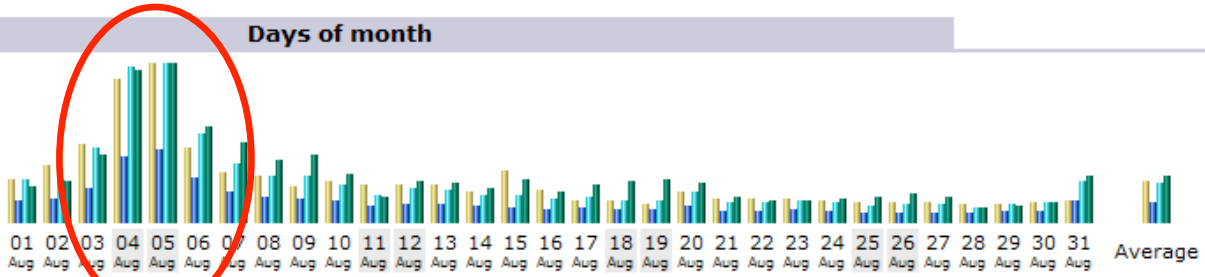
Jay Willis
Battalion Chief, C shift
Stillwater Fire Department

Monthly history



Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Jan 2012	7255	26023	643989	1115264	12.00 GB
Feb 2012	7057	23841	641328	1119798	13.60 GB
Mar 2012	8328	38750	814485	1461329	17.70 GB
Apr 2012	6006	19912	473424	869174	9.50 GB
May 2012	6066	18451	459667	840469	8.24 GB
Jun 2012	5499	19116	529287	921878	10.96 GB
Jul 2012	7607	33254	825965	1560048	14.50 GB
Aug 2012	18113	56350	1435617	2767019	28.95 GB
Sep 2012	4867	16797	484895	834005	10.40 GB
Oct 2012	0	0	0	0	0
Nov 2012	0	0	0	0	0
Dec 2012	0	0	0	0	0
Total	70798	252494	6308657	11488984	125.85 GB

Days of month



Day	Number of visits	Pages	Hits	Bandwidth
01 Aug 2012	1870	48261	94366	725.31 MB
02 Aug 2012	2495	53545	95588	834.46 MB
03 Aug 2012	3410	74648	164232	1.35 GB
04 Aug 2012	6280	146467	343799	3.03 GB
05 Aug 2012	6959	160664	349528	3.15 GB
06 Aug 2012	3314	97125	194592	1.90 GB


QUESTIONS ?
SUMNER
OK-FIRE