

# Flint Hills Wildland Fire Update

April 28, 2023

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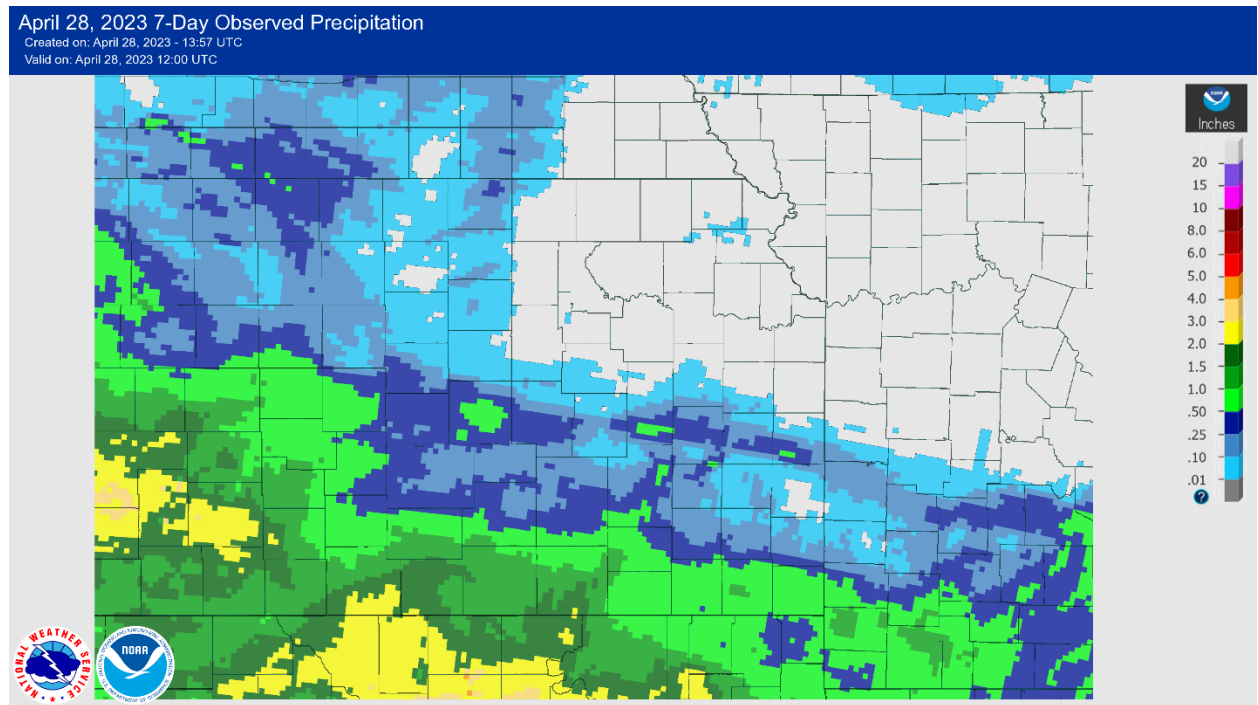
This website was developed as part of the development of the Kansas Flint Hills Smoke Management Plan. Kansas State University hosts the webpage and it includes important information for ranchers and others who might be interested in the Flint Hills. It provides training, regulations, policies, publications,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

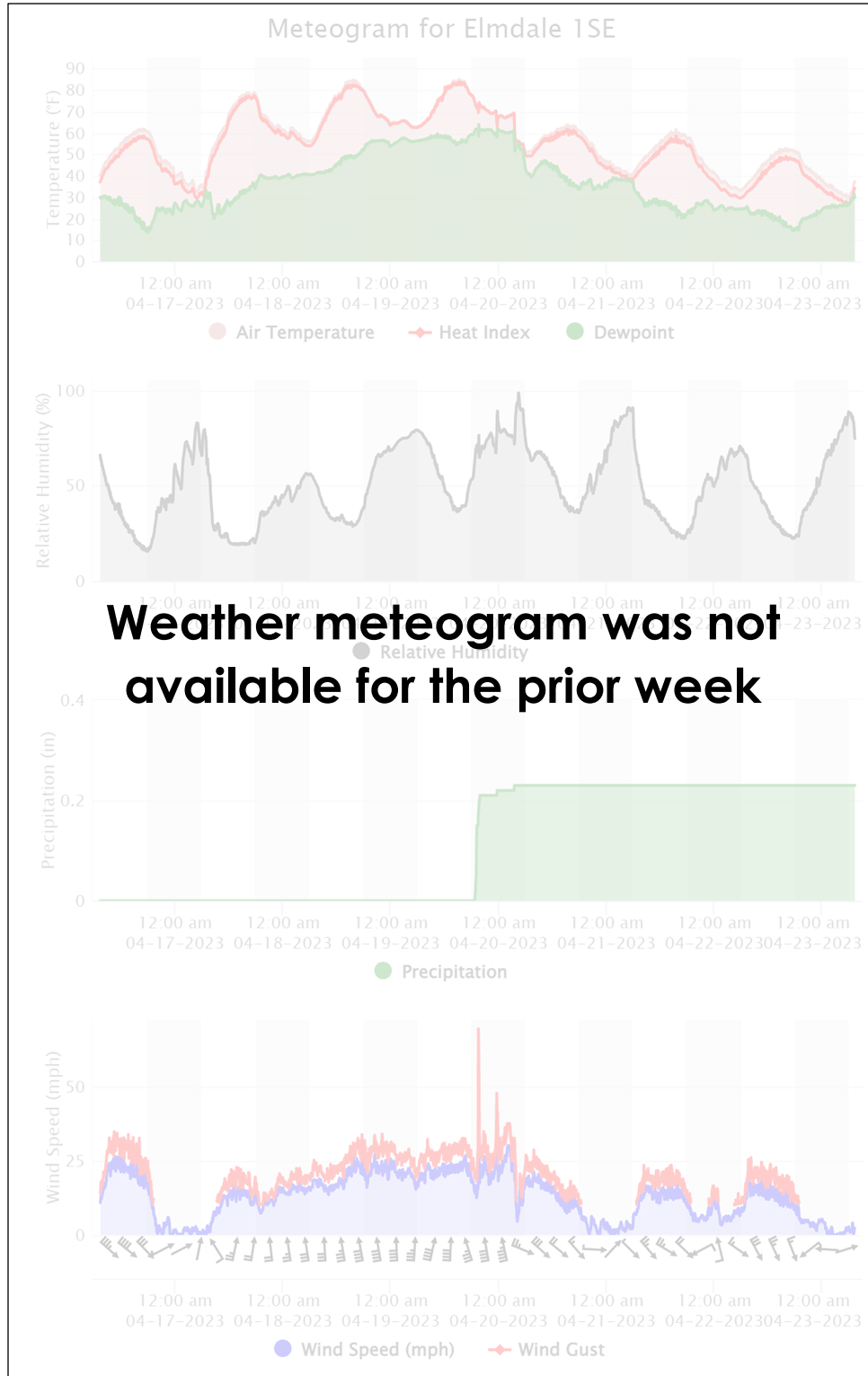
Temperatures remained mild throughout the last week with the exception being on Saturday (April 22) when temperatures struggled into the 50s. Northwest winds were on the breezy side for last Friday (April 21) and Saturday (April 22) as well before calming on Sunday (April 23). Winds became southerly for Monday (April 24) and continued to be light or southerly for the remainder of the week. A few gusts occurred each afternoon, but winds were largely less than 20 mph. Light precipitation occurred in the southern Flint Hills on Monday (April 24) with additional rounds of rainfall and cloud cover on Wednesday and Thursday (April 25-26). Precipitation is a welcome sight for the southern Flint Hills who are otherwise into Extreme to Exceptional Drought classification.

## Precipitation



NOAA/NWS Observed Total Precipitation for April 21-28, 2023.

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7-day (April 21-28, 2023) Observed Weather from the Kansas Mesonet station near Elmdale, Kansas (<https://mesonet.k-state.edu/>)



## Fire, Smoke, and Air Quality

For the period of April 21-27, 2023 there were no air quality exceedances 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<sub>2.5</sub>:** Preliminary data indicates no exceedances of the NAAQS daily 24-hour average maximum of 35  $\mu\text{g}/\text{m}^3$ .

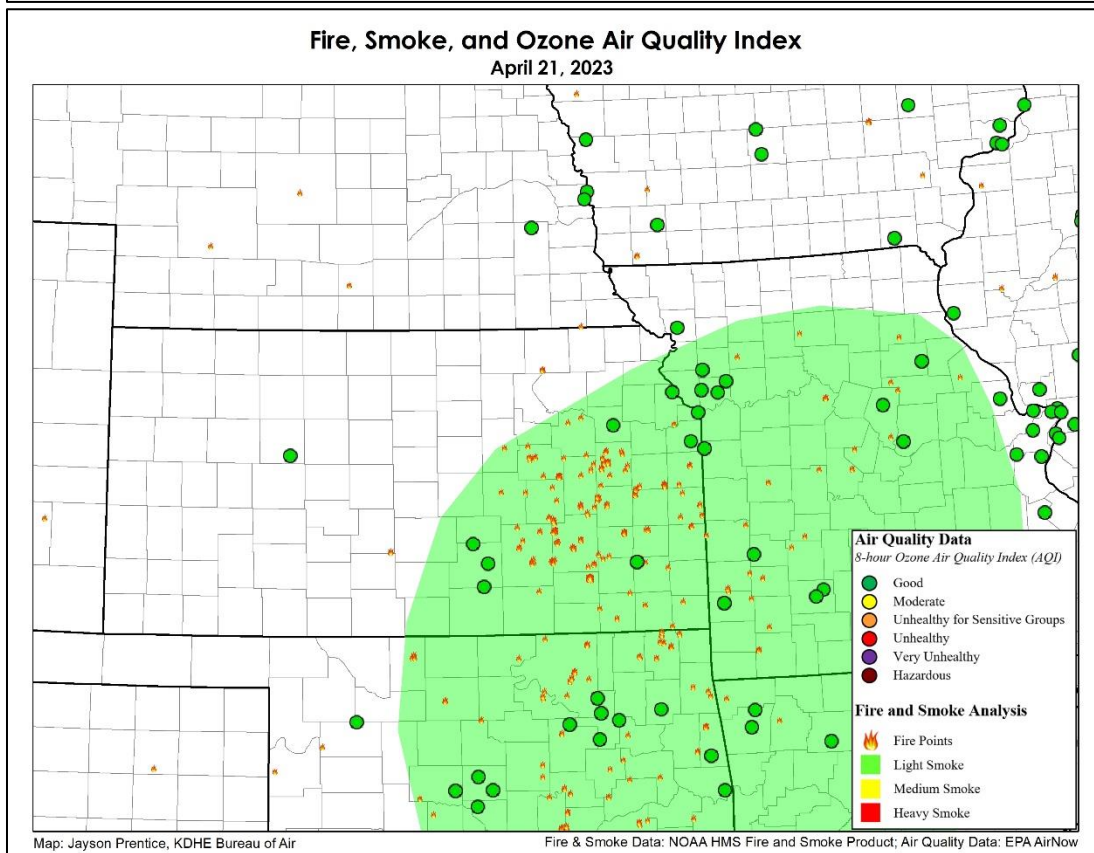
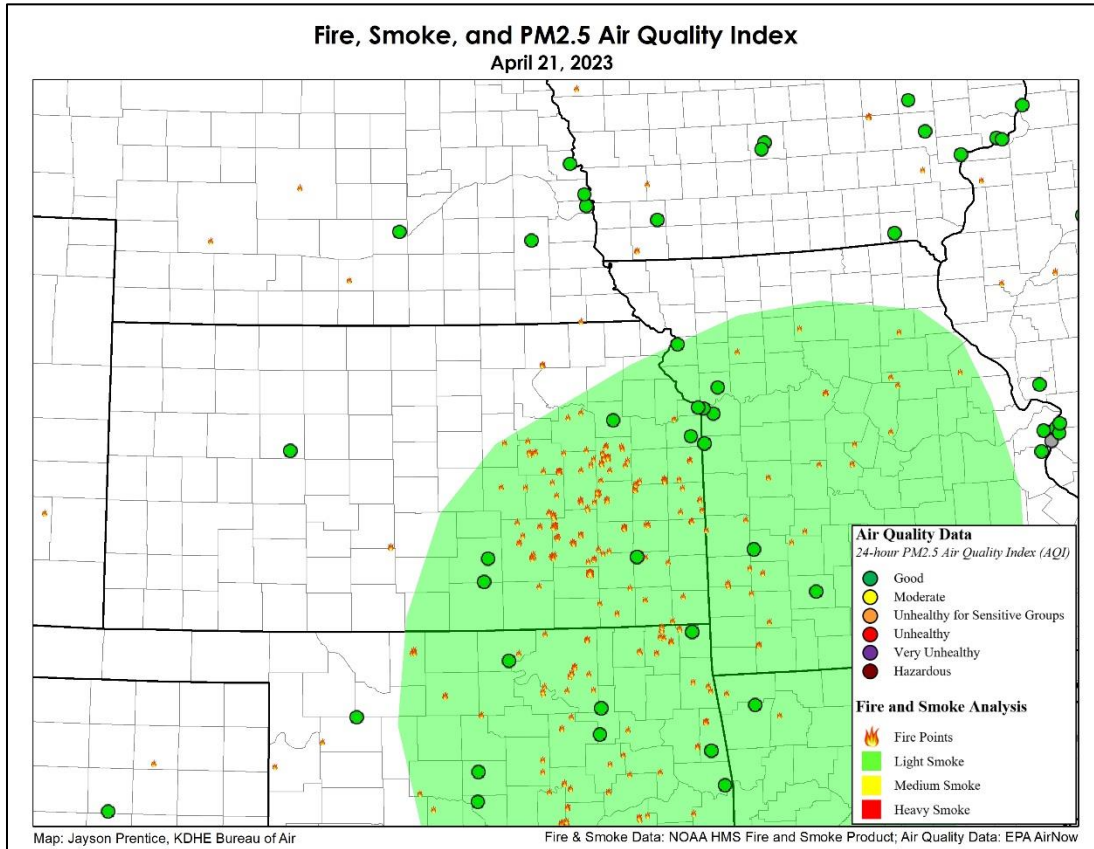
Despite some breezy northwest winds there were some continued prescribed fire activities within the Flint Hills on both Friday (April 21) and Saturday (April 22) although the winds at the surface and transport level provided ample mixing and reduced air quality impacts from any activity.

With calm winds and sunny skies there was widespread prescribed fire activity within the central and northern Flint Hills on Sunday (April 23). Much of eastern Kansas saw at least Moderate AQI for the period with localized and brief impacts to air quality moving into the Unhealthy for Sensitive Groups to Unhealthy AQI ranges. Some of these impacts lingered into Monday (April 24) with primarily Moderate AQI.

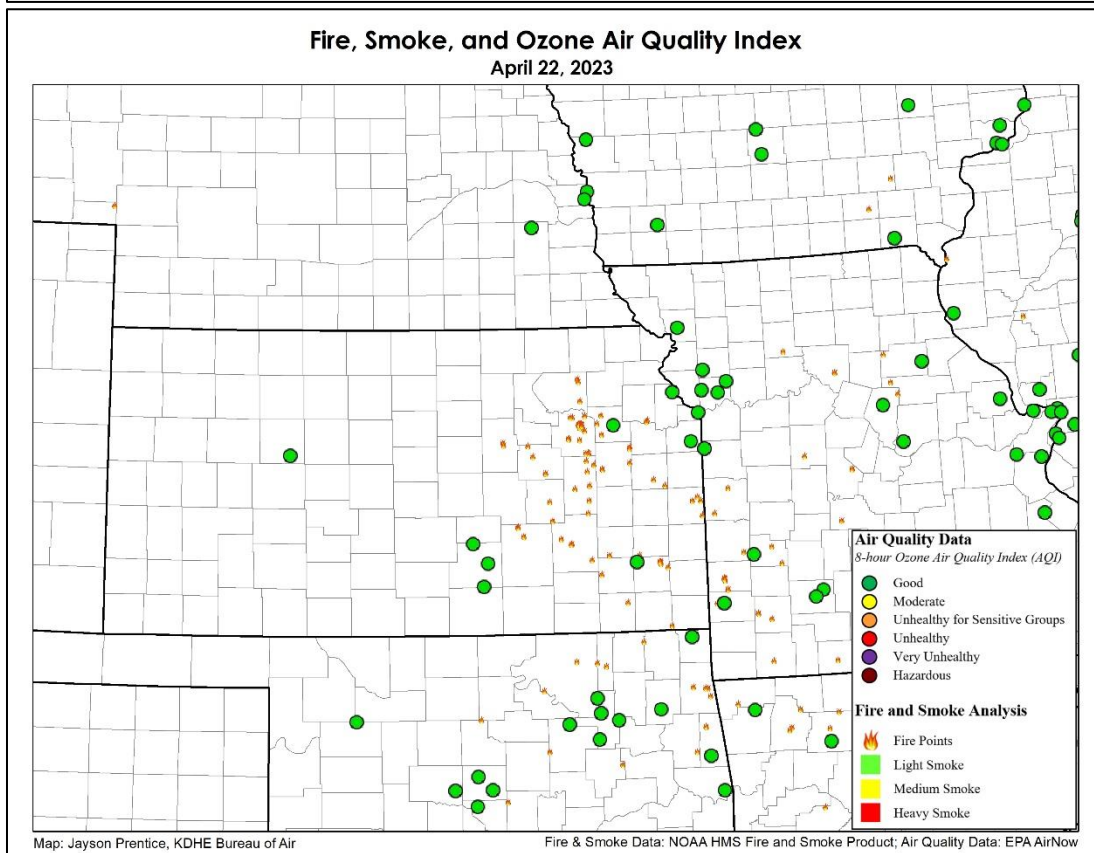
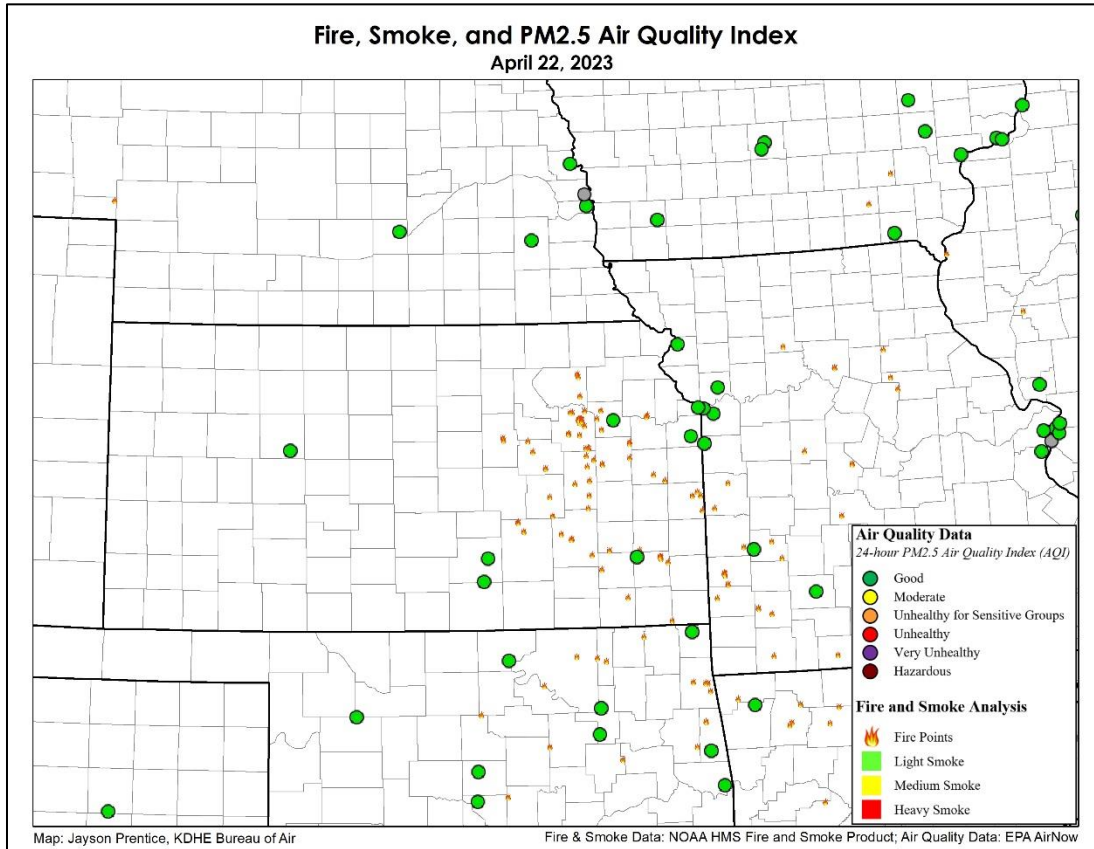
The remainder of the period, Monday-Thursday (April 24-27) had limited prescribed fire activity in the Flint Hills and an increase in regional fire activity. Periods of cloud skies, high moisture, and light precipitation likely limited fire activity throughout the Flint Hills. Significant green-up throughout the Flint Hills is also likely precluding additional fire activity, especially with higher humidity. Regional pollutants led to elevated Air Quality Index values towards the end of the week; Some impacts were also observed from fire activity across Iowa with Moderate AQI on Wednesday and Thursday.

*The following pages have two maps for each day; One showing the 24-hour average Air Quality Index category for PM<sub>2.5</sub> 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.*

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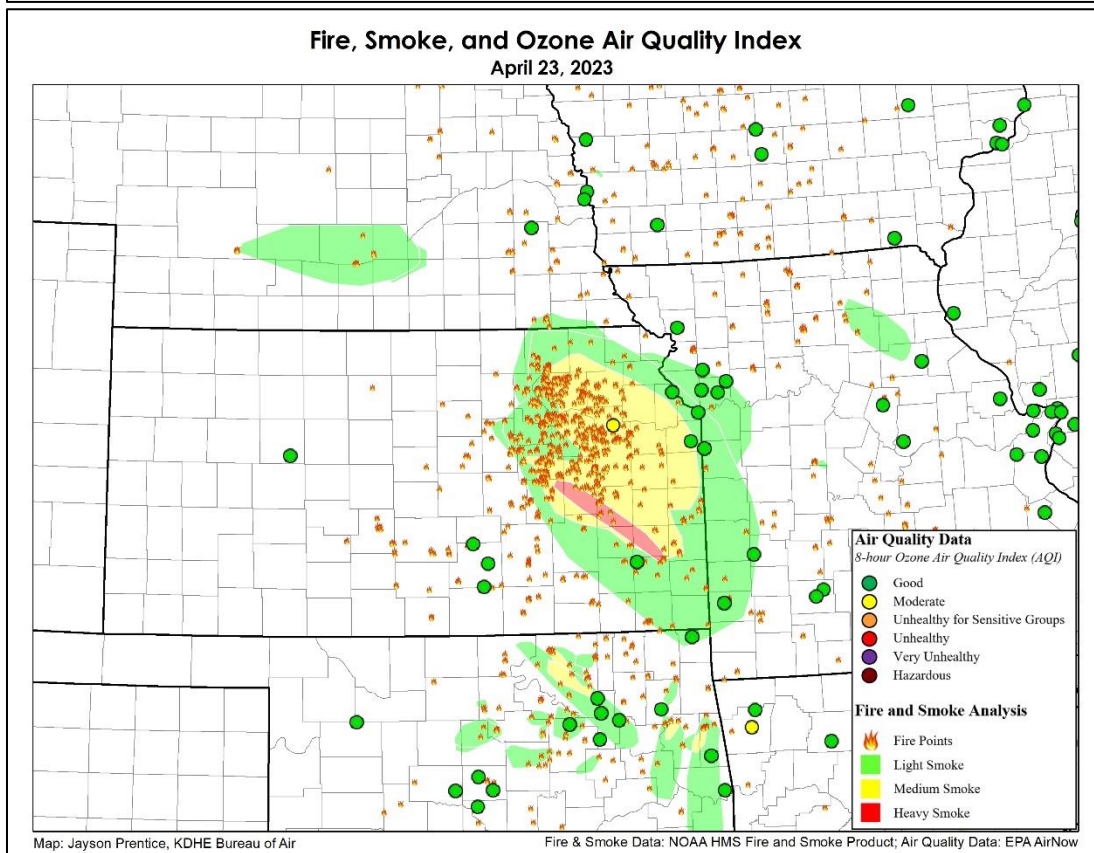
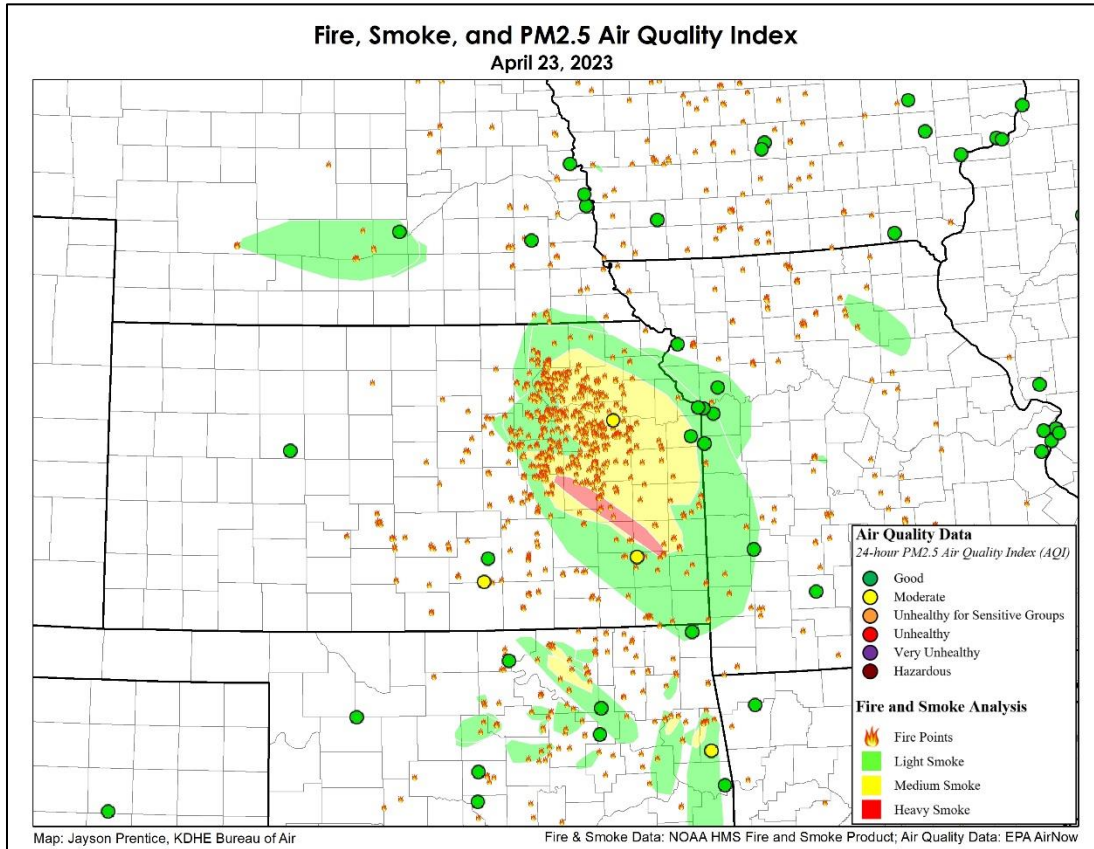


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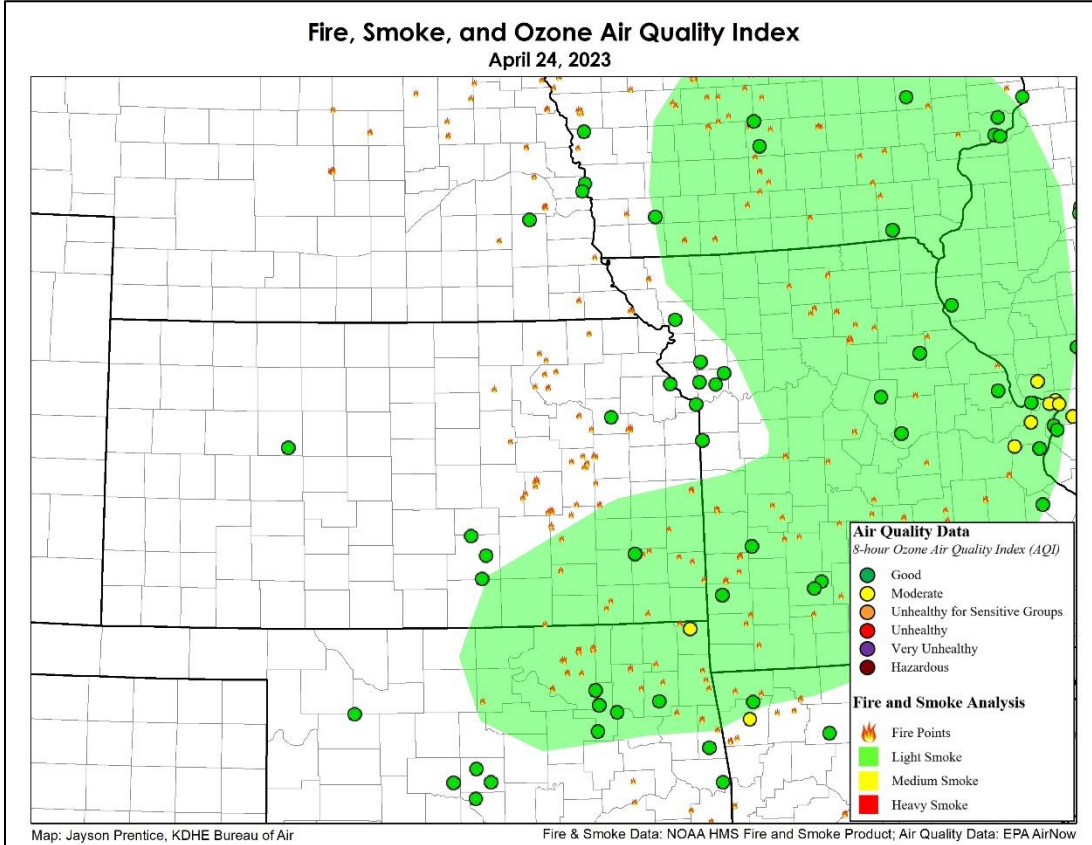
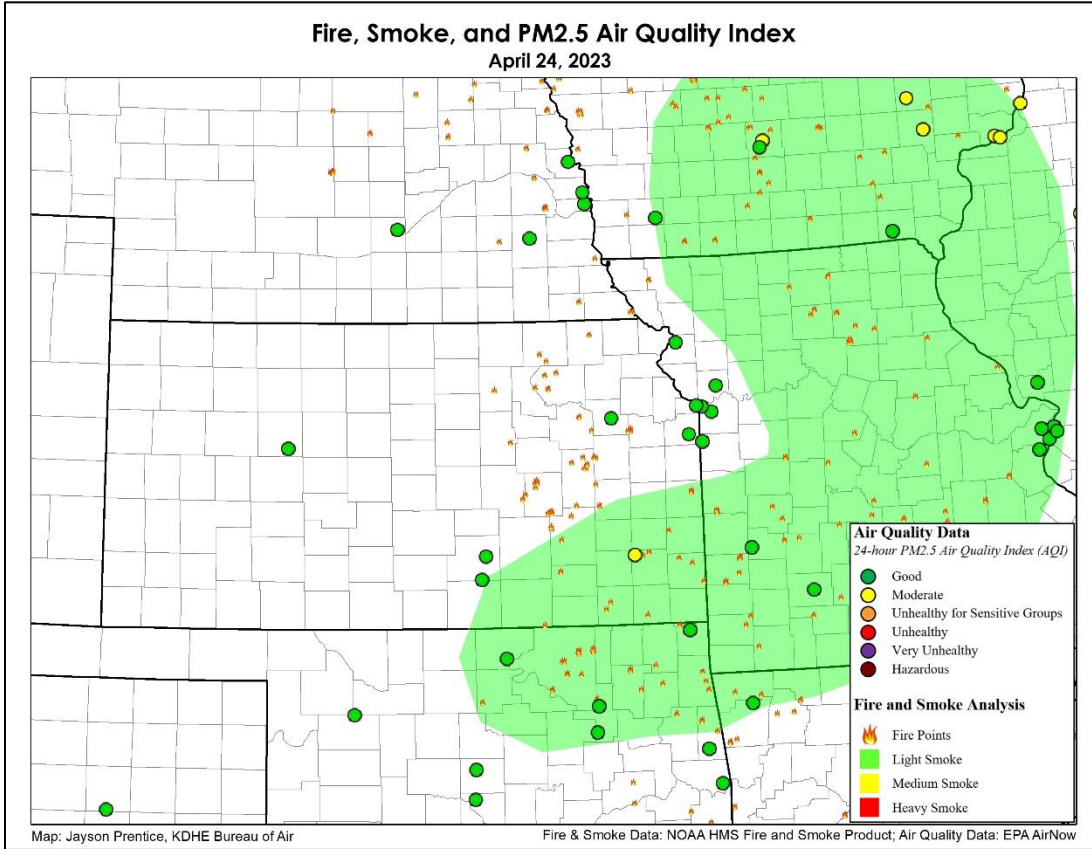




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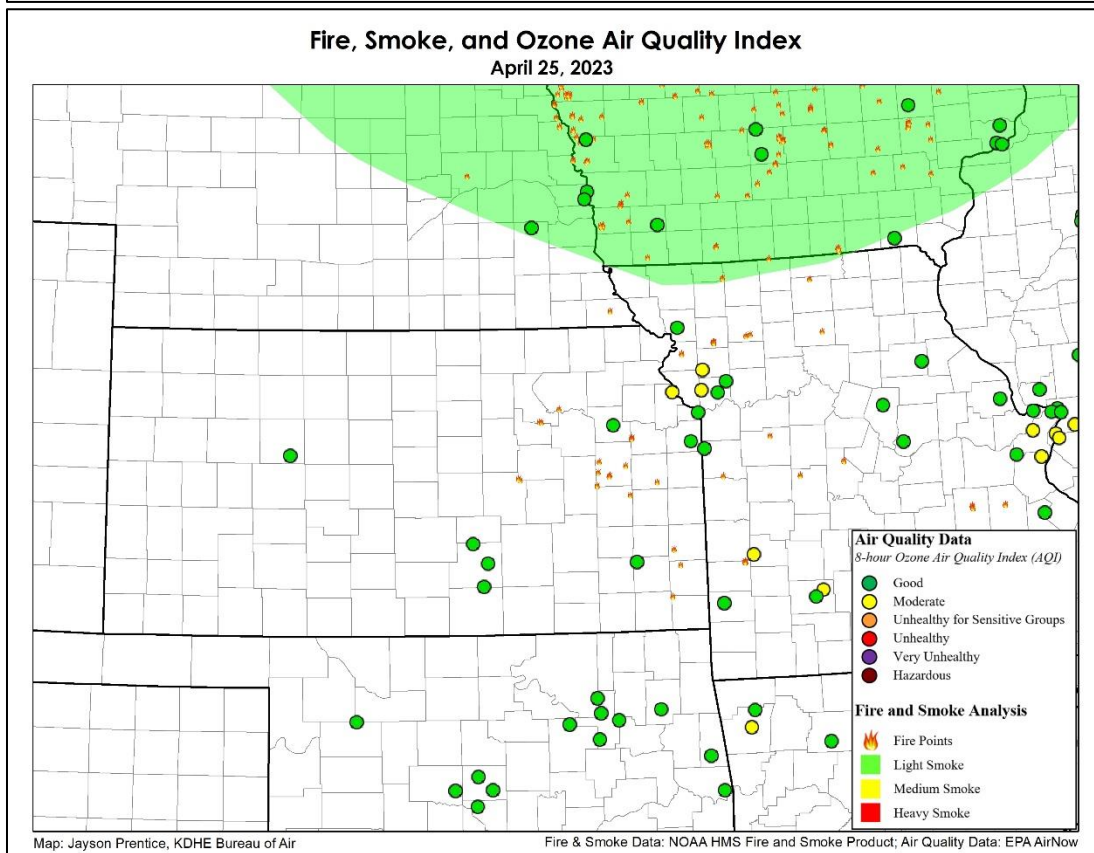
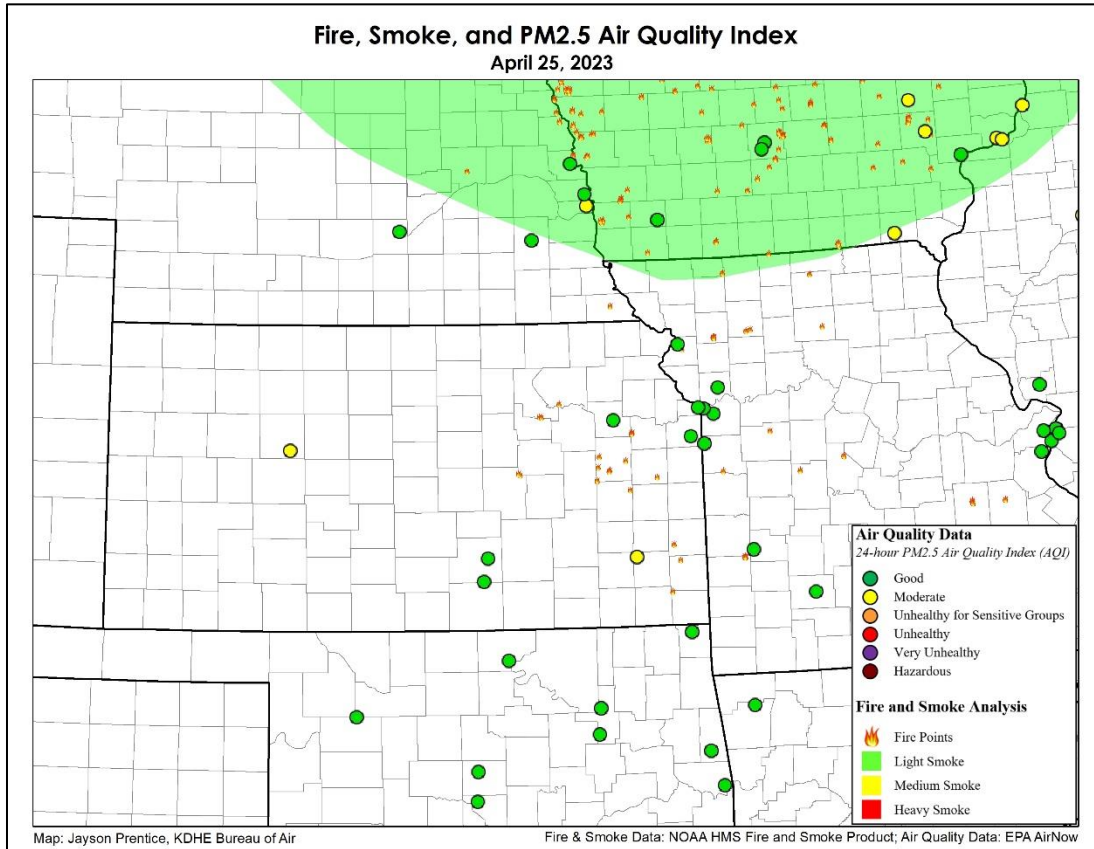


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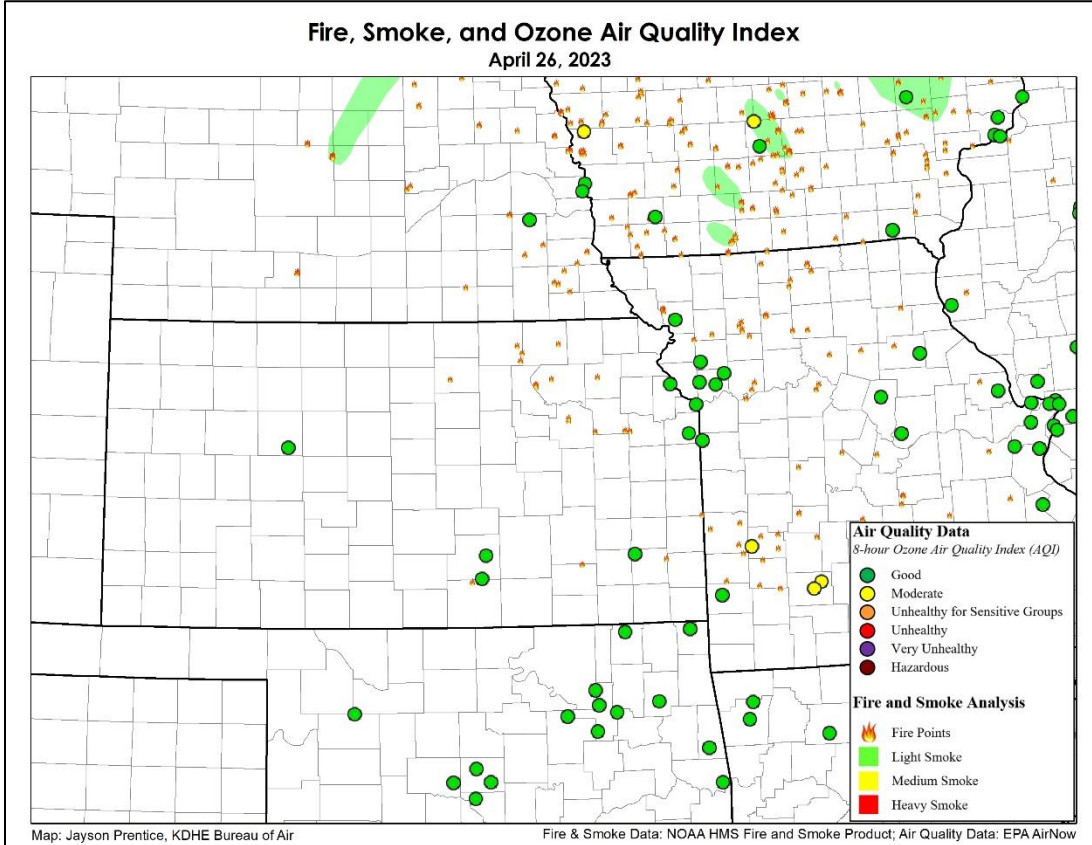
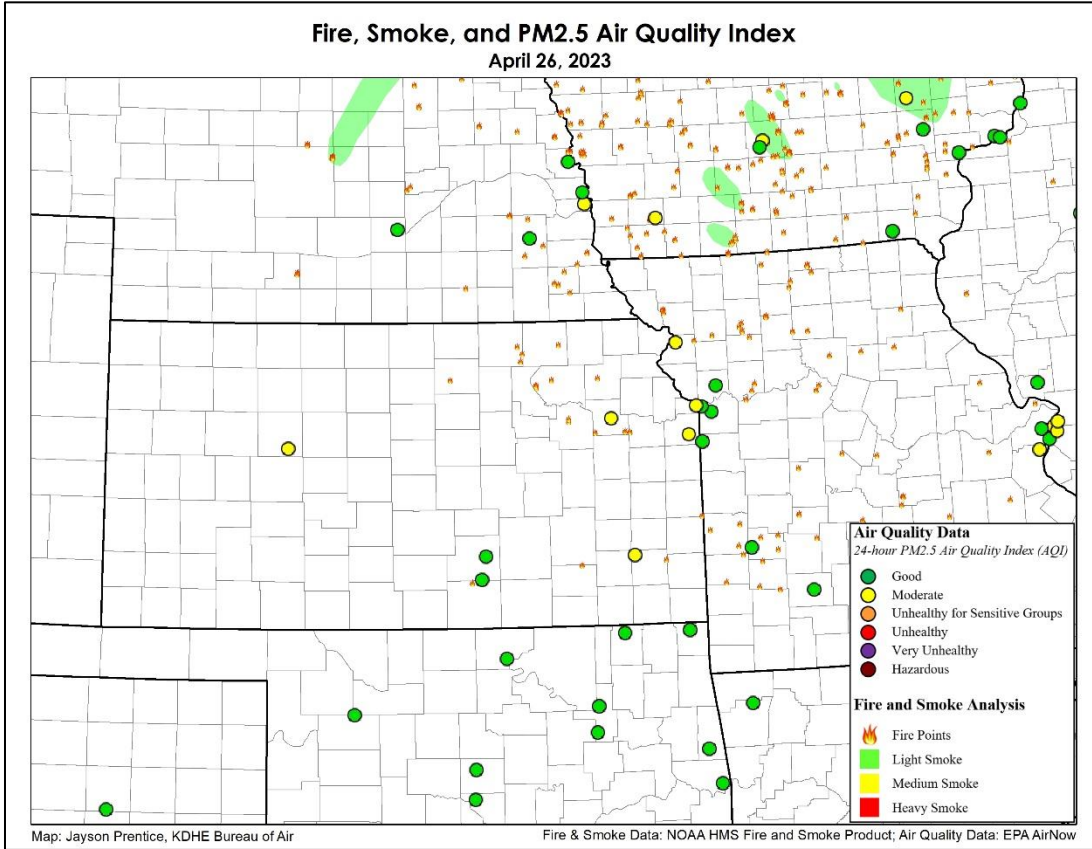




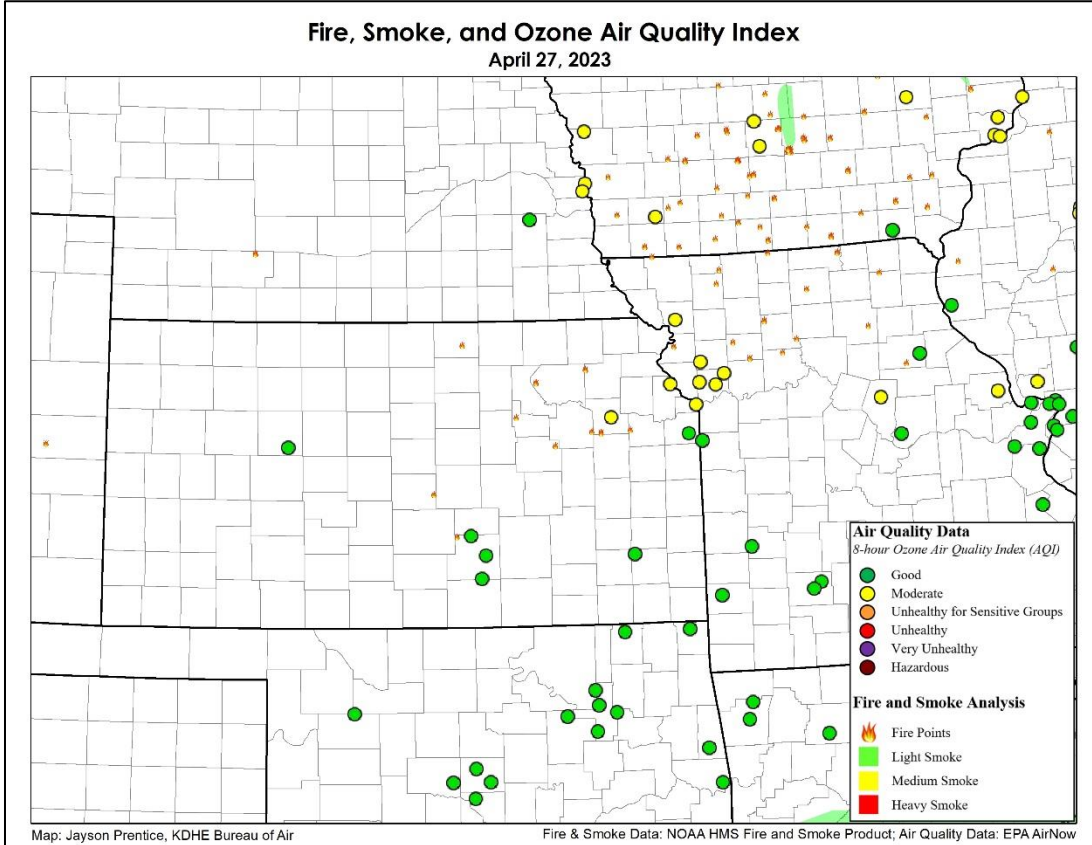
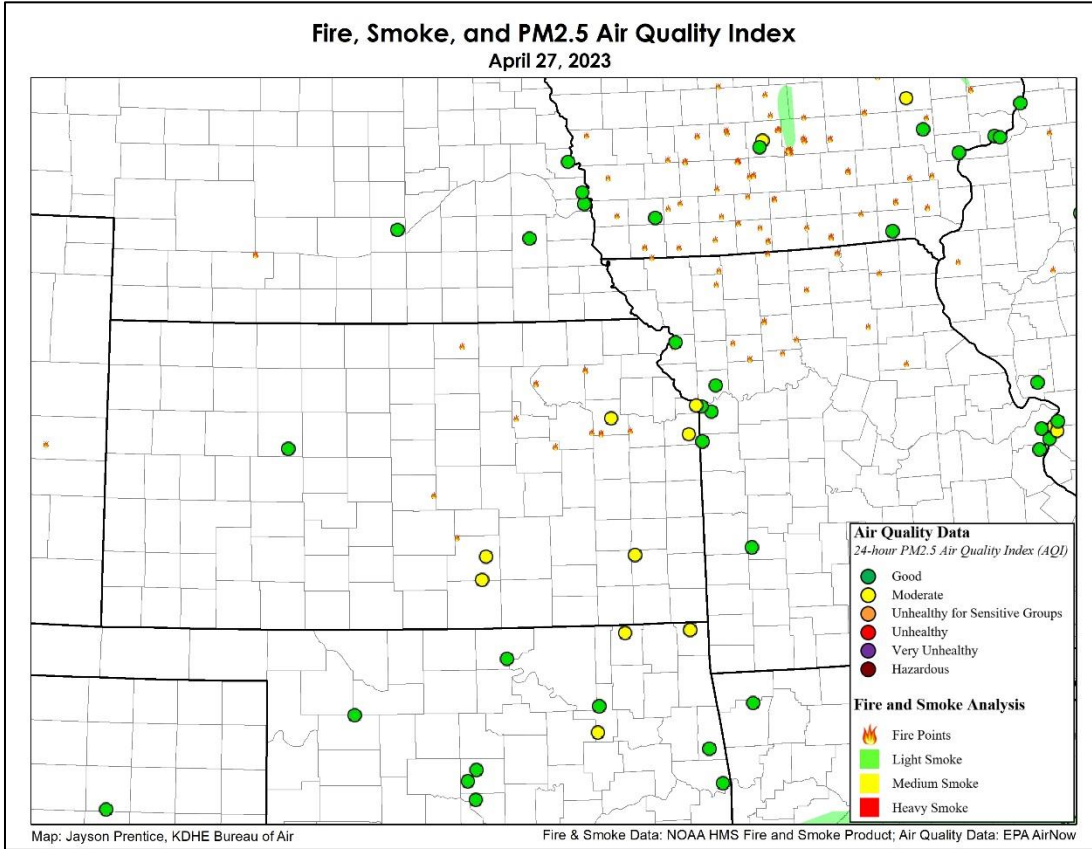
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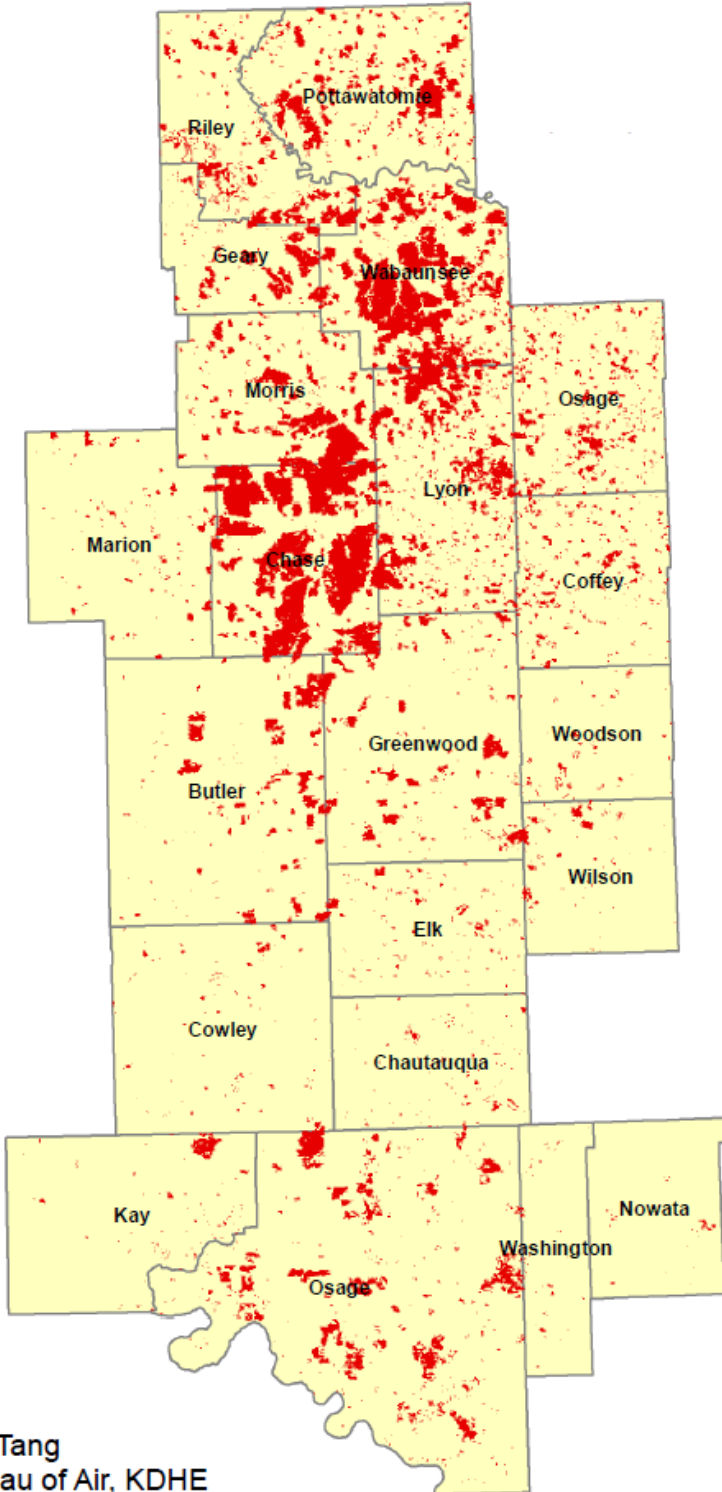


# Flint Hills Wildland Fire Update





## Flint Hills Acreage Burned (February 3 – April 21, 2023)



Yao Tang  
Bureau of Air, KDHE

<u>Counties</u>	<u>Acres Burned</u>	
Butler	49,561	
Chase	231,866	
Chautauqua	5,684	
Coffey	23,383	
Cowley	7,012	
Elk	10,749	
Geary	33,190	
Greenwood	46,272	
Lyon	107,137	
Marion	14,688	
Morris	72,465	
Osage (KS)	41,561	
Pottawatomie	76,017	
Riley	51,059	
Wabaunsee	179,973	
Wilson	8,572	
Woodson	5,097	
Nowata (OK)	1,483	*
Osage (OK)	101,640	
Washington (OK)	1,745	
Kay (OK)	9,637	
<b>Total</b>	<b>1,078,791</b>	
* Denotes county was partly or completely covered by clouds during latest analysis.		

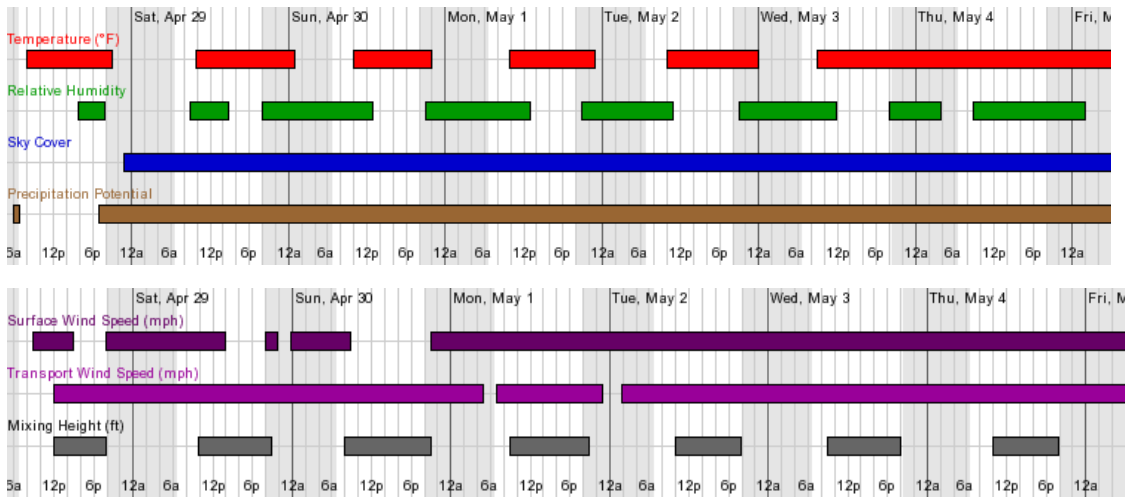




## Upcoming Look at Fires and Smoke

A frontal boundary moving across the region today will provide chances for rain throughout much of the day, but it's the only reasonable chance of precipitation in the forecast for the next week. Northwest winds will move into the area and be gusty at times late today, Saturday, and especially on Sunday with gusts greater than 35 mph forecast. Temperatures will be reasonable each afternoon and late next week conditions warm-up considerably with even mild low temperatures. The caveat for many afternoons will be relative humidity values which will likely drop below 30 percent nearly every afternoon until Thursday of next week. The calendar is also switching to May and most of the Flint Hills has seen considerable green vegetation emerge; Given any rain over the past week and today plus warmer conditions expect this trend to rapidly continue and certainly signal an end to widespread prescribed burning if it has not already occurred.

### 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](http://KSFire.org). Conditions are most favorable when each parameter has a colored boxplot displayed. Forecast valid: 8am April 28, 2023.*

For more information, contact:

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