

Flint Hills Wildland Fire Update

March 25, 2022

The following information on the Flint Hills wildland fires is provided weekly to keep stakeholders up to date on fires, smoke, and air quality.



<https://www.KSFire.org/>

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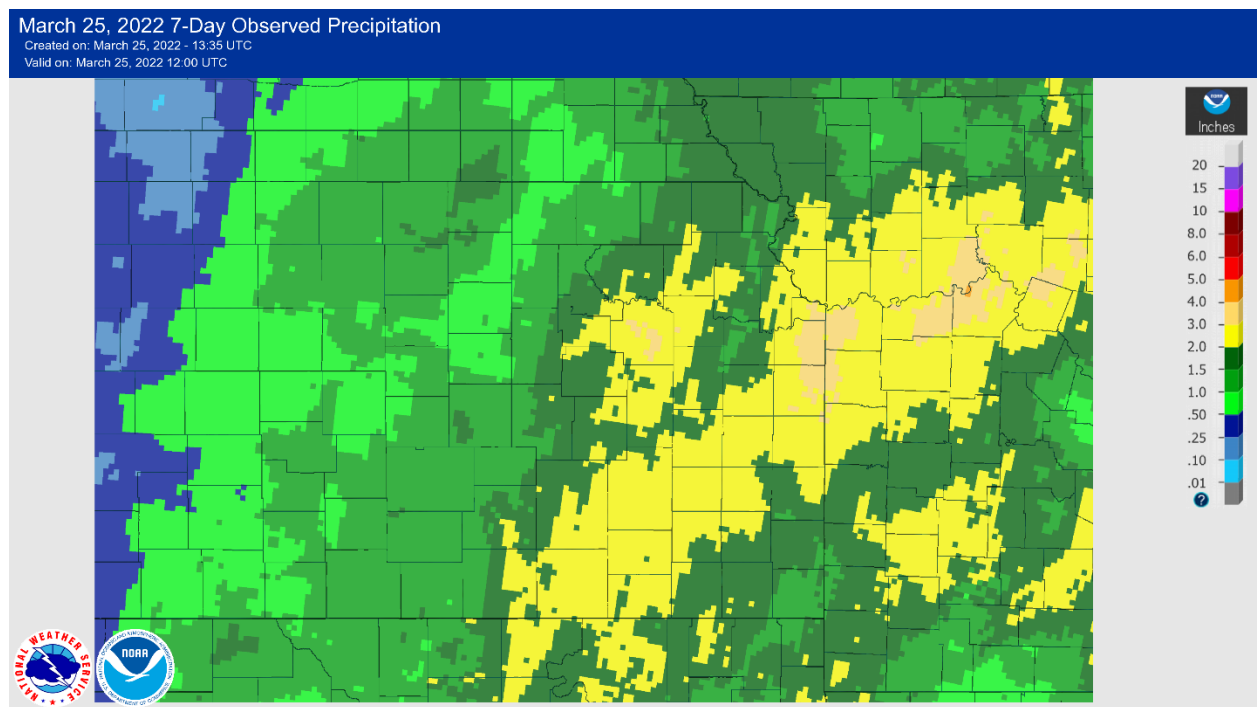
This website was developed as part of the development of the Kansas Flint Hills Smoke Management Plan. Kansas State University hosts the webpage and it includes important information for ranchers and others who might be interested in the Flint Hills. It provides training, regulations, policies, publications, 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.



Meteorology

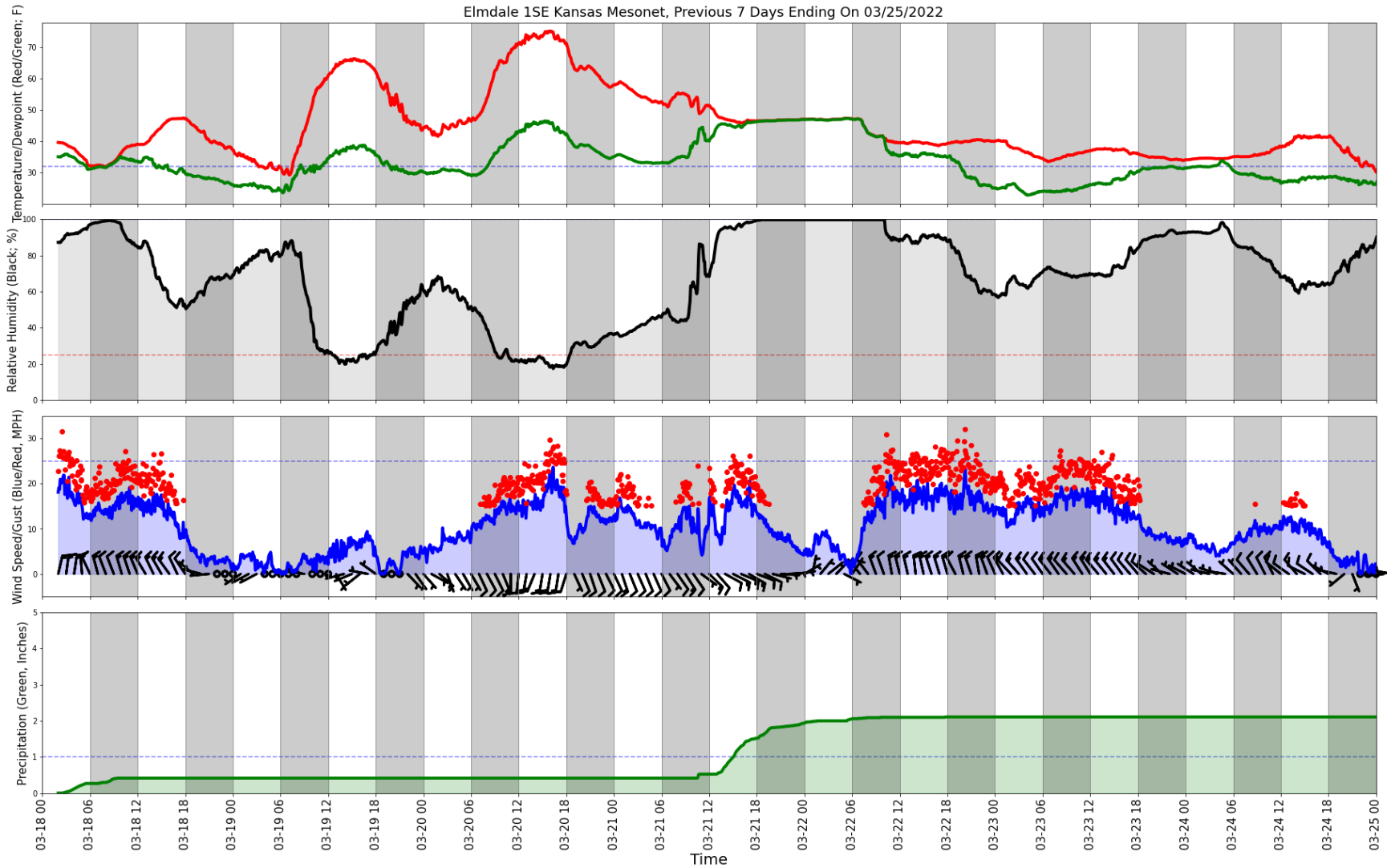
Light rain ended on Friday (March 18) and was replaced by sunny skies and warmer temperatures for Saturday (March 19) and Sunday (March 20). Winds and relative humidity on Sunday combined for Red Flag Warning conditions throughout the state of Kansas. Increasing clouds and the return of rain was seen on Monday (March 21) with cooler temperatures and periods of rain continuing through Wednesday (March 23) for most of the region. Precipitation totals varied from an inch to upwards of three inches for the Flint Hills area. Light rainfall finally exited the region on Thursday (March 24) with sunny skies even returning by the end of the day for most.

Precipitation



NOAA/NWS Observed Total Precipitation for Mar. 18-24, 2022.

Flint Hills Wildland Fire Update



7-day (Mar. 18-24, 2022) Observed Weather from Kansas Mesonet station near Elmdale, Kansas
<https://mesonet.k-state.edu/>



Fire, Smoke, and Air Quality

For the period of March 18-24, 2022 there were **no** air quality exceedances of the National Ambient Air Quality Standards (NAAQS) that were potentially influenced by prescribed fire within the Flint Hills region.

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

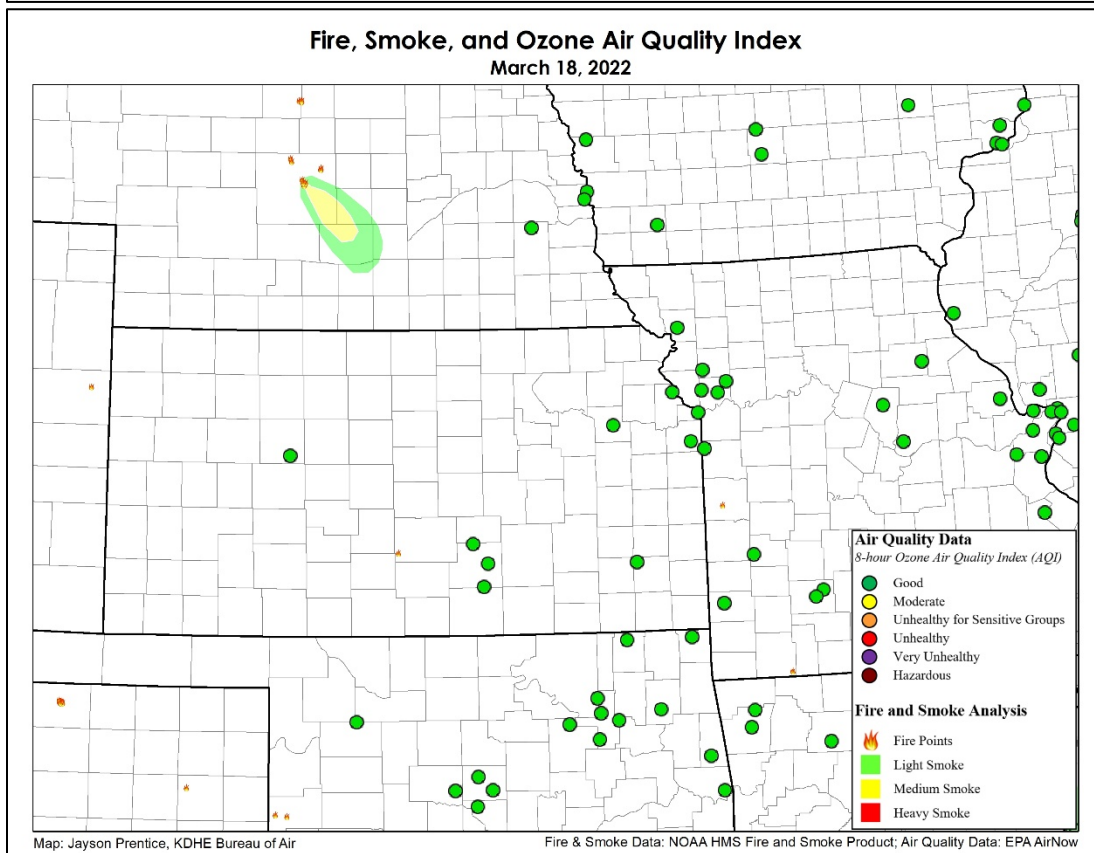
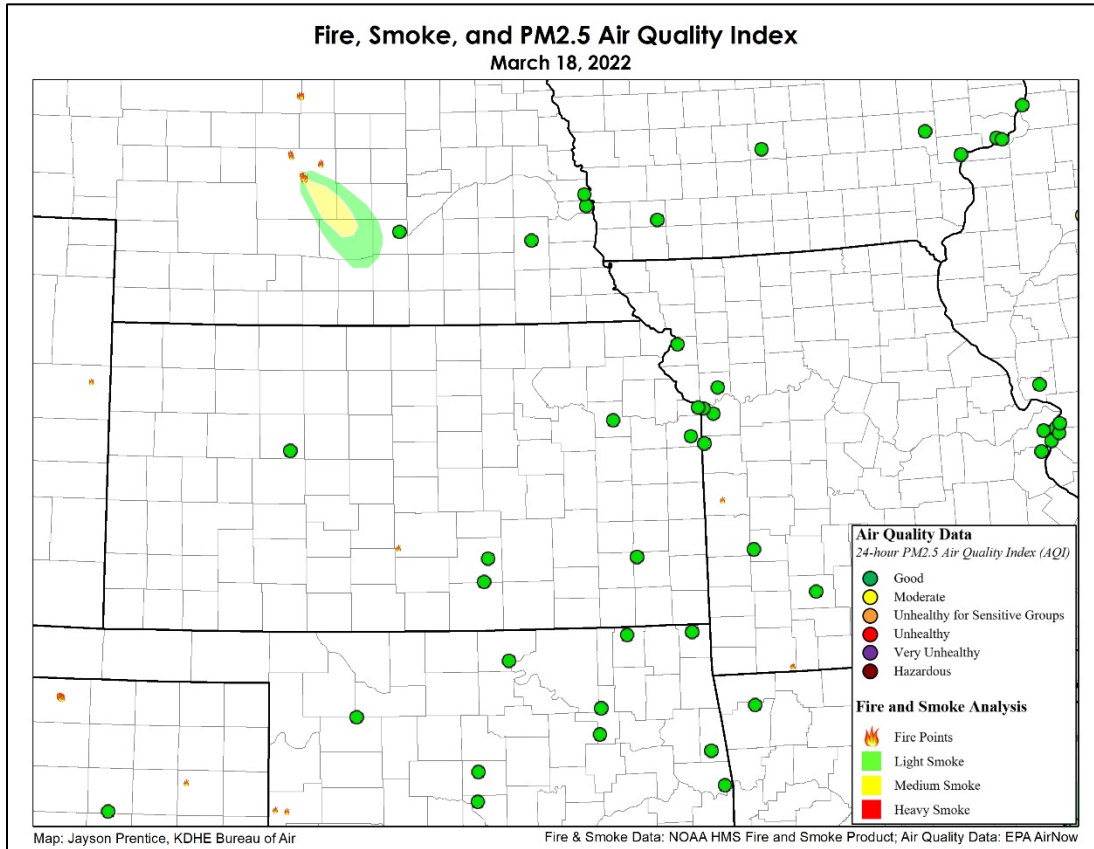
PM_{2.5}: Preliminary data indicates no exceedances of the NAAQS daily 24-hour average maximum of 35 µg/m³.

Light precipitation and cloud cover on Friday (March 18) limited the use of prescribed fire for much of the region. Dry conditions and sunshine on Saturday (March 19) allowed prompted a quick return to prescribed fire after the prior week's precipitation. Despite a reasonable amount of fires any smoke impacts were minimized with good mixing heights and reasonable transport winds. Red Flag Warnings were issued for the Flint Hills and all but locations southeast of the Flint Hills on Sunday (March 20) as relative humidity values dropped down to 20 percent or lower and wind speeds exceeded 20-30 mph. Some burning continued for areas east of the Flint Hills, and especially south of the Flint Hills where conditions were slightly better. However, several wildfires were noted by late Sunday throughout the region. Several wildfires continued Monday (March 21) as conditions moderated ahead of the next round of rainfall; A few prescribed fires were also likely mixed in. A combination of prior day smoke and dense smoke from wildfires in Oklahoma and Texas led to widespread Moderate Air Quality Index (AQI) on Sunday and Monday with some hourly values noted up to the Unhealthy range early Monday.

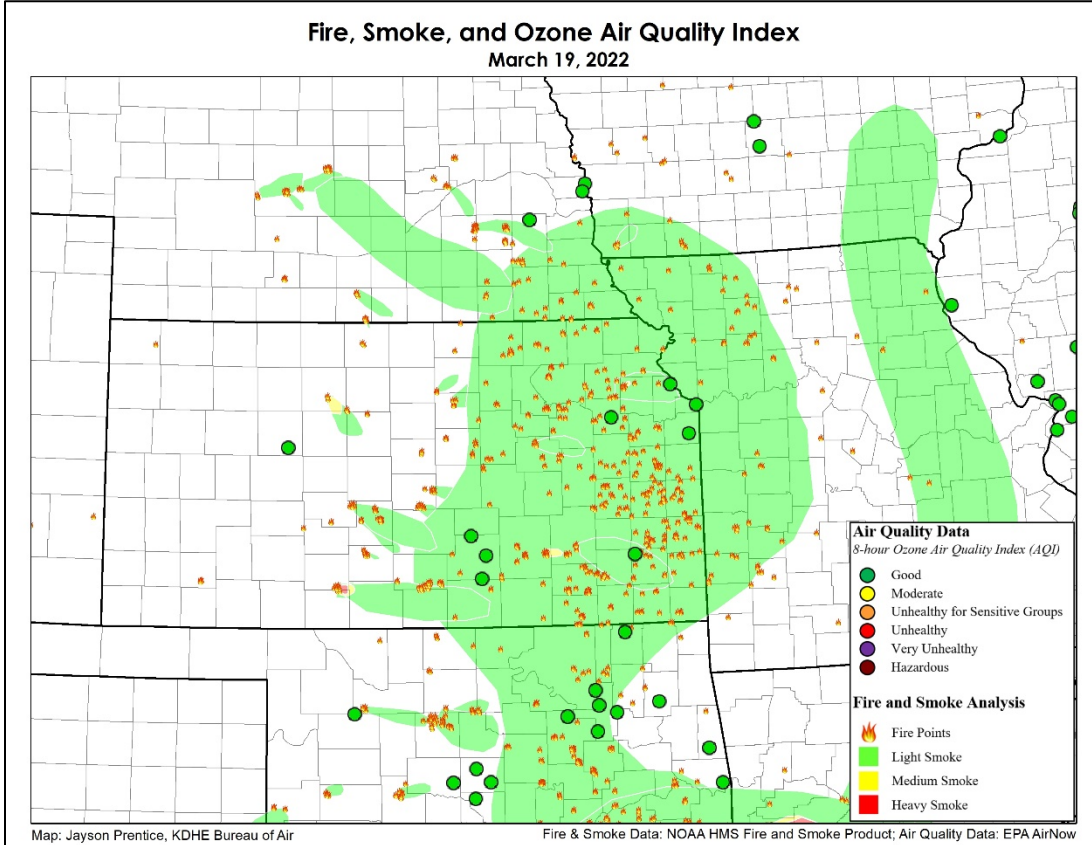
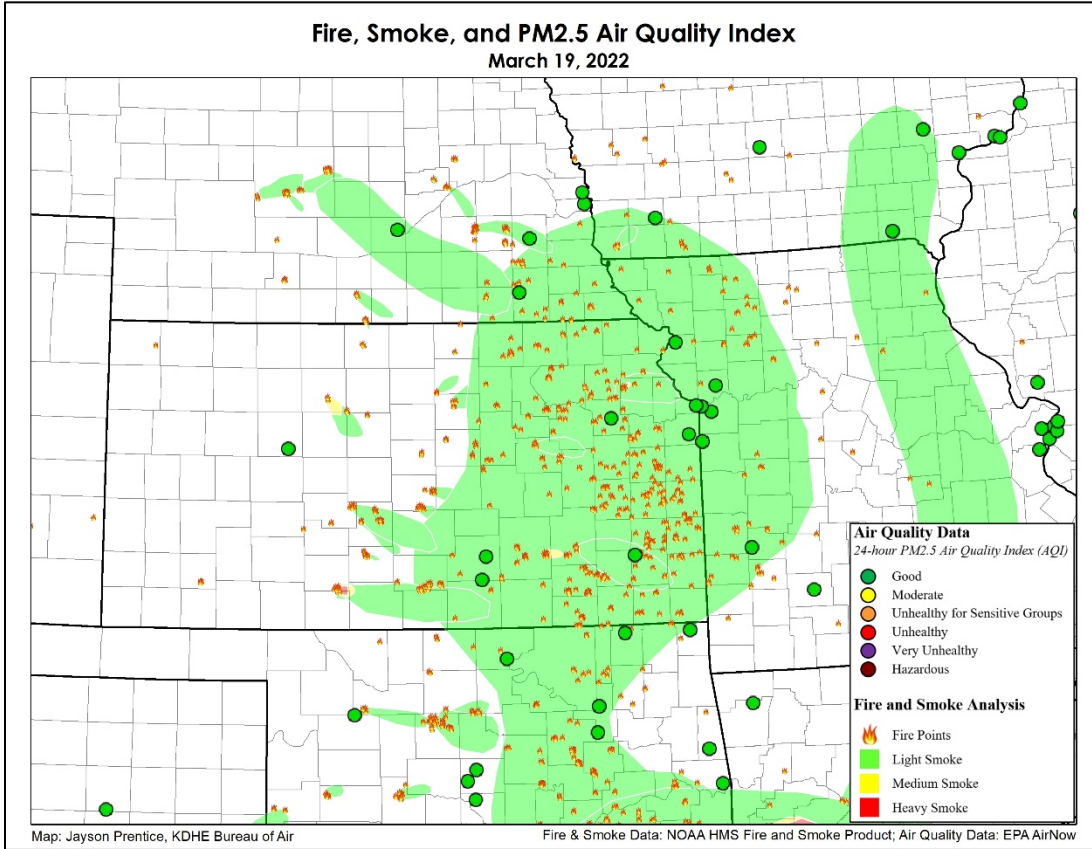
Periods of heavy rain and otherwise wet and cloudy conditions across the region on Tuesday (March 22), Wednesday (March 23), and even into Thursday (March 24) precluded fire use for most areas, and the cloudy conditions masked most fires from being detected by satellite.

The following pages have two maps for each day; One showing the 24-hour average Air Quality Index category for PM_{2.5} and the other showing the 8-hour average maximum Air Quality Index category for Ozone from regulatory air quality monitors in the region. Both maps show fires and smoke as analyzed by NOAA Hazard Mapping Services.

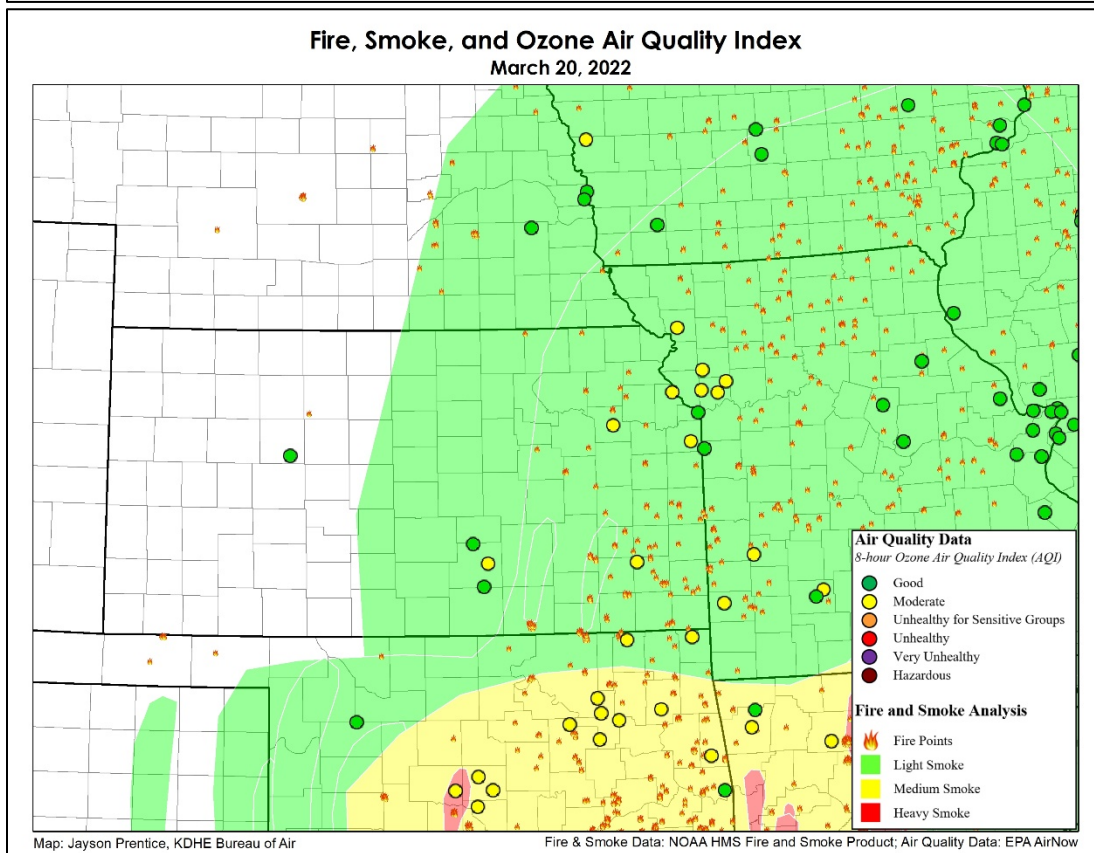
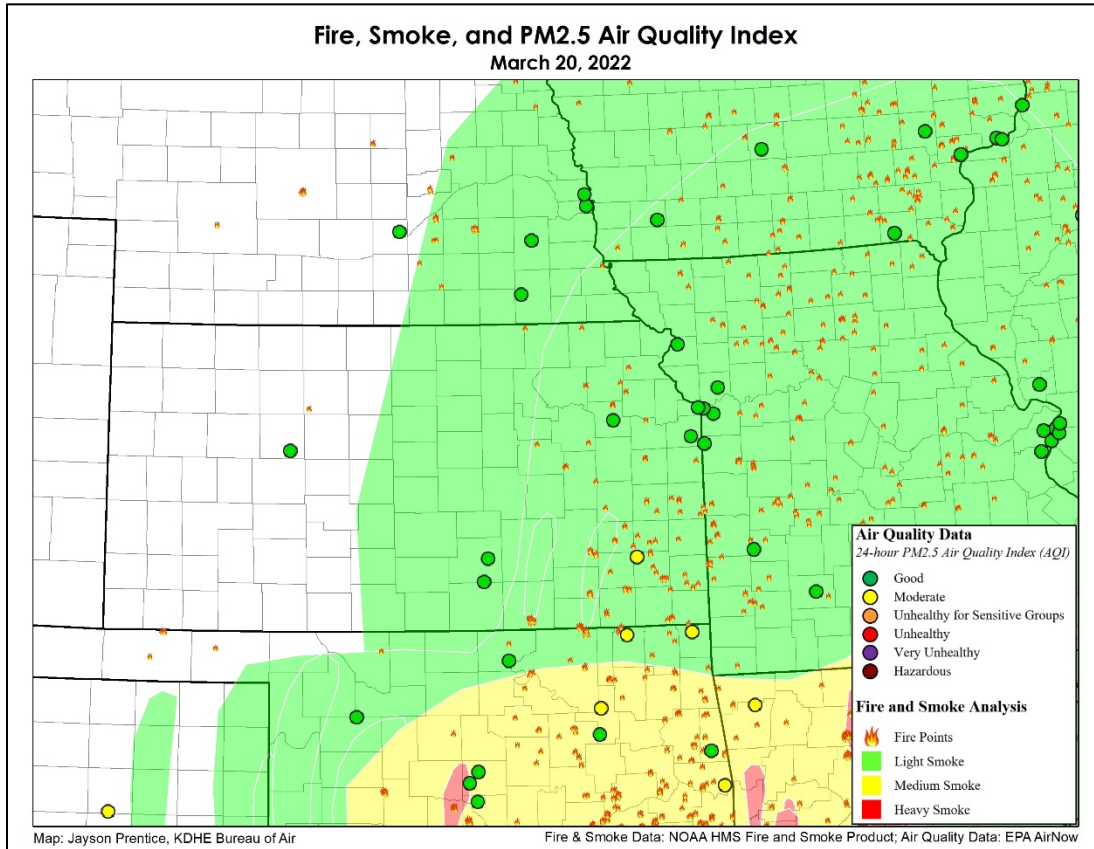
Flint Hills Wildland Fire Update



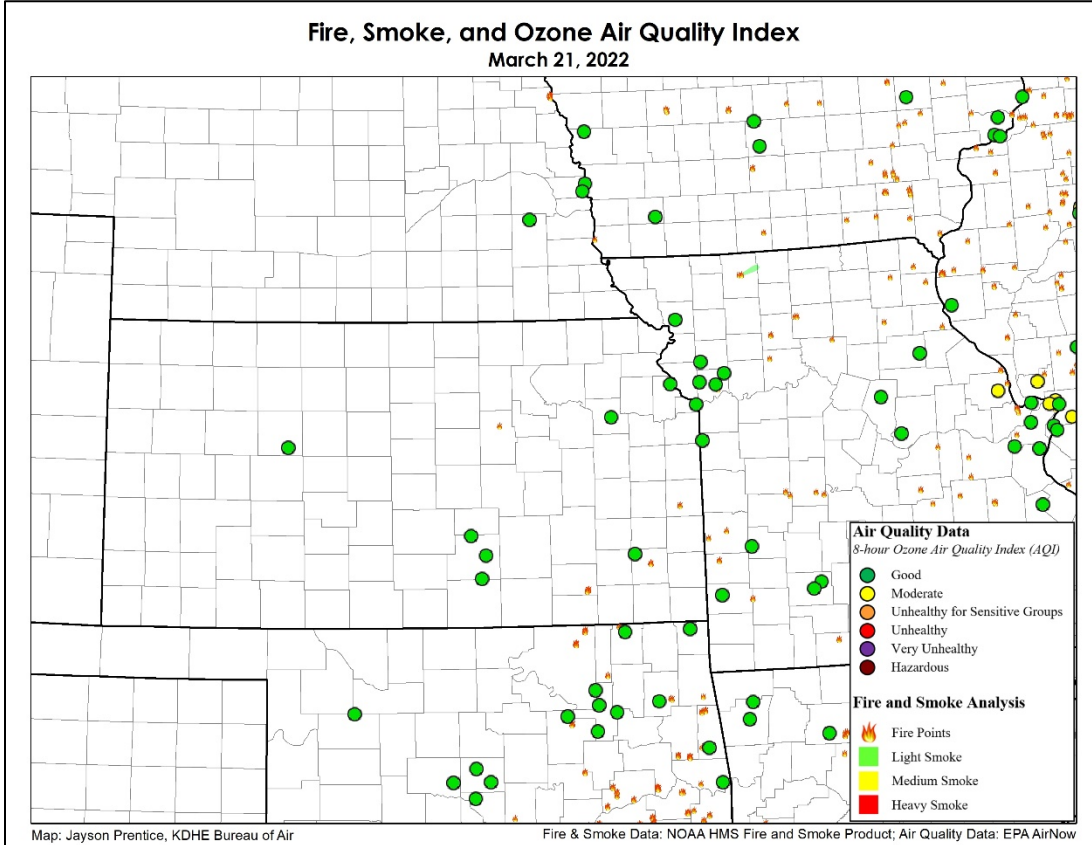
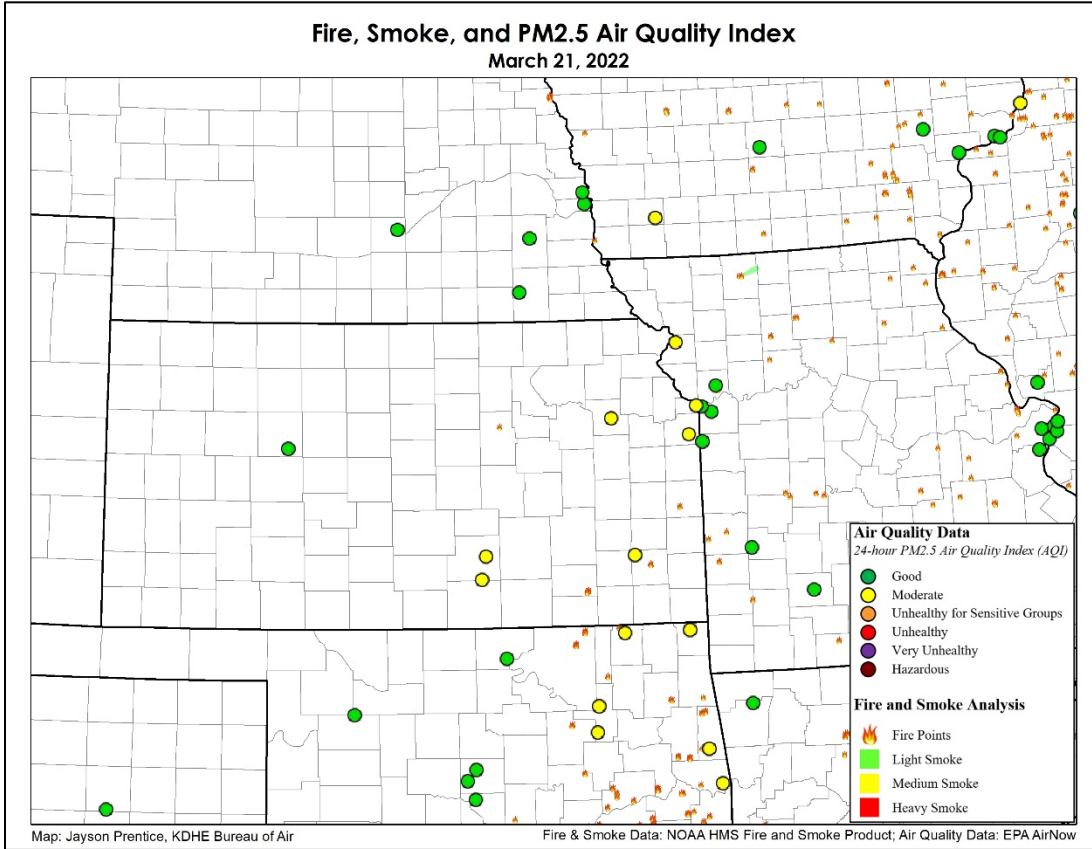
Flint Hills Wildland Fire Update



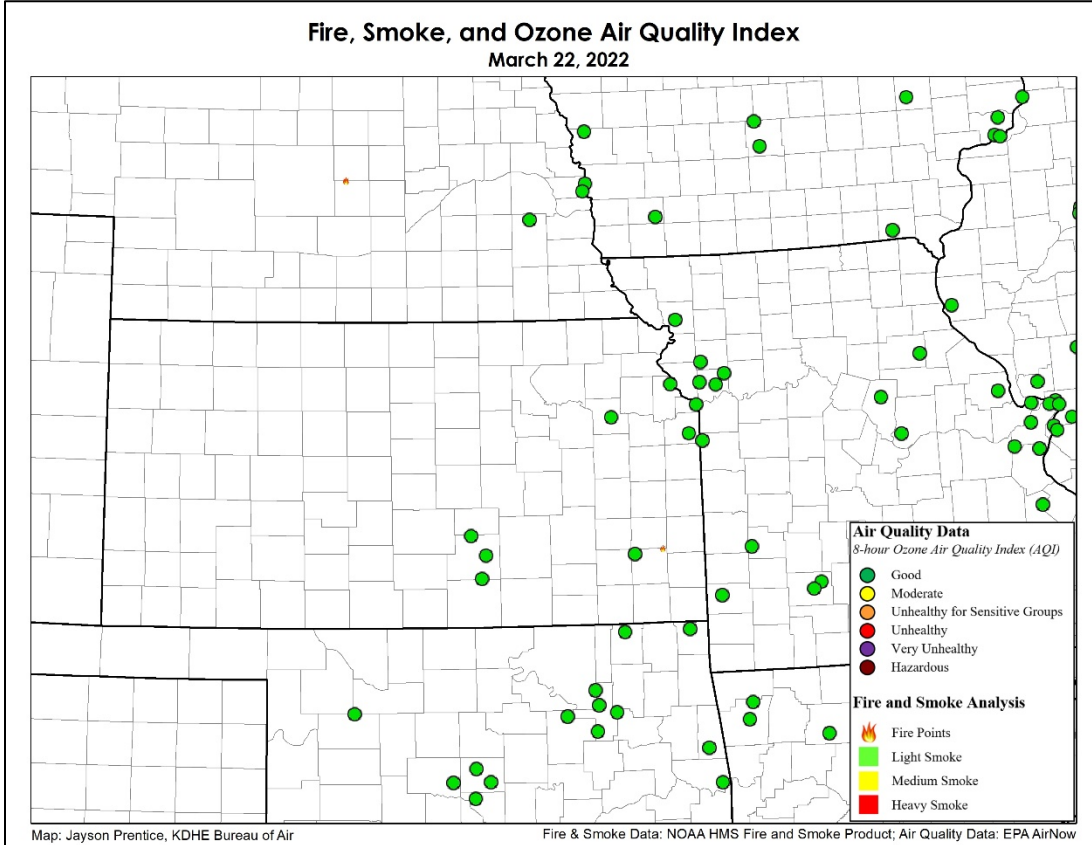
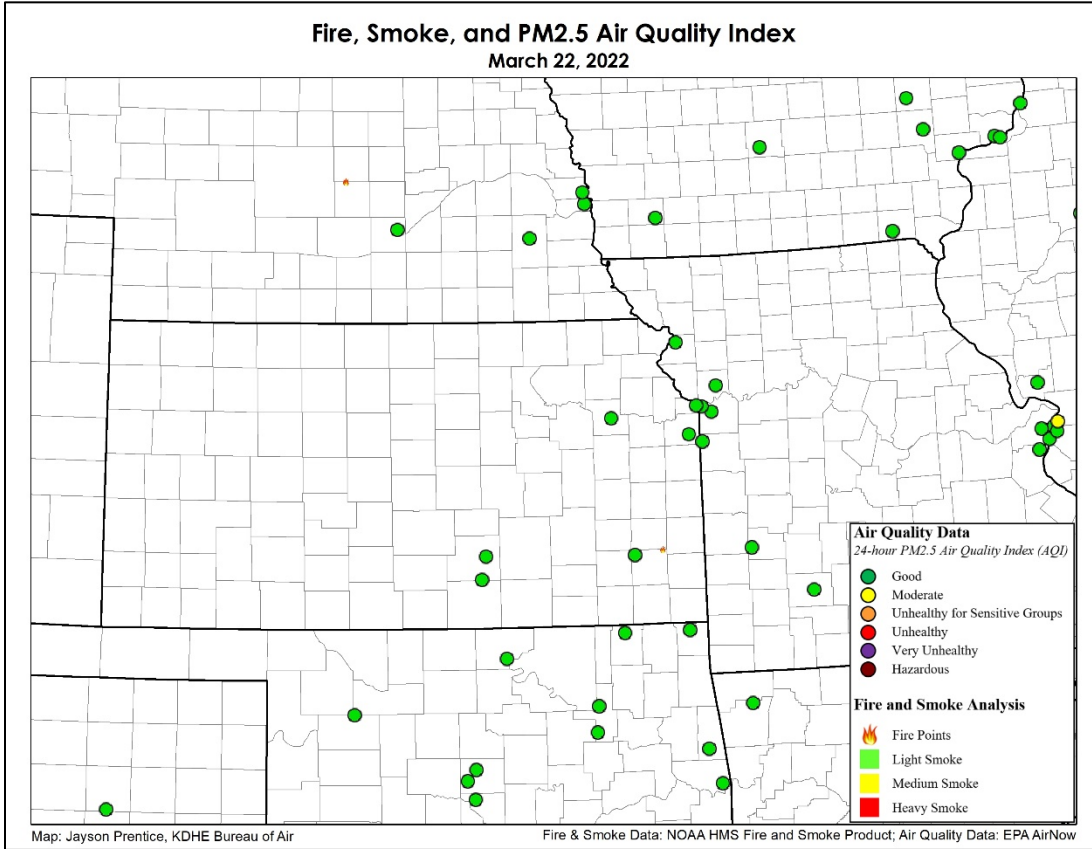
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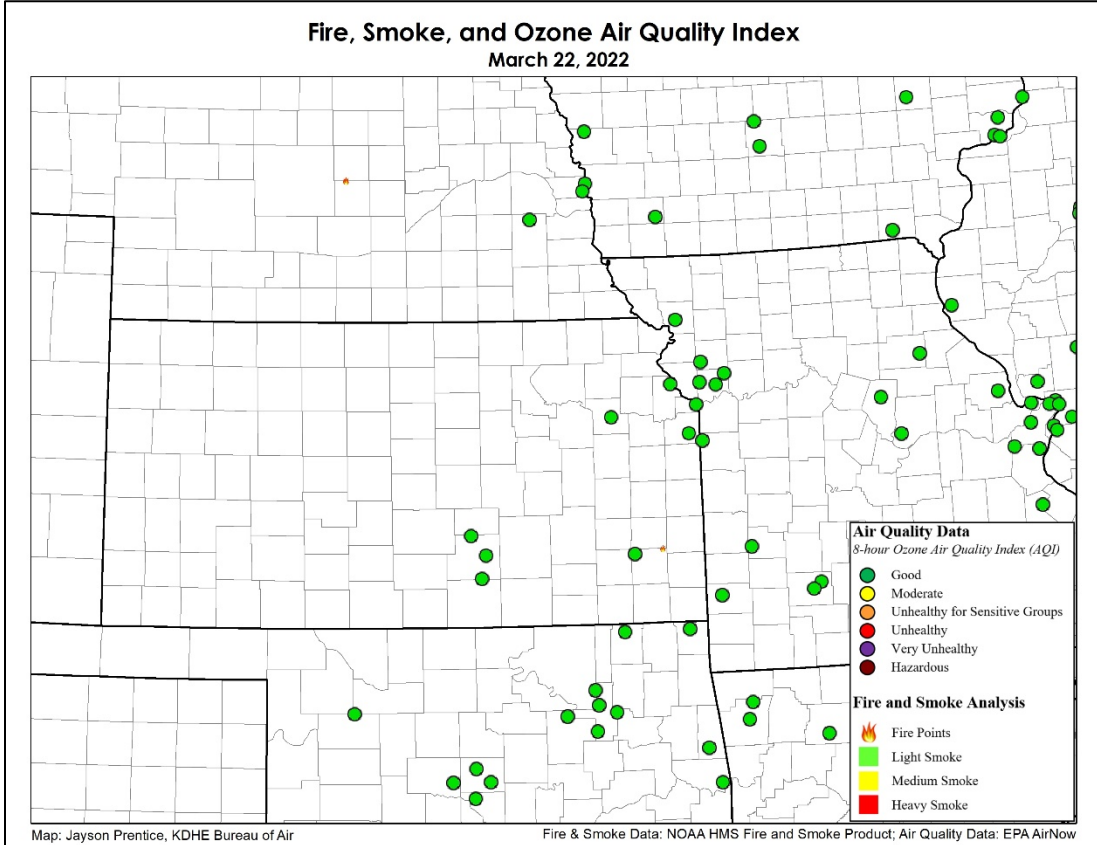
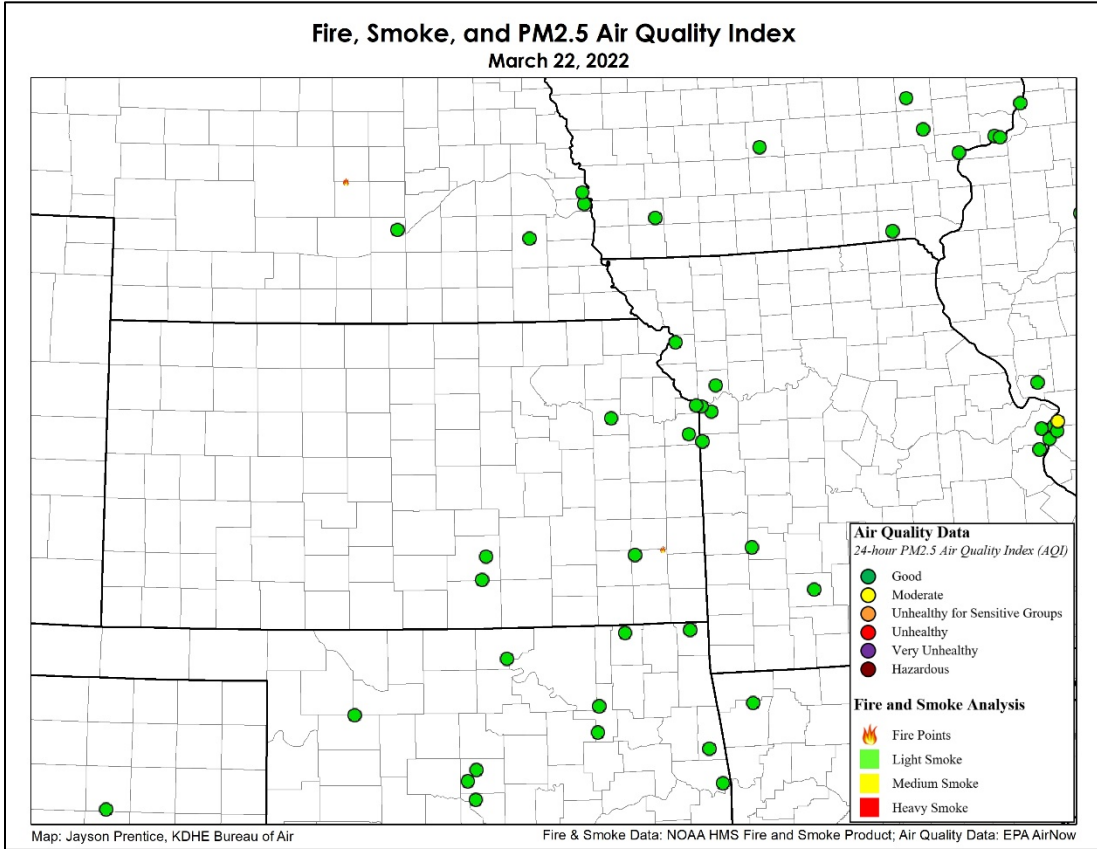
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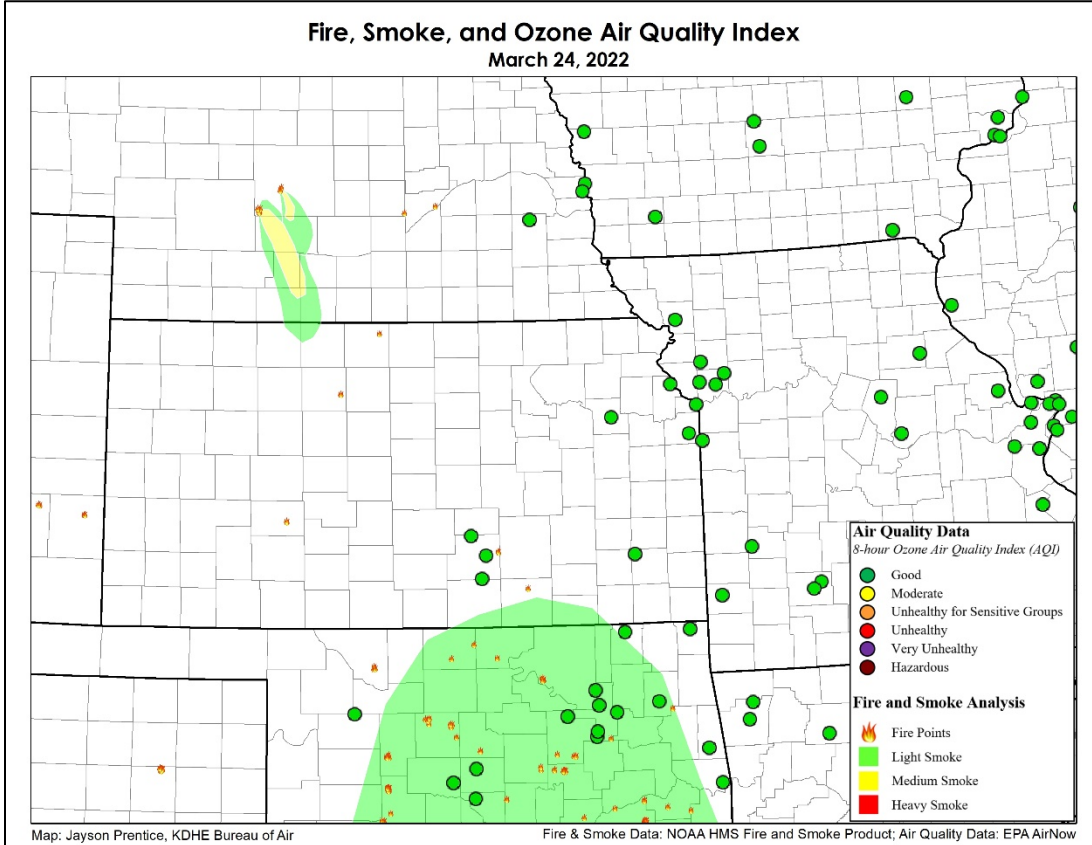
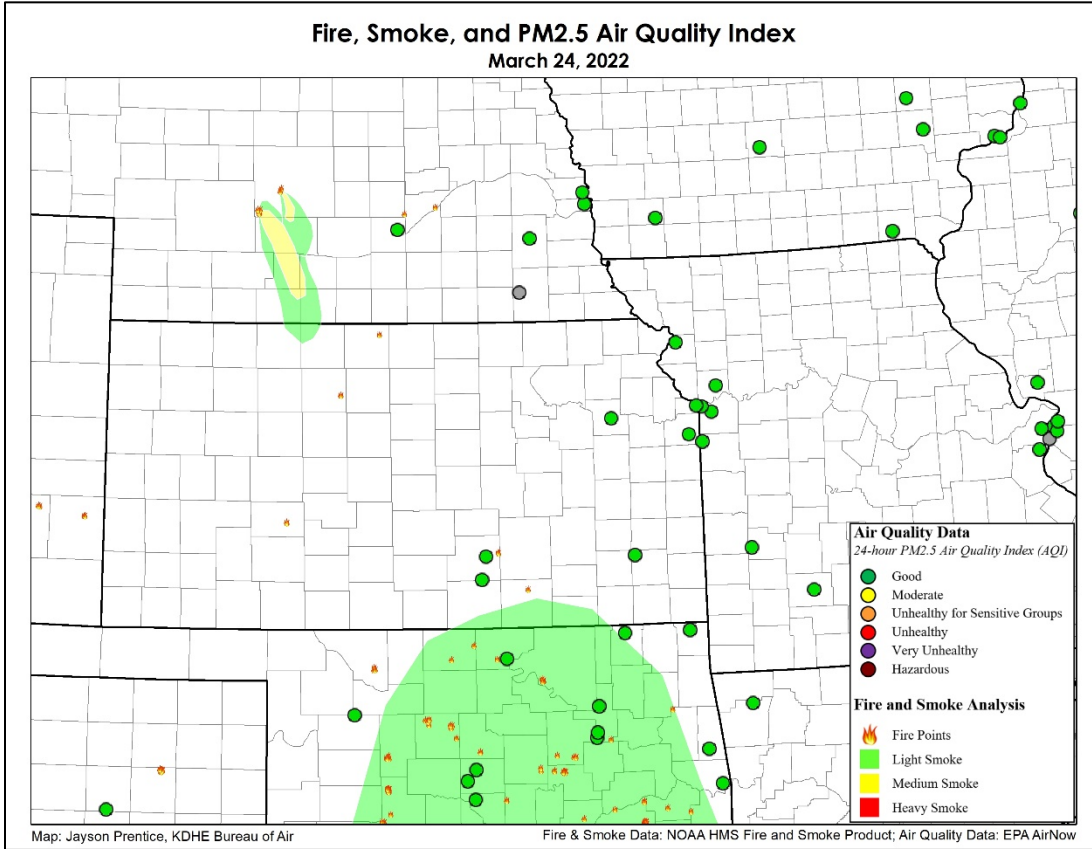
Flint Hills Wildland Fire Update



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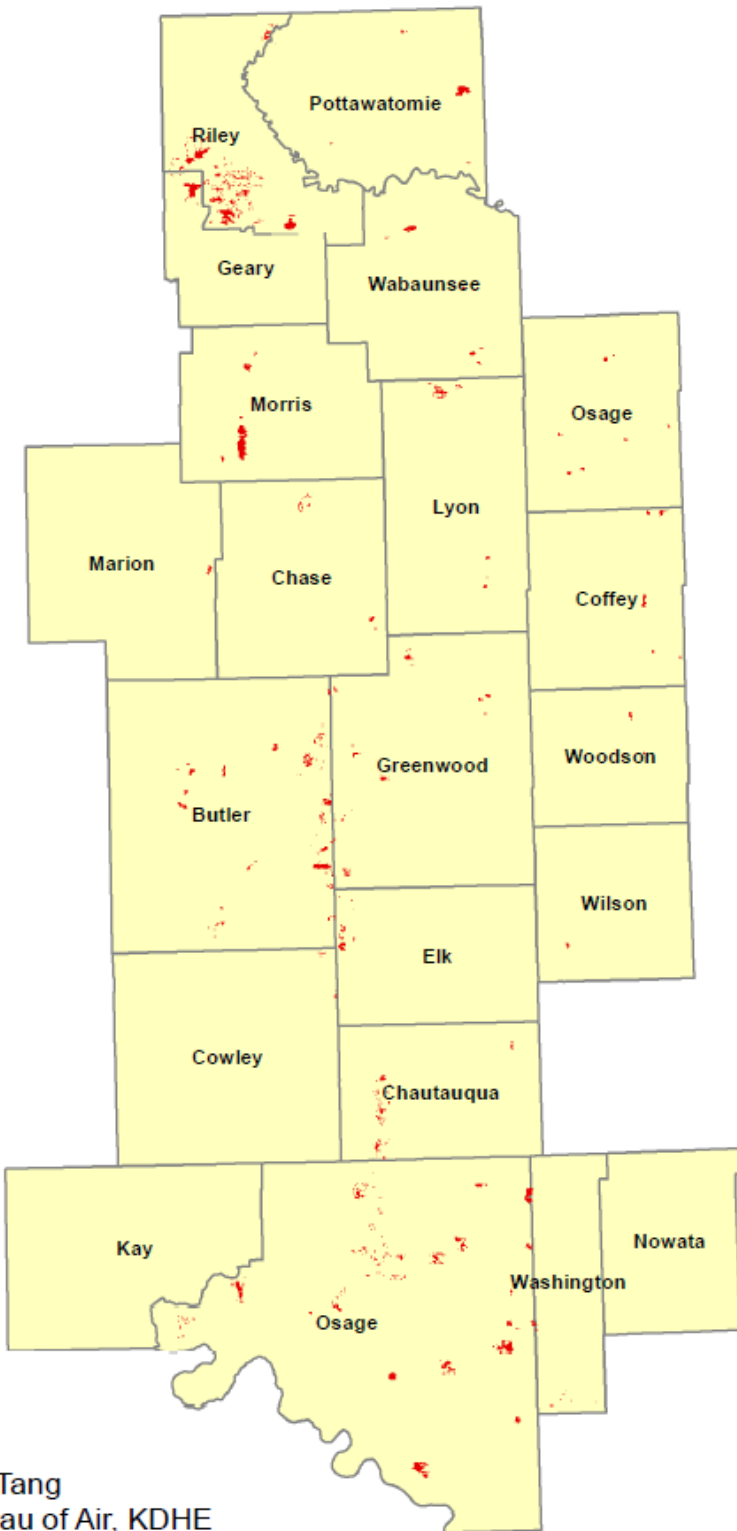


Flint Hills Wildland Fire Update





Flint Hills Acreage Burned (Feb. 14 – Mar. 19, 2022)



Yao Tang
Bureau of Air, KDHE

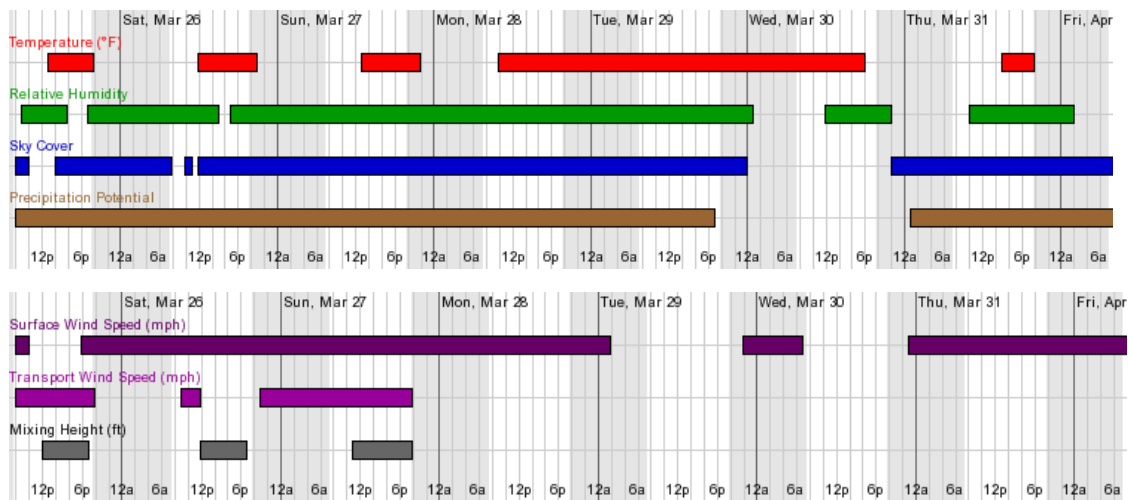
<u>Counties</u>	<u>Acres Burned</u>
Butler	8,031
Chase	865
Chautauqua	5,359
Coffey	1,112
Cowley	556
Elk	4,448
Geary	2,100
Greenwood	2,548
Lyon	3,243
Marion	402
Morris	4,572
Osage (KS)	1,575
Pottawatomie	2,178
Riley	12,093
Wabaunsee	1,575
Wilson	525
Woodson	278
Nowata (OK)	432
Osage (OK)	14,919
Washington (OK)	494
Kay (OK)	0
Total	67,305
* Denotes county was partly or completely covered by clouds during latest analysis.	



Upcoming Look at Fires and Smoke

Dry conditions and sunshine have finally returned to the area after more than 48 hours of rainfall and an even longer stretch of primarily cloudy conditions. While the sun is shining, and temperatures are warmer the combination of breezy and low relative humidity has led to high to very high fire danger today (March 25). Conditions moderate for Saturday (March 26) with lower winds and higher humidity, which should allow for increased prescribed fire use. Winds become steady southeast-south for Sunday (March 27) and Monday (March 28) with otherwise good conditions for prescribed fires. Tuesday (March 29) and Wednesday (March 30) will be breezy with the potential for rain late Tuesday through Wednesday. Dry conditions and cooler temperatures are expected for Thursday (March 31).

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 for that hour.

Note: Forecast for mixing height and transport winds are only issued for the next 72 hours. Forecast valid: 8am March 25, 2022.

For more information, contact:

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