

Flint Hills Wildland Fire Update

April 23, 2021

The following information on the Flint Hills wildland fires will be sent weekly to keep stakeholders up to date on fires and related smoke.



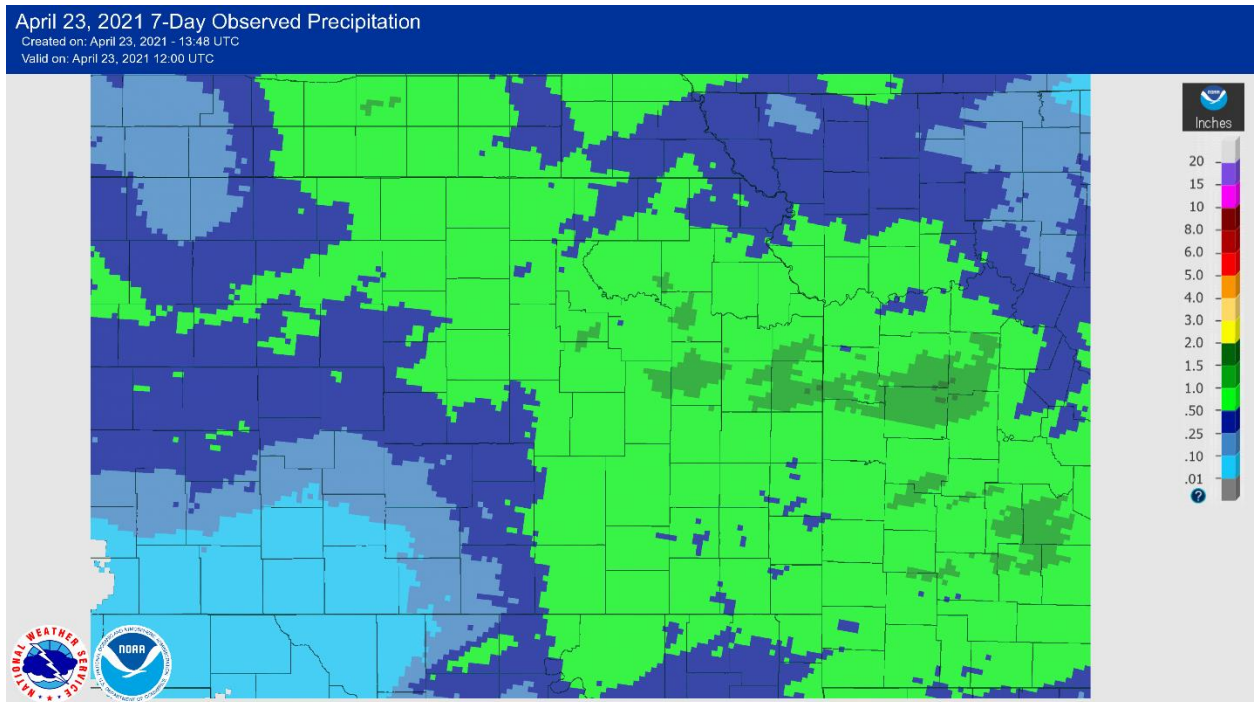


Meteorology

Widespread rain showers occurring last Friday (April 16) giving much of the region at least a quarter- to half-inch of precipitation. Conditions were dry, but cloudy and cool on Saturday (April 17) before at least partly sunny skies returned with warmer temperatures on Sunday (April 18) and Monday (April 19). Winds during this period were primarily northerly, but brief south winds were present on Sunday before another cold front moved through.

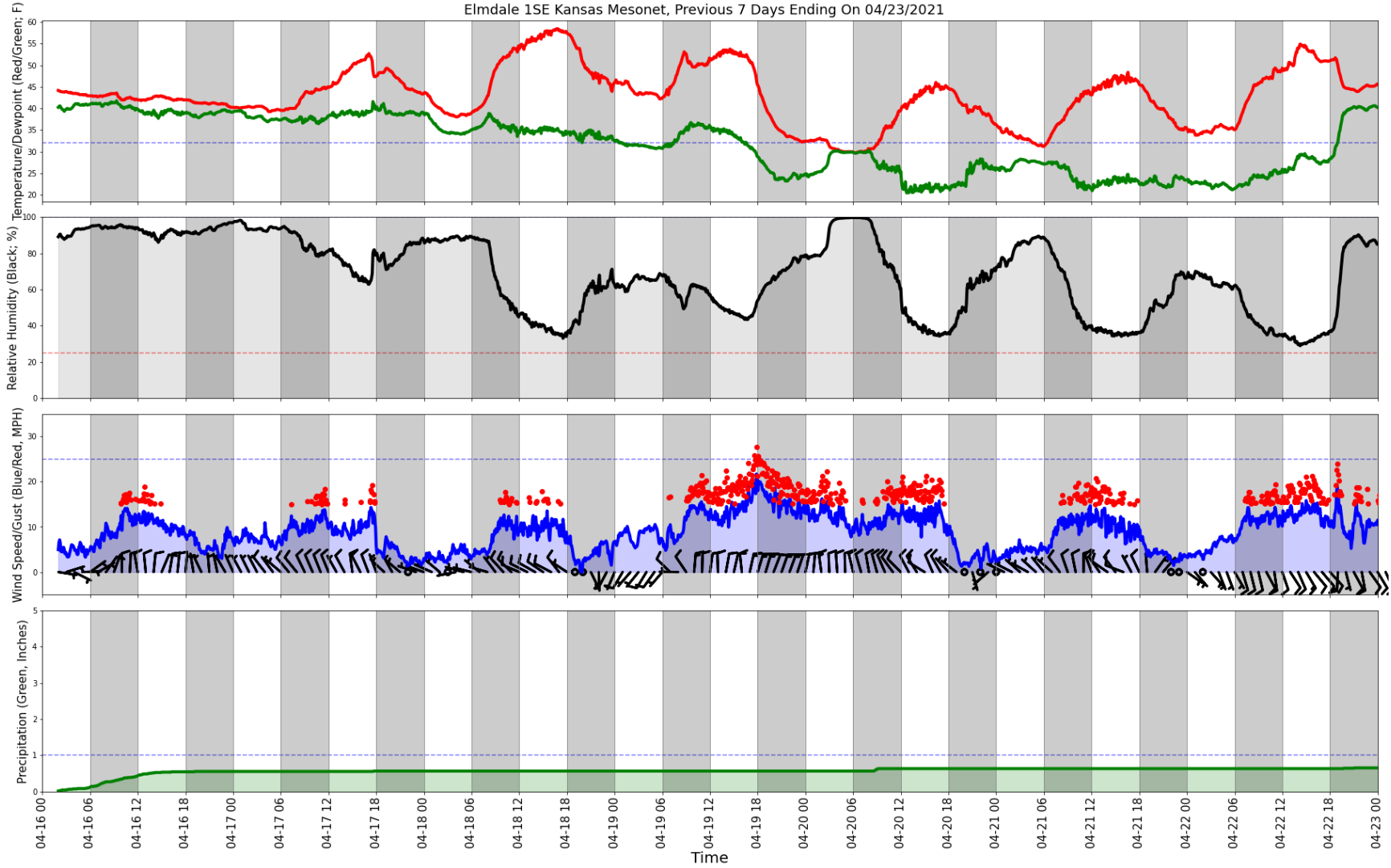
A late season snow fell across the region on Tuesday (April 20) providing more precipitation and up to five inches of snow in parts of the northern Flint Hills. Temperatures rebounded quickly with late April sunshine though and snow quickly melted within the same day. A warm-up began on Wednesday (April 21) and continues on Thursday (April 22) as winds became southerly ahead of the next storm system, which is impacting the region this morning, Friday (April 23) with more rain showers and perhaps a few afternoon thunderstorms.

Precipitation



NOAA/NWS Observed Total Precipitation for April 16-22, 2021.

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7-day (April 16-22, 2021) Observed Weather from Kansas Mesonet station near Elmdale, Kansas
<https://mesonet.k-state.edu/>



Air Quality Data

Air quality data for the period of April 16-22, 2021:

Ozone: Preliminary data indicates **no** exceedances of the NAAQS daily 8-hour average maximum of 70 ppb.

PM_{2.5}: Preliminary data indicates **no** exceedances of the NAAQS daily 24-hour average maximum of 35 $\mu\text{g}/\text{m}^3$.

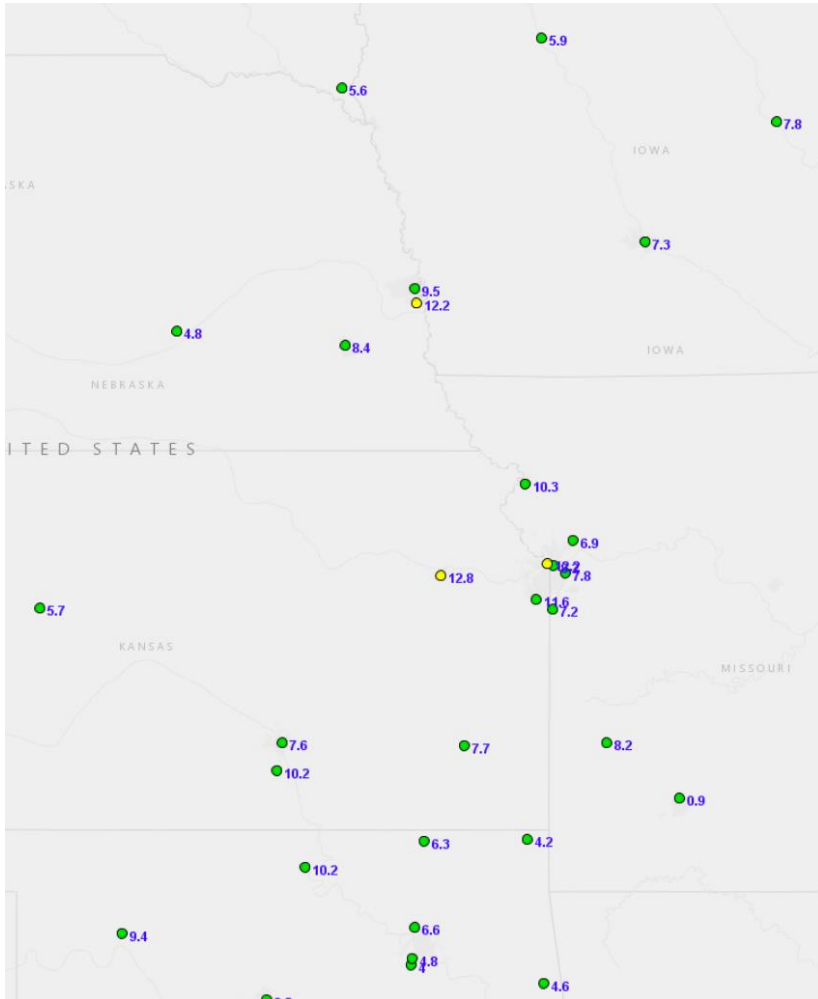
Air quality images on the following pages for each day show preliminary data, courtesy Air Now Tech.

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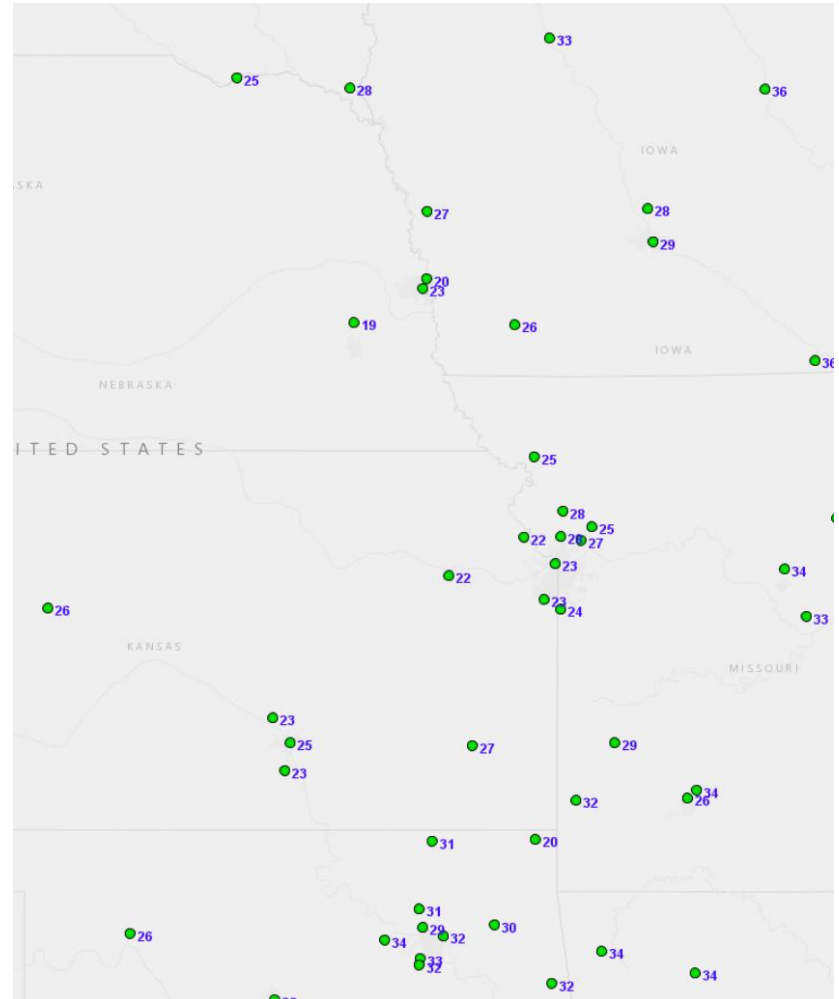


Friday, April 16, 2021

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

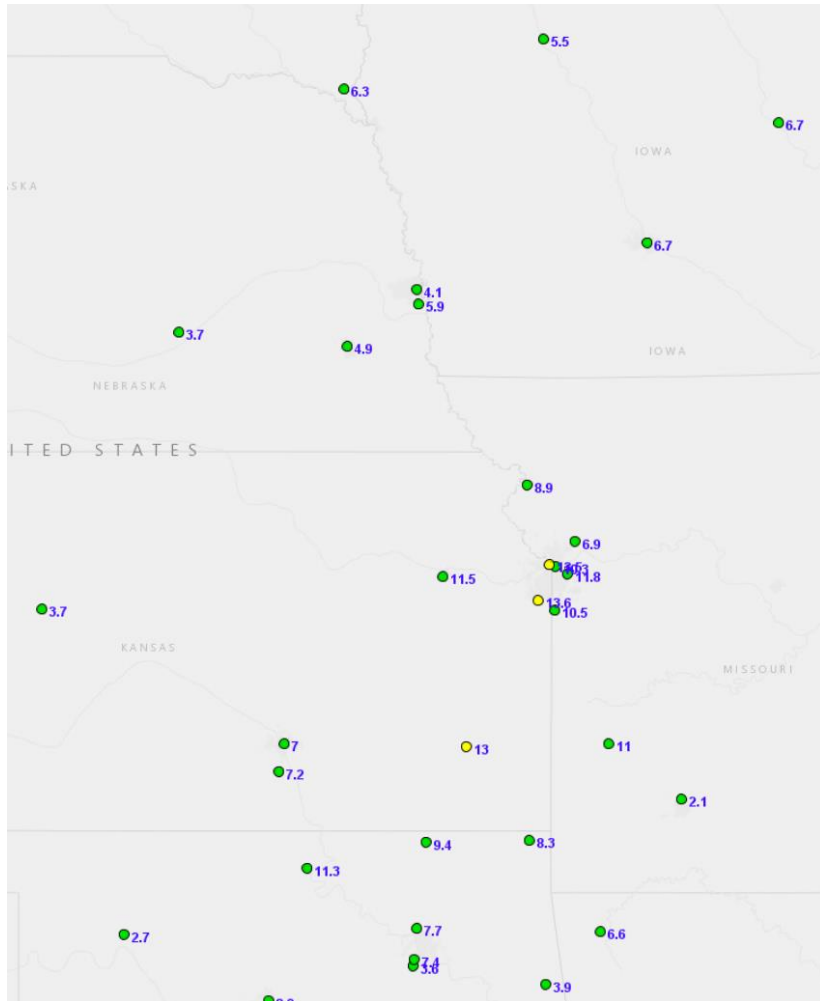


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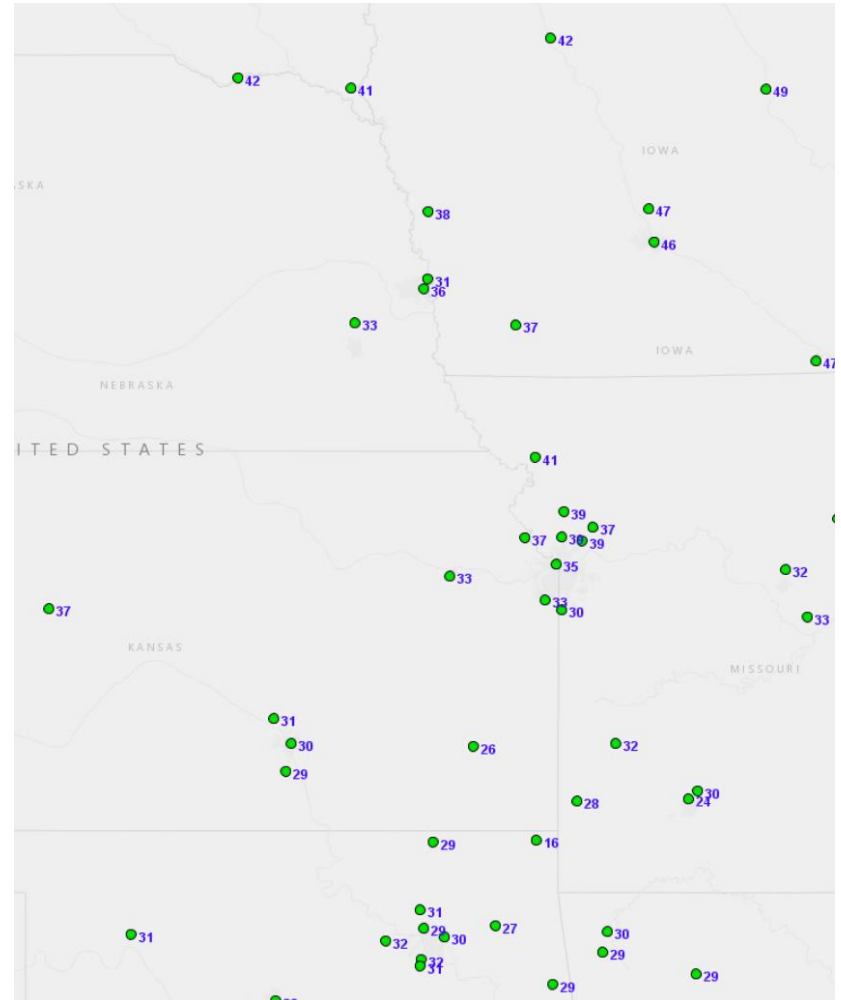


Saturday, April 17, 2021

PM2.5 (24-hour average)



Ozone (8-hour average maximum)



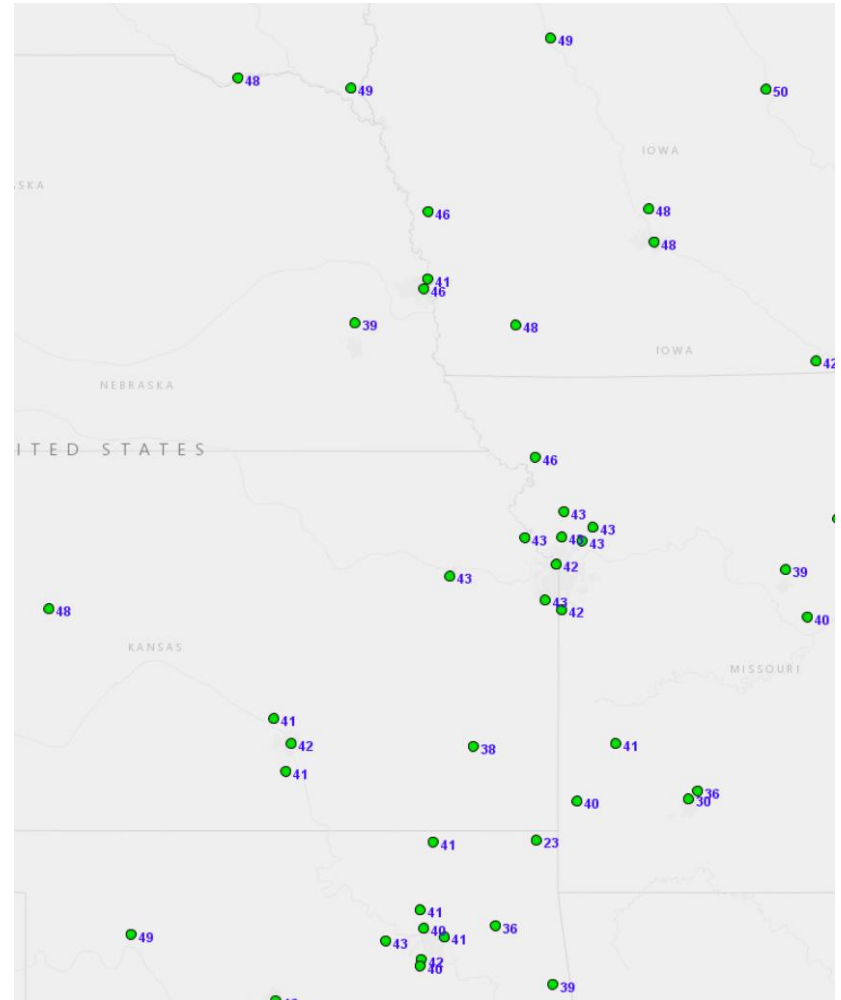
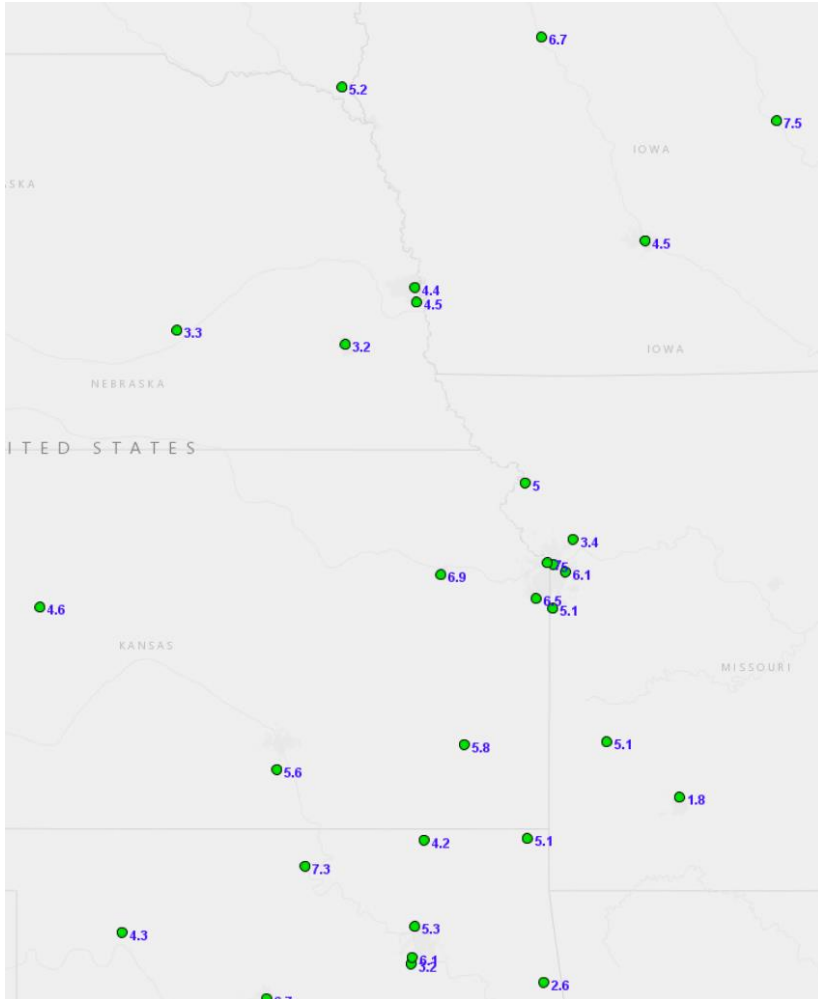
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Sunday, April 18, 2021

PM2.5 (24-hour average)

Ozone (8-hour average maximum)

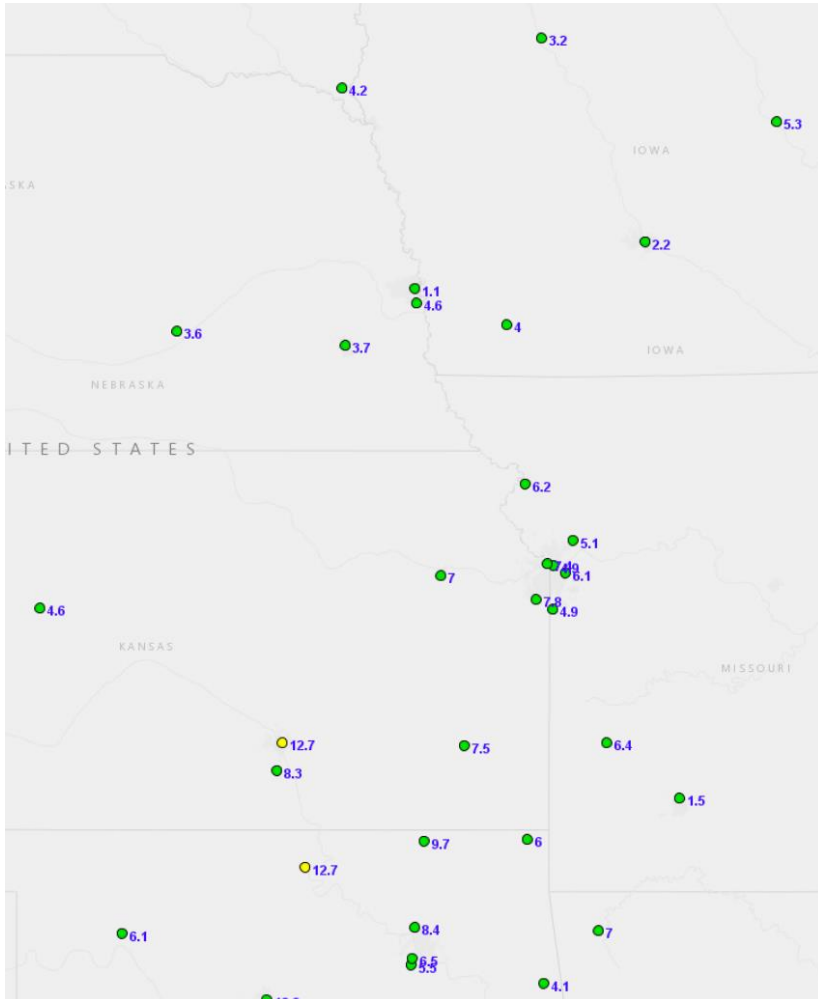


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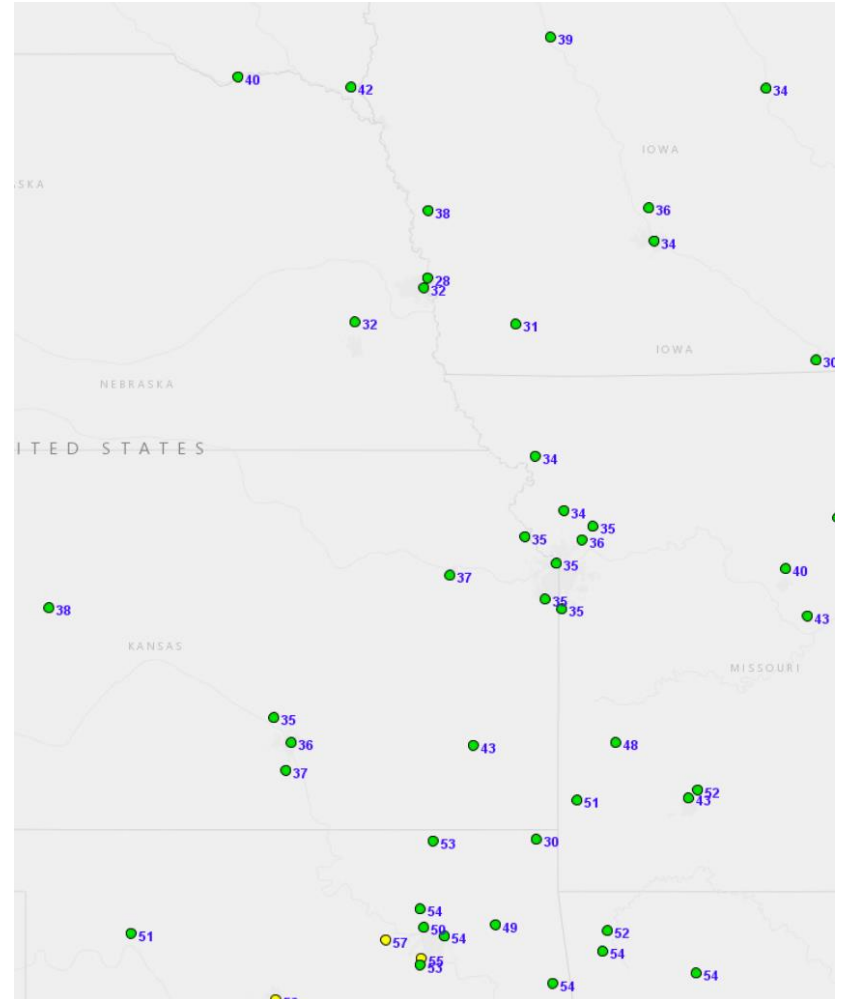


Monday, April 19, 2021

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

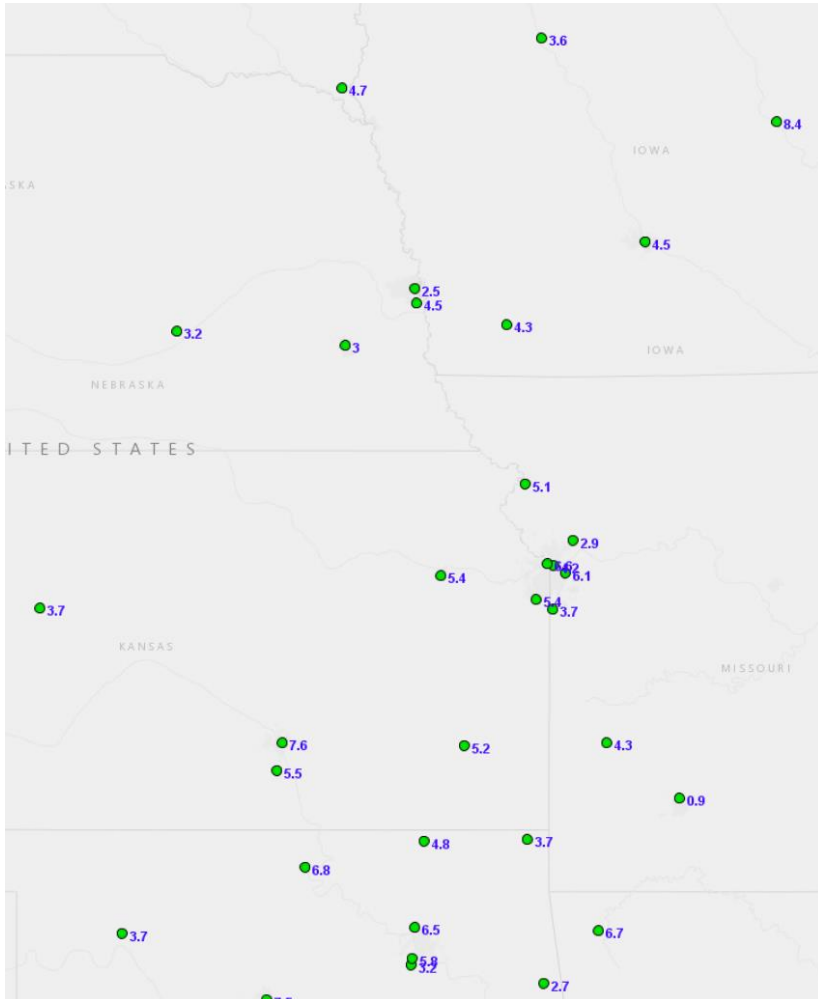


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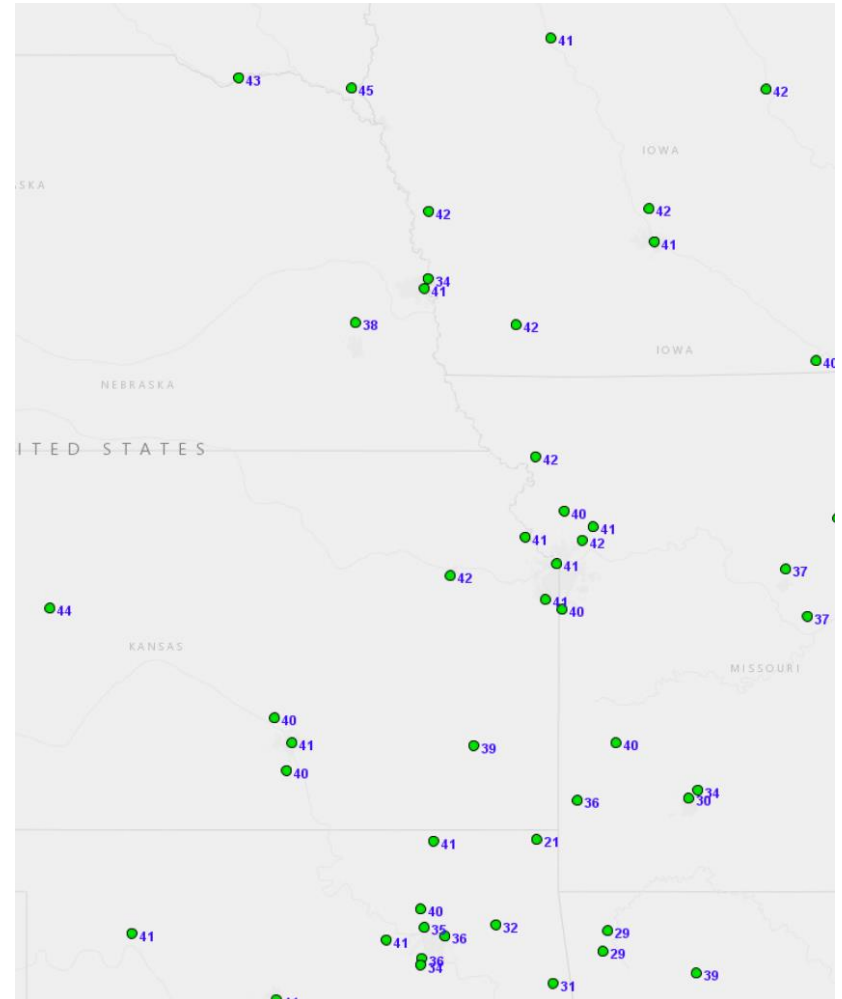


Tuesday, April 20, 2021

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

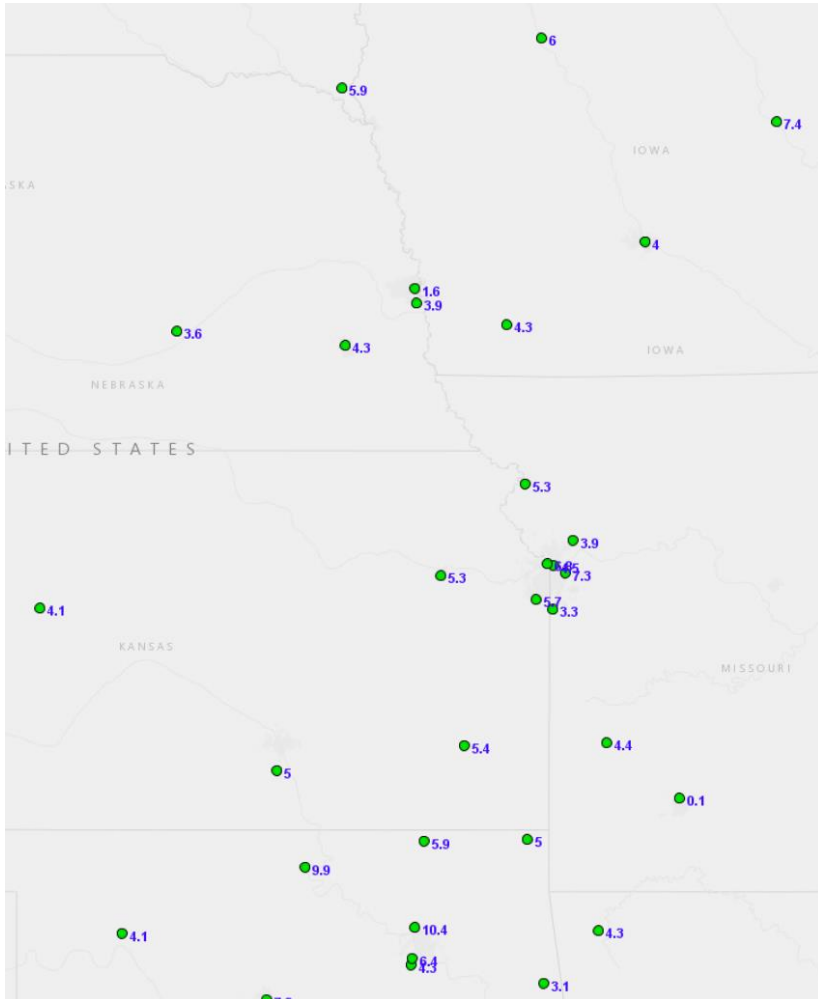


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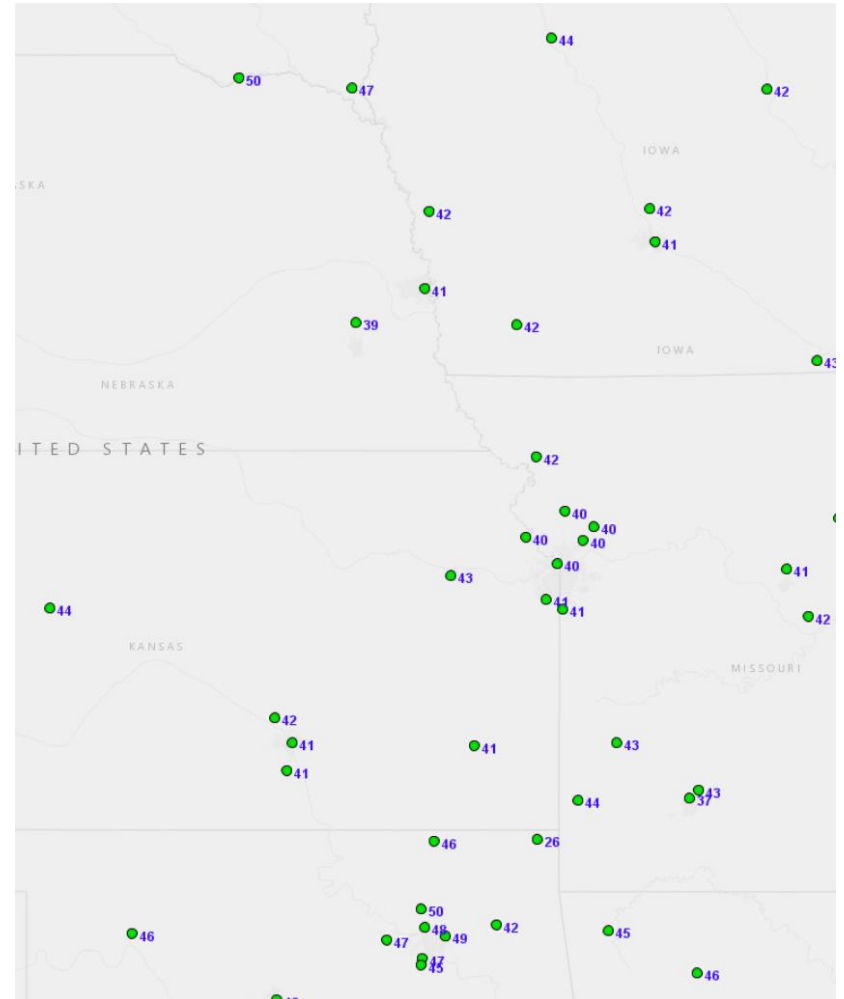


Wednesday, April 21, 2021

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

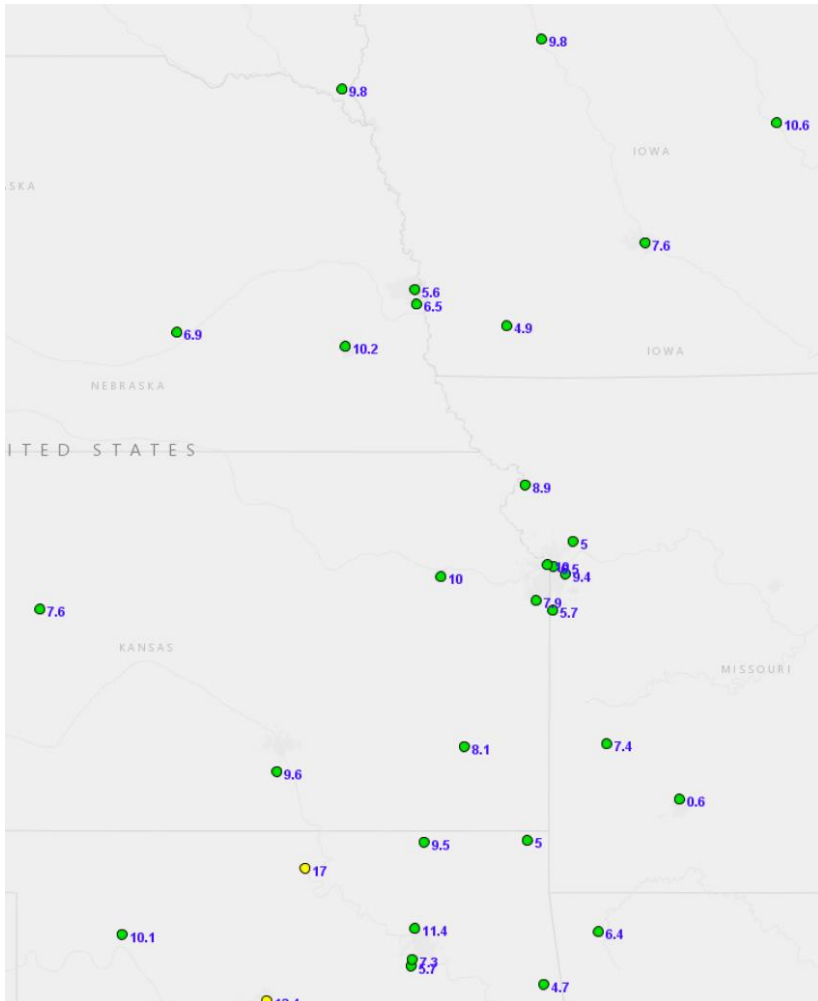


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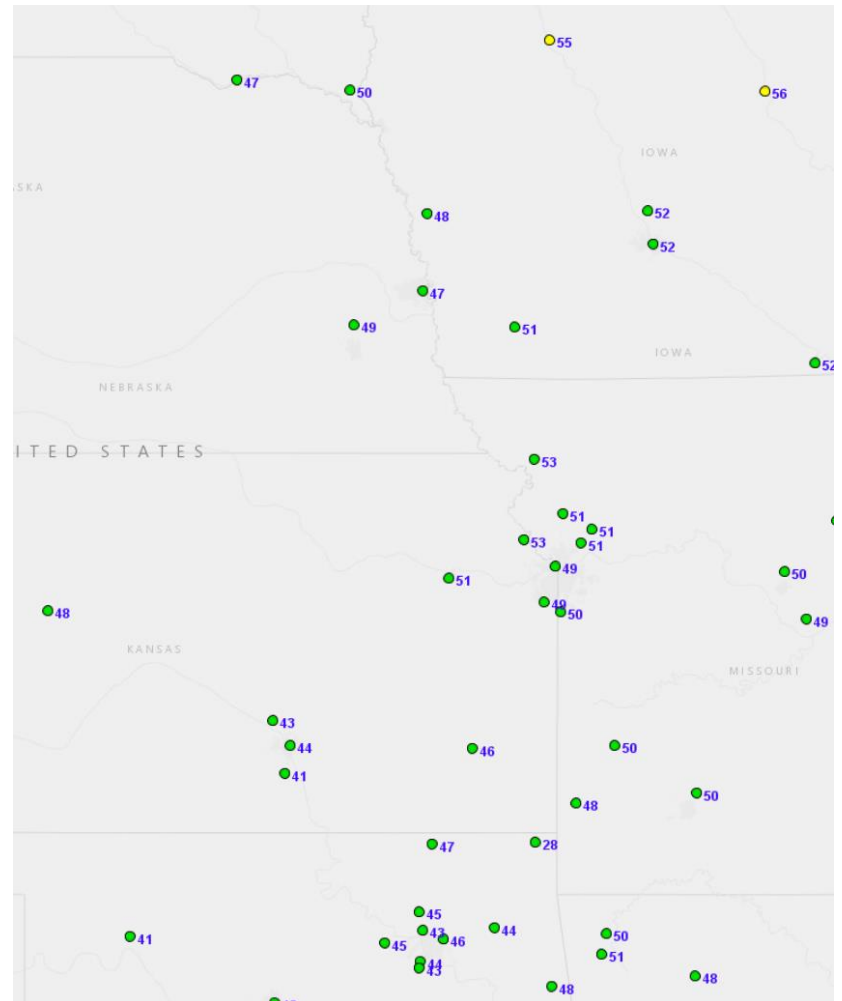


Thursday, April 22, 2021

PM2.5 (24-hour average)

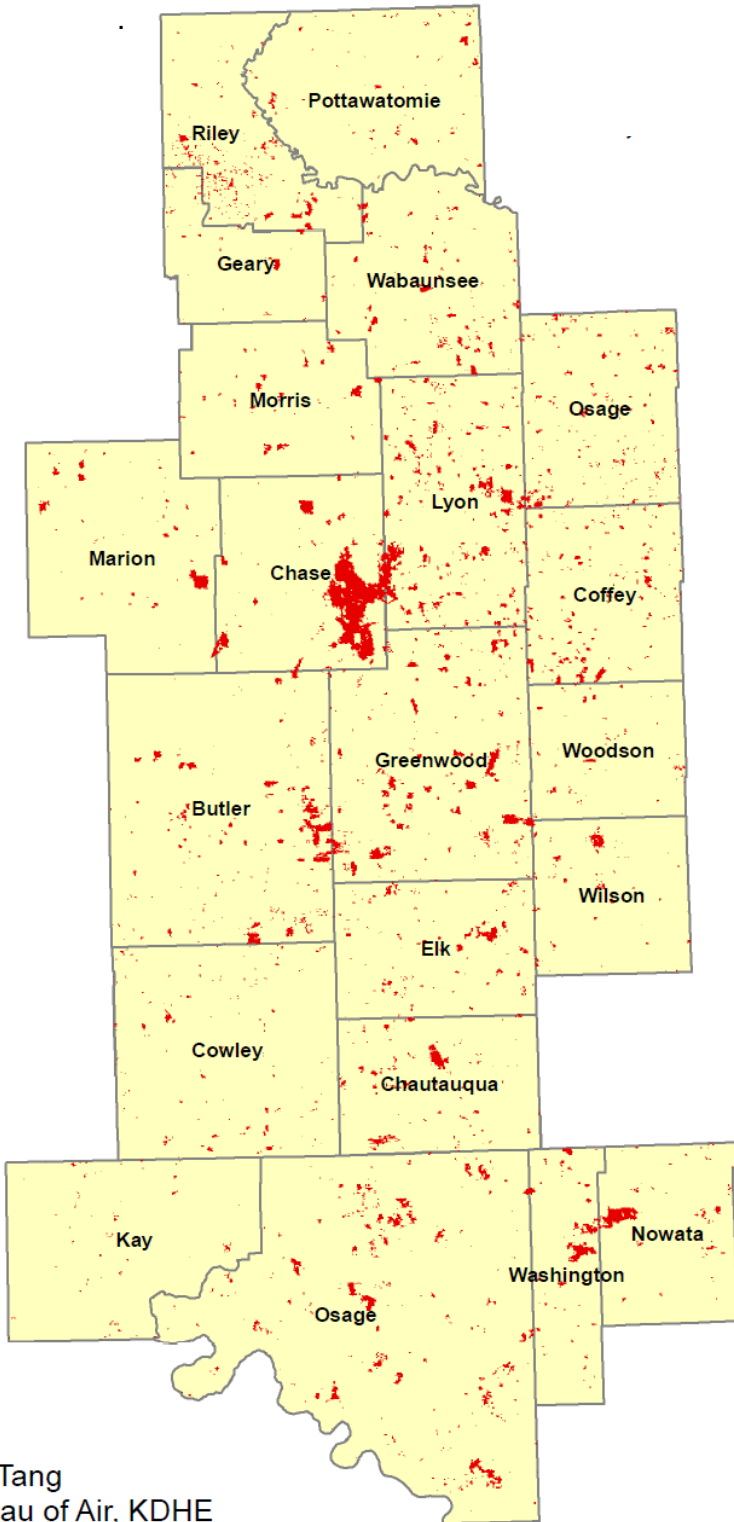


Ozone (8-hour average maximum)





Flint Hills Acreage Burned (February 23 – March 29, 2021)



<u>Counties</u>	<u>Acres Burned</u>
Butler	24,387
Chase	55,383
Chautauqua	10,950
Coffey	12,896
Cowley	6,270
Elk	10,749
Geary	3,027
Greenwood	31,028
Lyon	34,379
Marion	8,448
Morris	7,321
Osage (KS)	11,645
Pottawatomie	5,436
Riley	11,892
Wabaunsee	12,093
Wilson	5,992
Woodson	9,313
Nowata (OK)	31,522
Osage (OK)	9,730
Washington (OK)	2,394
Kay (OK)	
Total	308,407
* Denotes county was partly or completely covered by clouds during latest analysis.	

Yao Tang
Bureau of Air, KDHE



Fires and Smoke

Widespread rain across the Flint Hills on Friday (April 16) eliminated the potential for any prescribed fires and with rainfall amounts of at least a quarter- to half-inch led to minimal prescribed fire activity on Saturday (April 17) as well. With clear skies and warmer temperatures some prescribed fire activity return for Sunday (April 18) and Monday (April 19) as another cold front moved across the region. The combination of limited fires, varying wind directions, and breezy winds on Monday limited any smoke impacts.

A blanket of snow covered much of the Flint Hills on Tuesday (April 20) with as much as 3-5 inches of wet slushy accumulations in the northern Flint Hills. Prescribed fire activity return for Wednesday and Thursday (April 21-22) with occasionally cloudy skies, which may have shielded satellite fire detections at times, but lack of widespread fires and reasonable mixing with breezy conditions at times lead to only limited and brief smoke impacts for most areas throughout the region.

KSFIRE.ORG



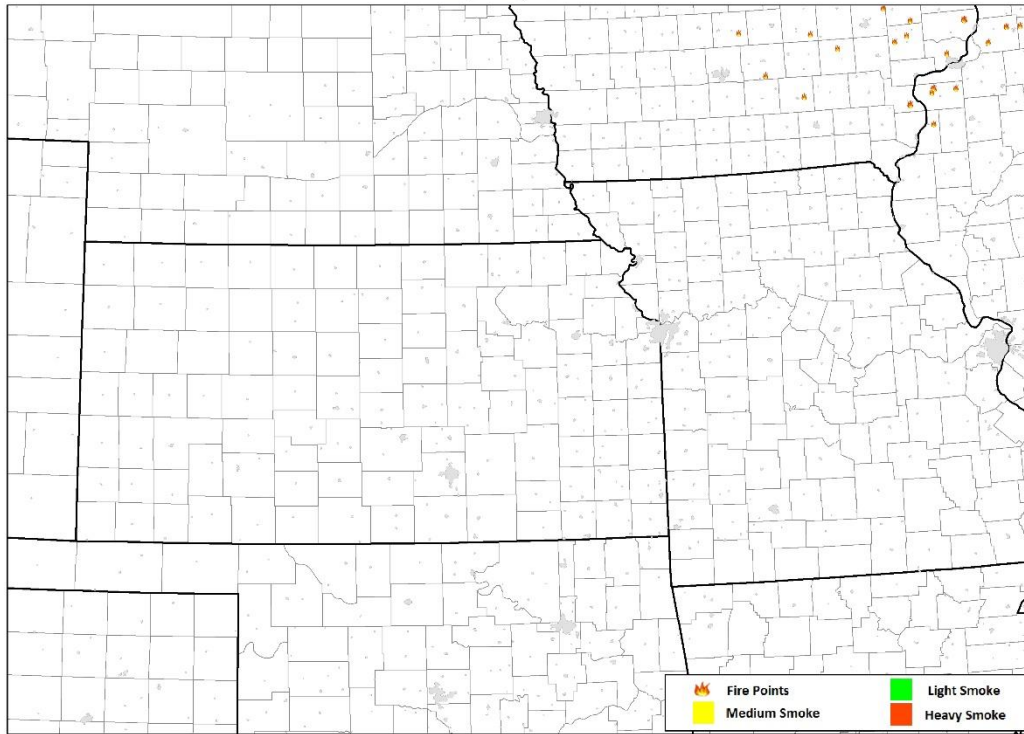
This website was developed as part of the development of the Kansas Flint Hills Smoke Management Plan. Kansas State University hosts the webpage and it includes important information for ranchers and others who might be interested in the Flint Hills. It provides training, regulations, policies, publications, a modeling tool and other links to guide people looking for information on smoke management. The development of the Flint Hills Smoke Management Plan is an attempt to balance the need for prescribed fire in the Flint Hills with the need for clean air in downwind areas.

Flint Hills Wildland Fire Update



Satellite Fire & Smoke Analysis

April 16, 2021

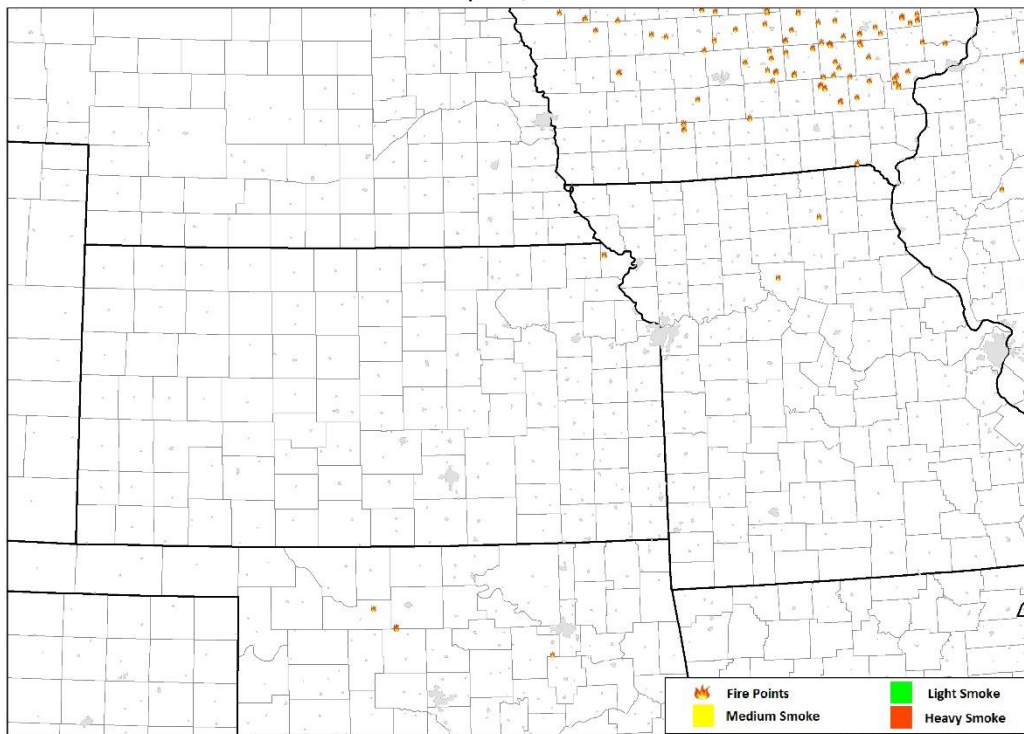


Map: Jayson Prentice, KDHE Bureau of Air

Data: NOAA NESDIS OSPO Hazard Mapping System Fire and Smoke Product

Satellite Fire & Smoke Analysis

April 17, 2021



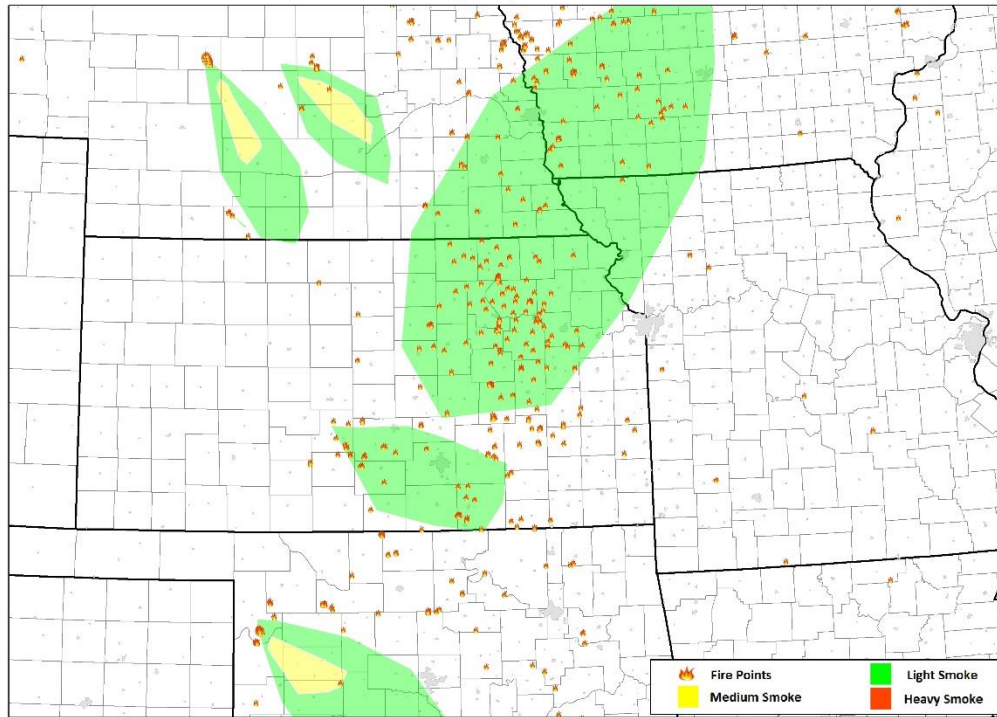
Map: Jayson Prentice, KDHE Bureau of Air

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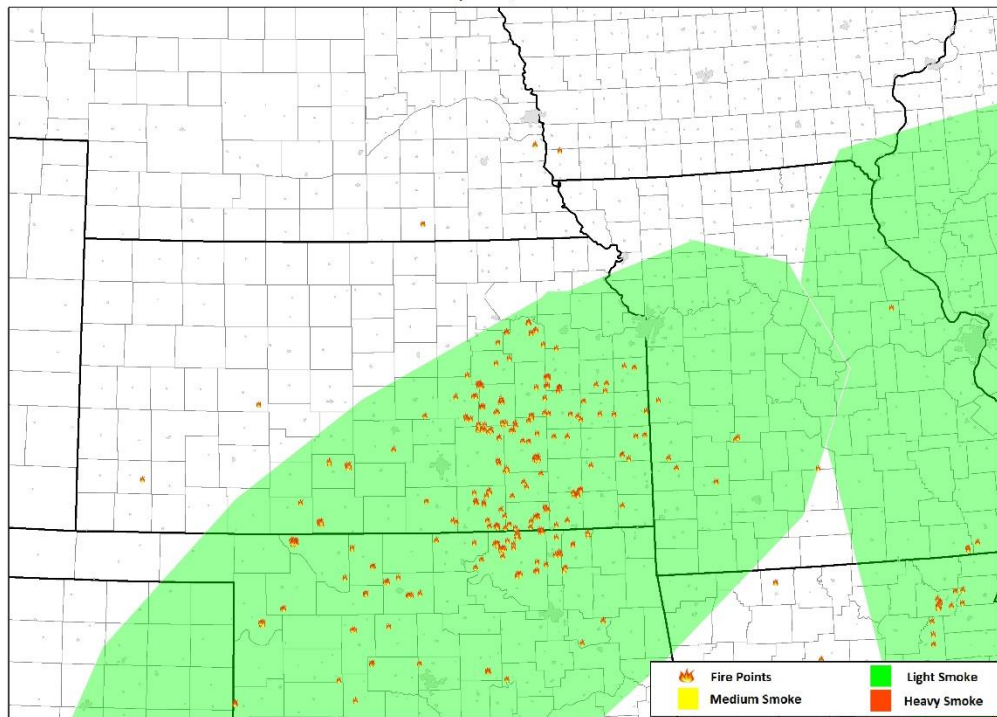
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Satellite Fire & Smoke Analysis April 18, 2021



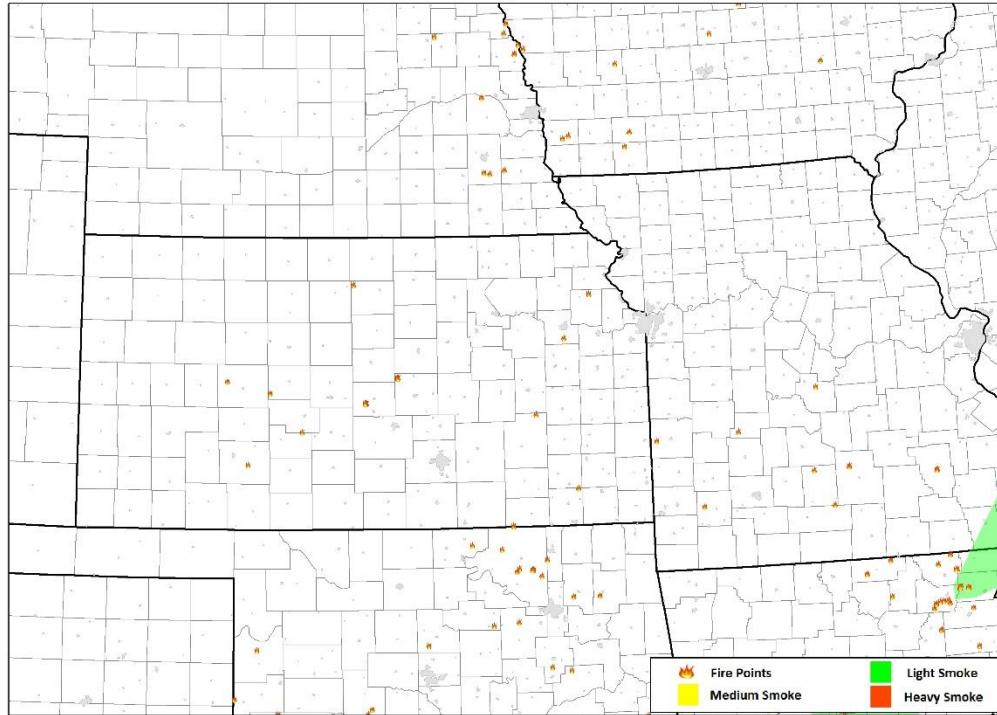
Satellite Fire & Smoke Analysis April 19, 2021



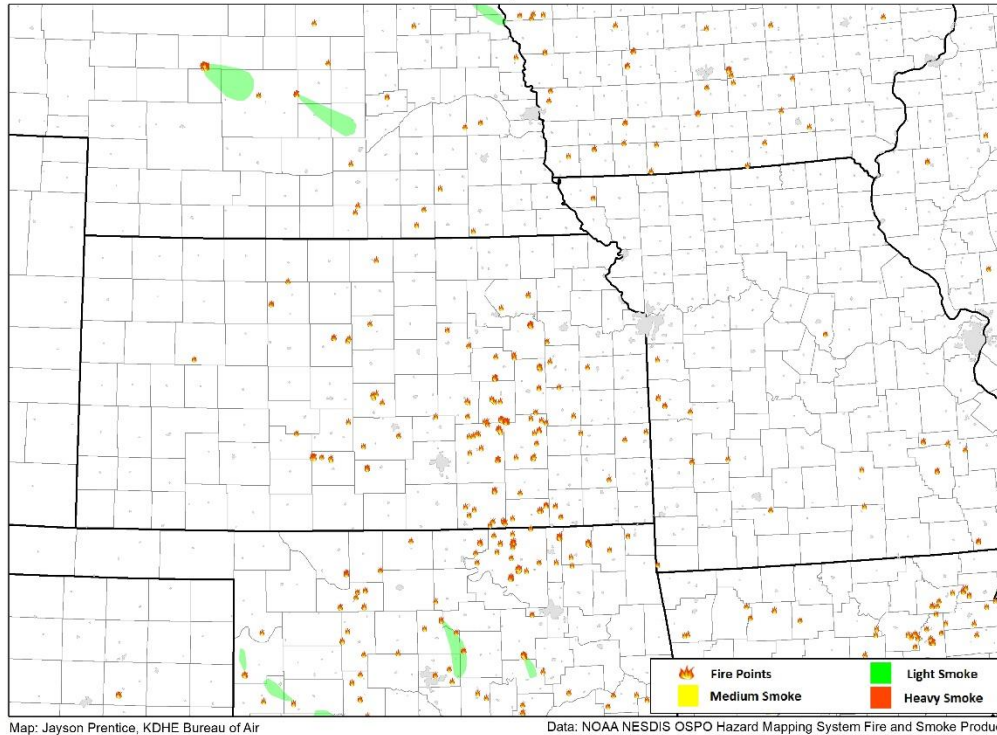
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Satellite Fire & Smoke Analysis April 20, 2021



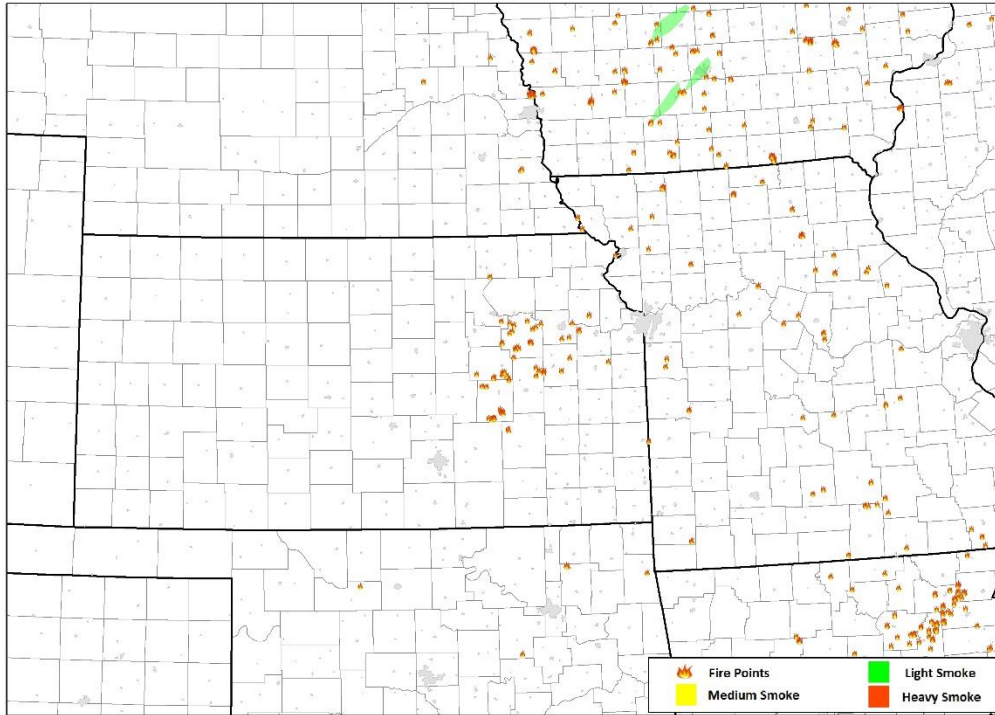
Satellite Fire & Smoke Analysis April 21, 2021



Flint Hills Wildland Fire Update



Satellite Fire & Smoke Analysis April 22, 2021



Map: Jayson Prentice, KDHE Bureau of Air

Data: NOAA NESDIS OSPO Hazard Mapping System Fire and Smoke Product

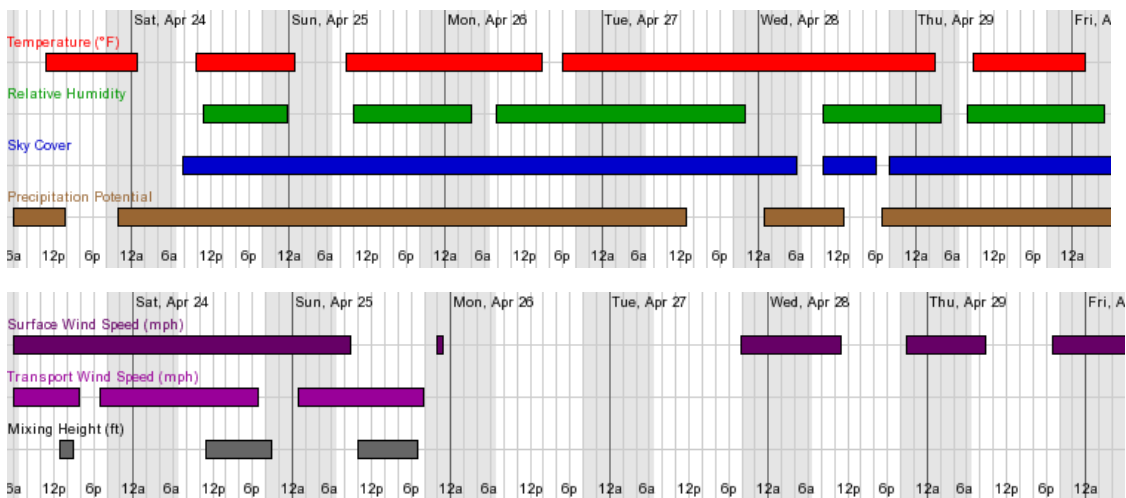


Upcoming Look at Fires and Smoke

Cloudy conditions with the potential for afternoon showers and thunderstorms across much of the region will likely limit fire potential today, Friday (April 23). The opportunity will likely exist for prescribed fires on Saturday (April 24) under dry conditions and gradually warming temperatures. Breezy to gusty winds return on Sunday (April 25) and continue for the entire period of Monday and Tuesday (April 26-27) as temperatures warm into the 80s in the afternoon.

A round of showers and thunderstorms are expected late Tuesday (April 27) and perhaps again Wednesday (April 28). Winds will remain breezy during the afternoon hours for Wednesday (April 28) and Thursday (April 29) rounding out a week of rather limited prescribed fire potential. With the warm temperatures and rainfall anticipate significant new vegetation growth throughout the region as green-up continues.

Ideal Weather Conditions for Prescribed Burning



Current National Weather Service forecast for the approximate center of the Flint Hills showing when conditions may be most favorable for wildland burning as described at KSFire.org. Conditions are most favorable when each parameter has a colored boxplot displayed. Note: Forecast for mixing height and transport winds are only out to 2 days. Forecast valid: 7am April 23, 2021.

For more information, contact:

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