

# Flint Hills Wildland Fire Update

April 8, 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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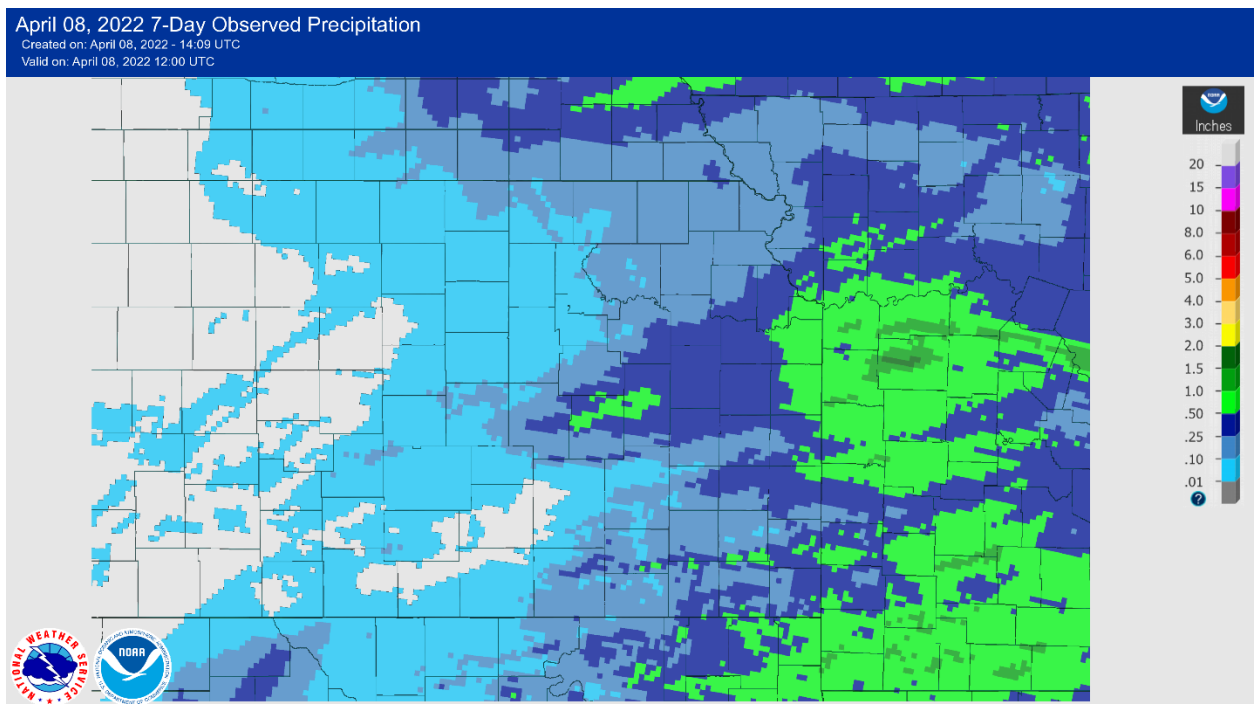
This website was developed as part of the development of the Kansas Flint Hills Smoke Management Plan. Kansas State University hosts the webpage and it includes important information for ranchers and others who might be interested in the Flint Hills. It provides training, regulations, policies, publications, 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

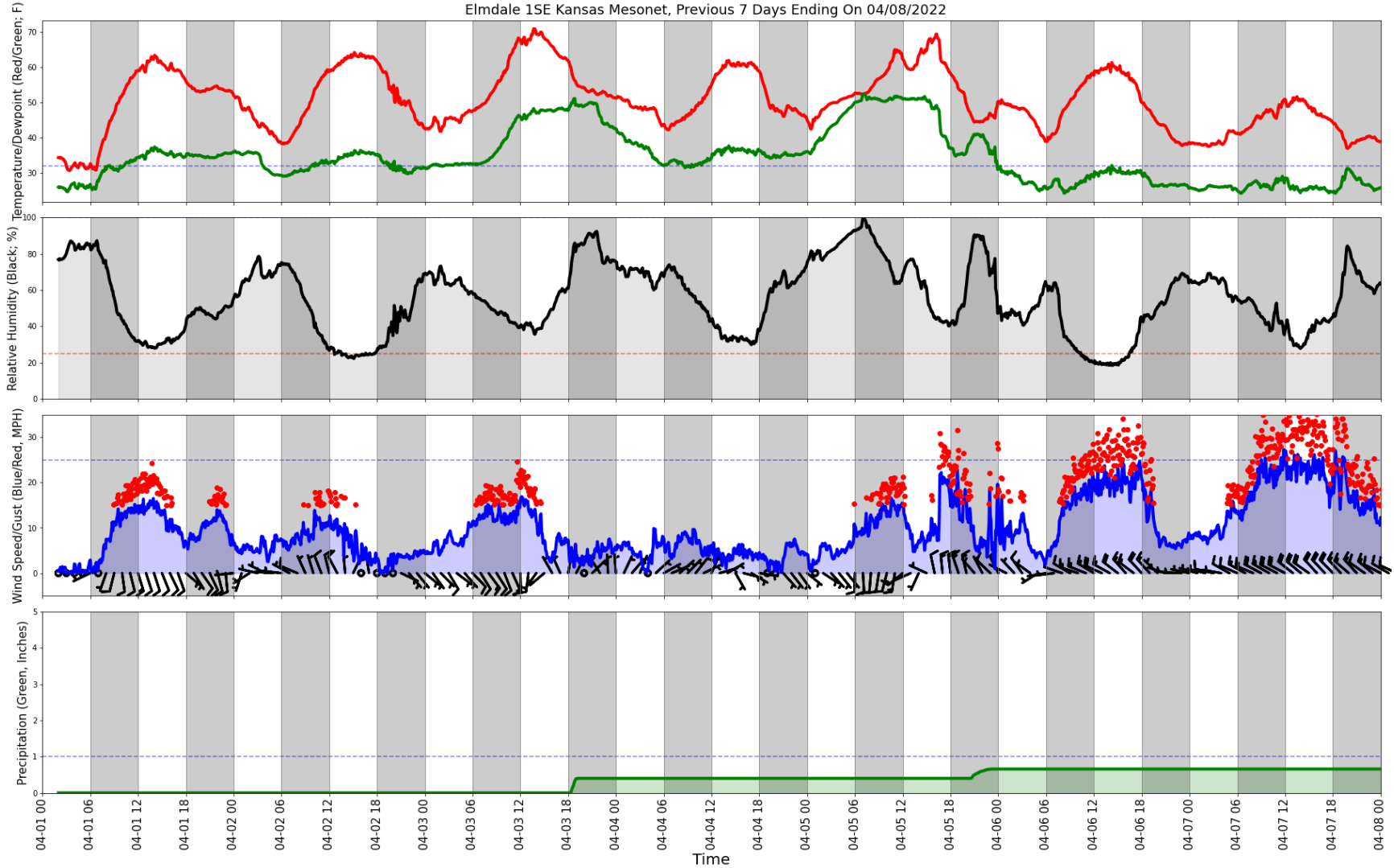
Seasonable temperatures and a somewhat breezy south wind were observed last Friday (April 1) before winds become northerly on Saturday (April 2) but temperatures remained seasonable with highs in the 60s for most. The strong south wind returned on Sunday (April 3) with periods of cloud cover, rain showers, and warmer temperatures. A light and variable wind and a bit cooler for Monday (April 4) before a storm system began to influence the region on Tuesday (April 5) bringing strong south winds and a cold front that abruptly changed the winds across most of the Flint Hills to the northwest and brought showers and thunderstorms to some areas of the Flint Hills. Strong northwest winds and very dry conditions have been the weather highlight for Wednesday (April 6) and Thursday (April 7) with very high to extreme fire danger across the region.

## Precipitation



NOAA/NWS Observed Total Precipitation for Apr. 1-7, 2022.

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7-day (Apr. 1-7, 2022) Observed Weather from Kansas Mesonet station near Elmdale, Kansas  
<https://mesonet.k-state.edu/>



## Fire, Smoke, and Air Quality

For the period of April 1-7, 2022 there were zero 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<sub>2.5</sub>:** Preliminary data indicates no exceedances of the NAAQS daily 24-hour average maximum of 35 µg/m<sup>3</sup>.

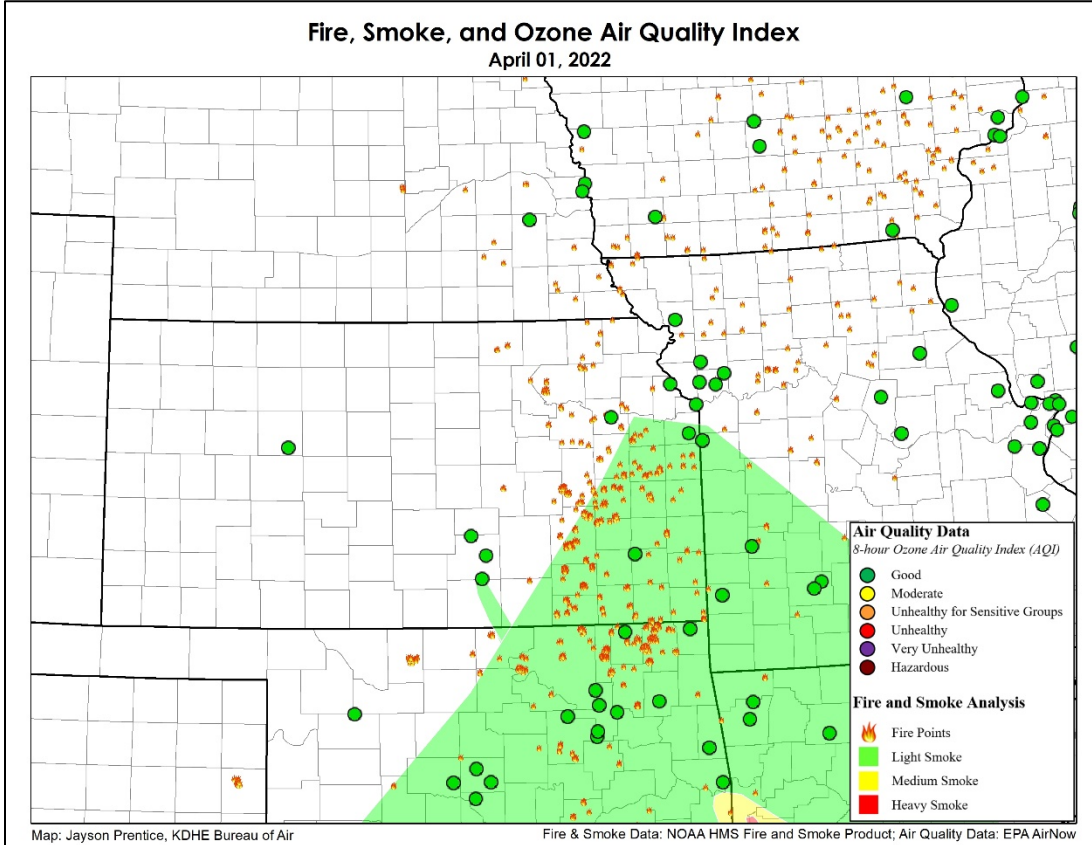
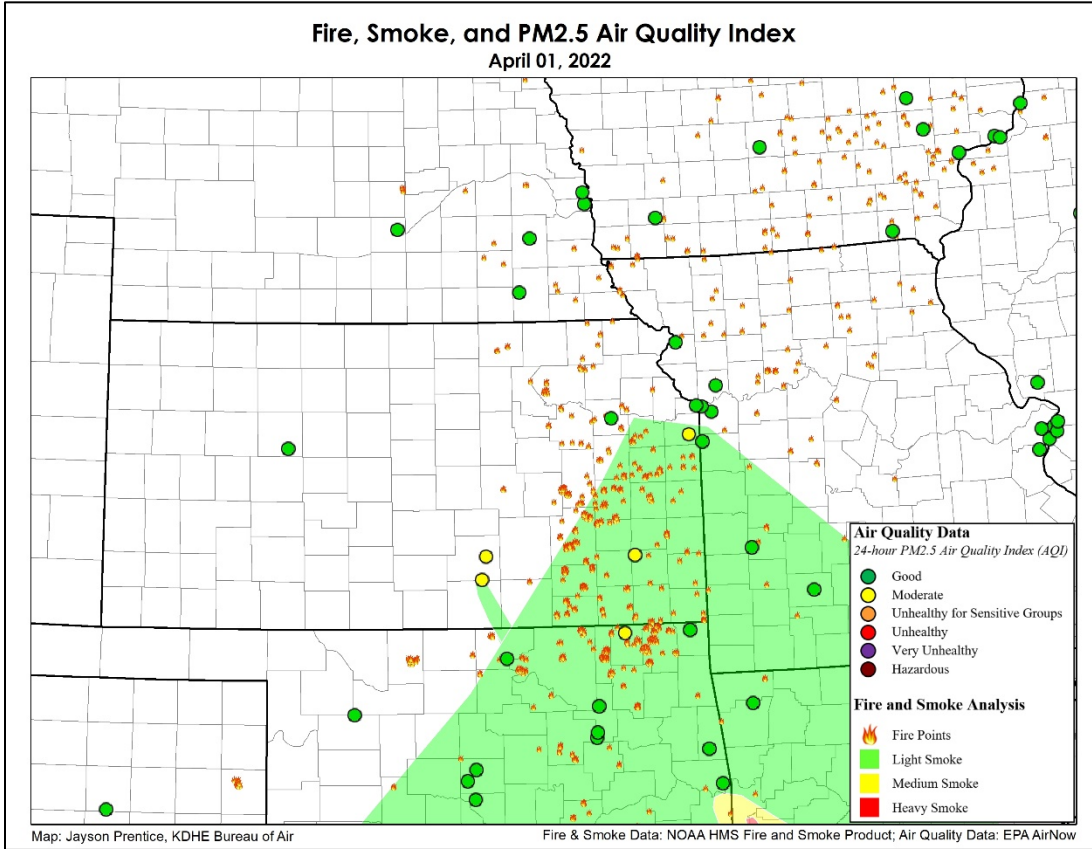
Strong south winds on Friday (April 1) kept prescribed burning limited for much of the day, but also provided excellent smoke dispersion and kept smoke impacts limited. A lighter and more variable wind was observed across the Flint Hills on Saturday (April 2) with north winds eventually becoming southerly by the evening. Widespread burning was analyzed, and the variable wind directions led to a swath of Moderate smoke across the Flint Hills region. Warm temperatures and sunny skies did aid in achieving good mixing heights which was a primary factor in avoiding more significant air quality issues; Numerous air quality monitors recorded Moderate Air Quality Index (AQI) overall but short-term values that up to an Unhealthy AQI levels did occur.

Strong south winds returned for Sunday (April 3) alongside occasional cloud cover and rain showers for the region. Some prescribed fires were analyzed early in the day and perhaps continuing burns from the previous day. Remnant smoke from the prior day continued to impact air quality monitors across the region with widespread Moderate AQI. Light winds returned for Monday (April 4) and eventually become more southerly by the evening. Widespread use of prescribed fire was once again observed across the region. Despite the light winds smoke dispersion remained good to excellent which kept air quality impacts reduced across the region; Numerous monitors recorded Moderate AQI overall but again short-term impacts with more localized denser smoke did occur.

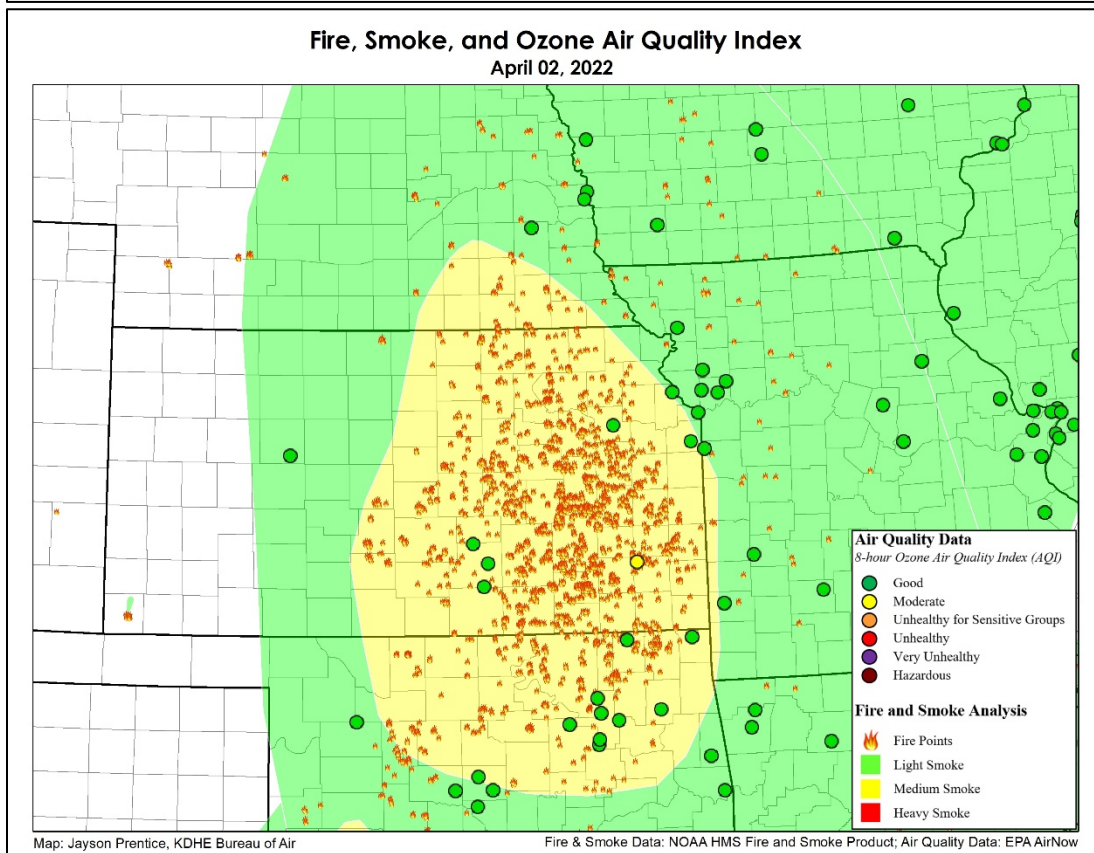
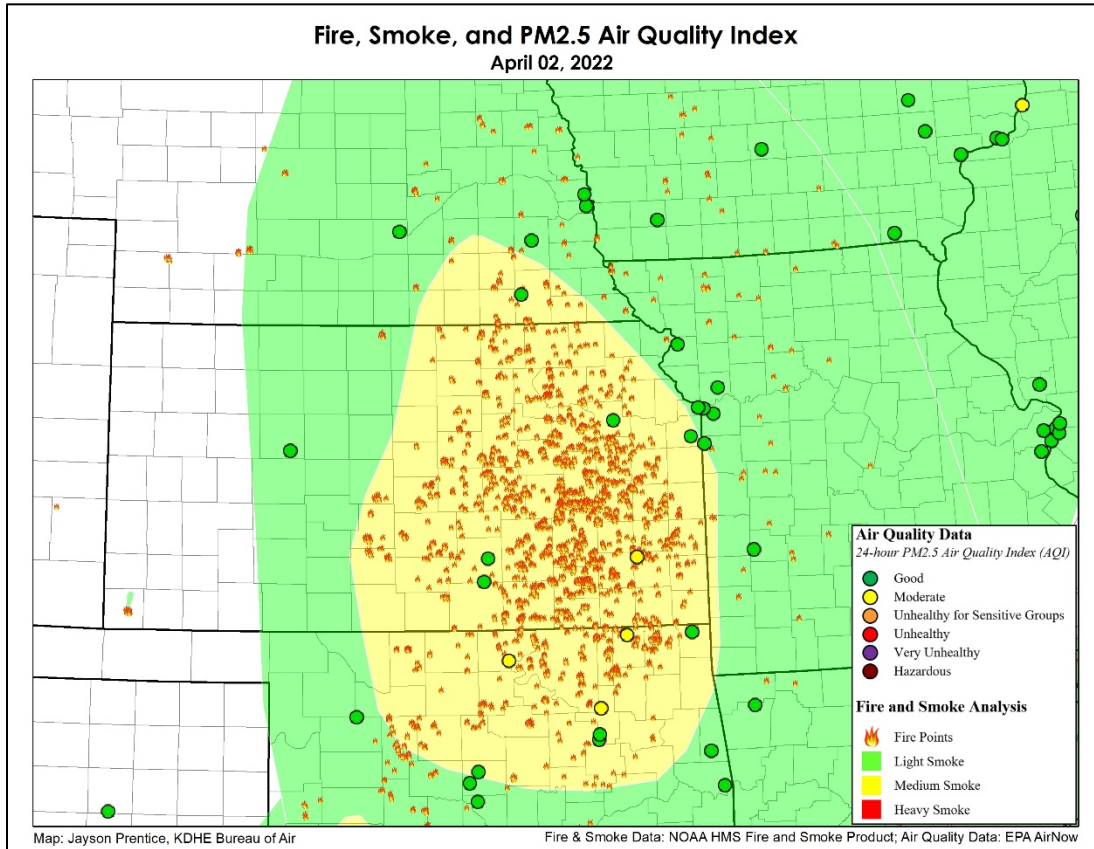
A few prescribed fires continued Tuesday (April 5) in southeast Kansas ahead of a strong cold front and abrupt wind shift. Windy conditions on Wednesday (April 6) and Thursday (April 7) alongside low relative humidity led to fire danger concerns with most of the fires and smoke plumes analyzed being from wildfires that were occurring across the region.

*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.*

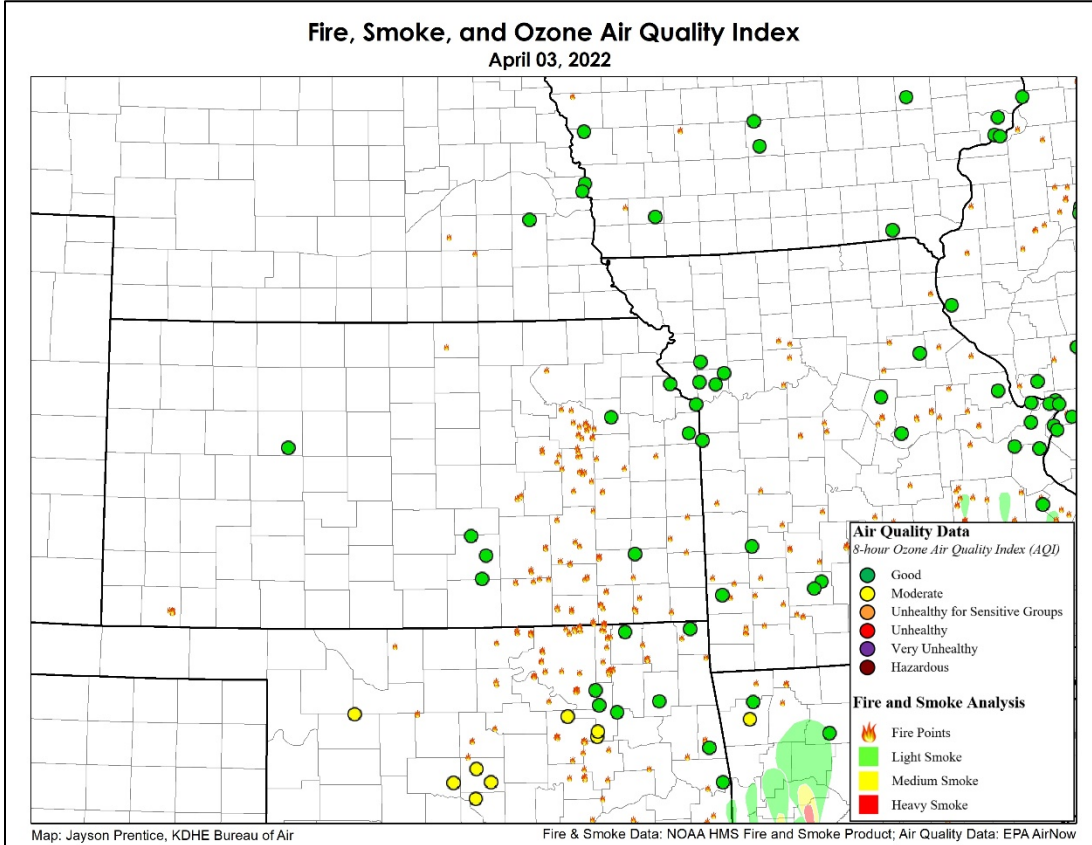
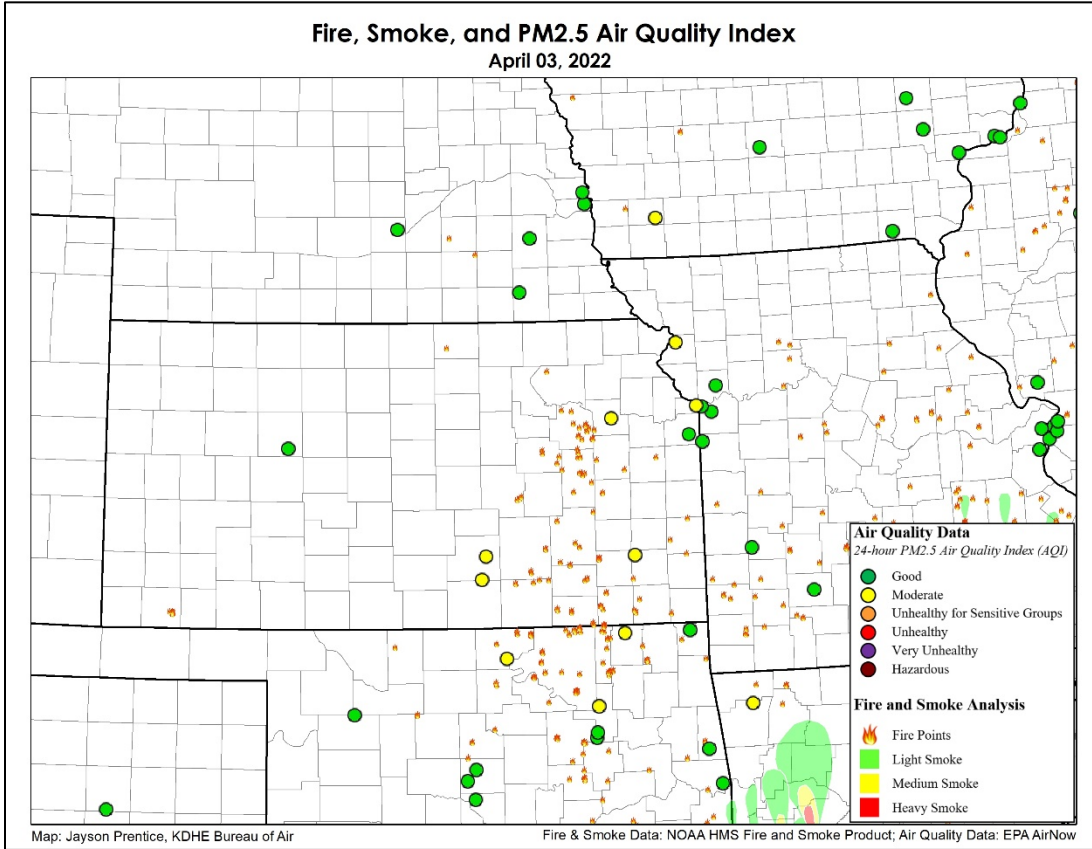
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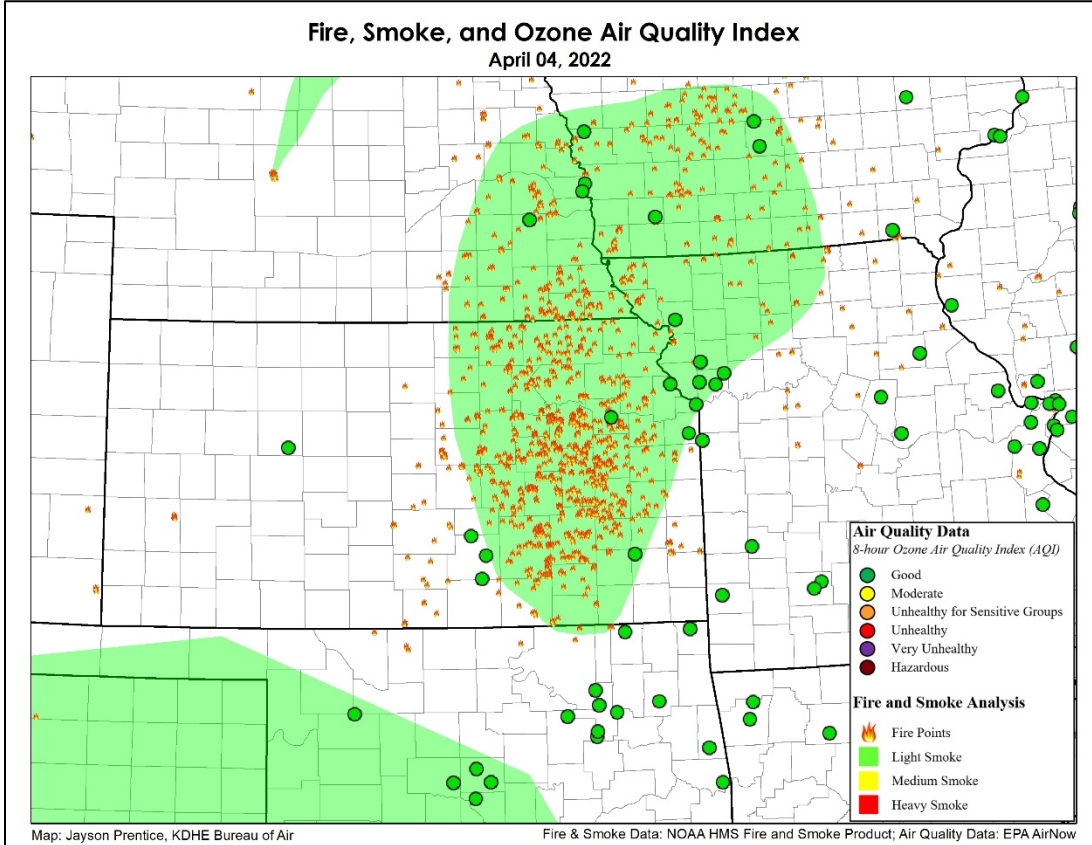
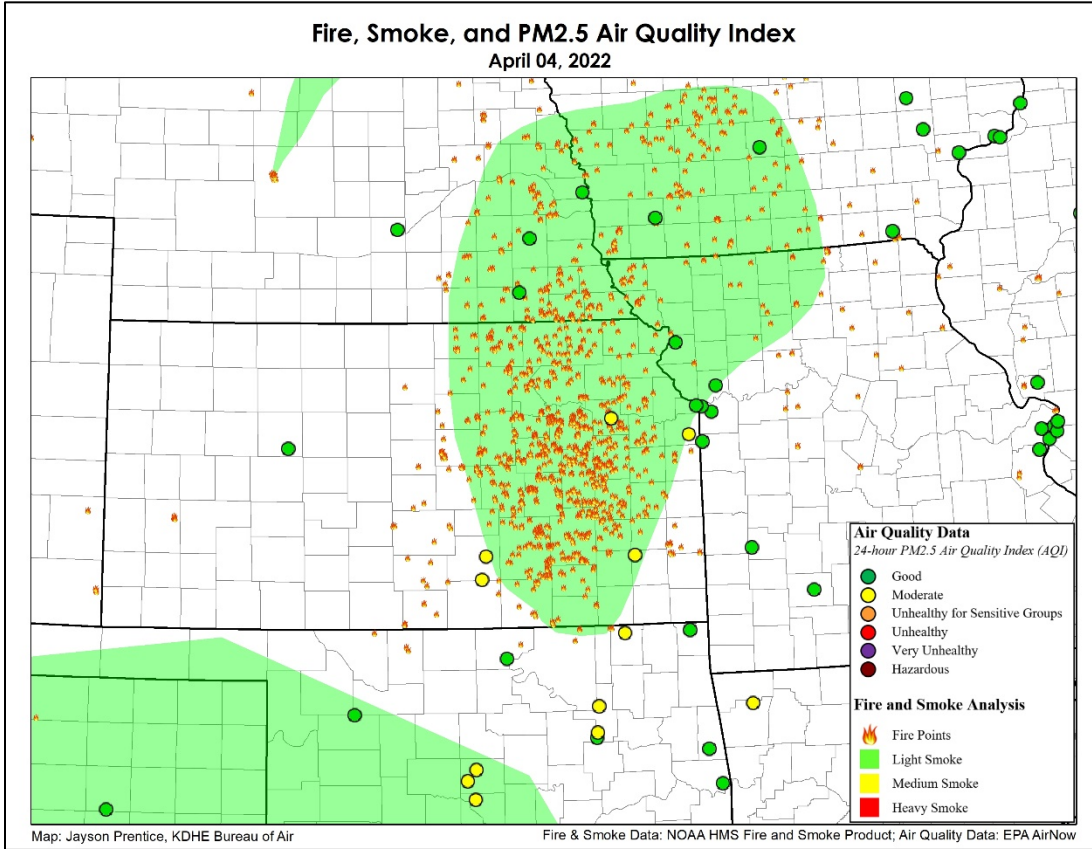
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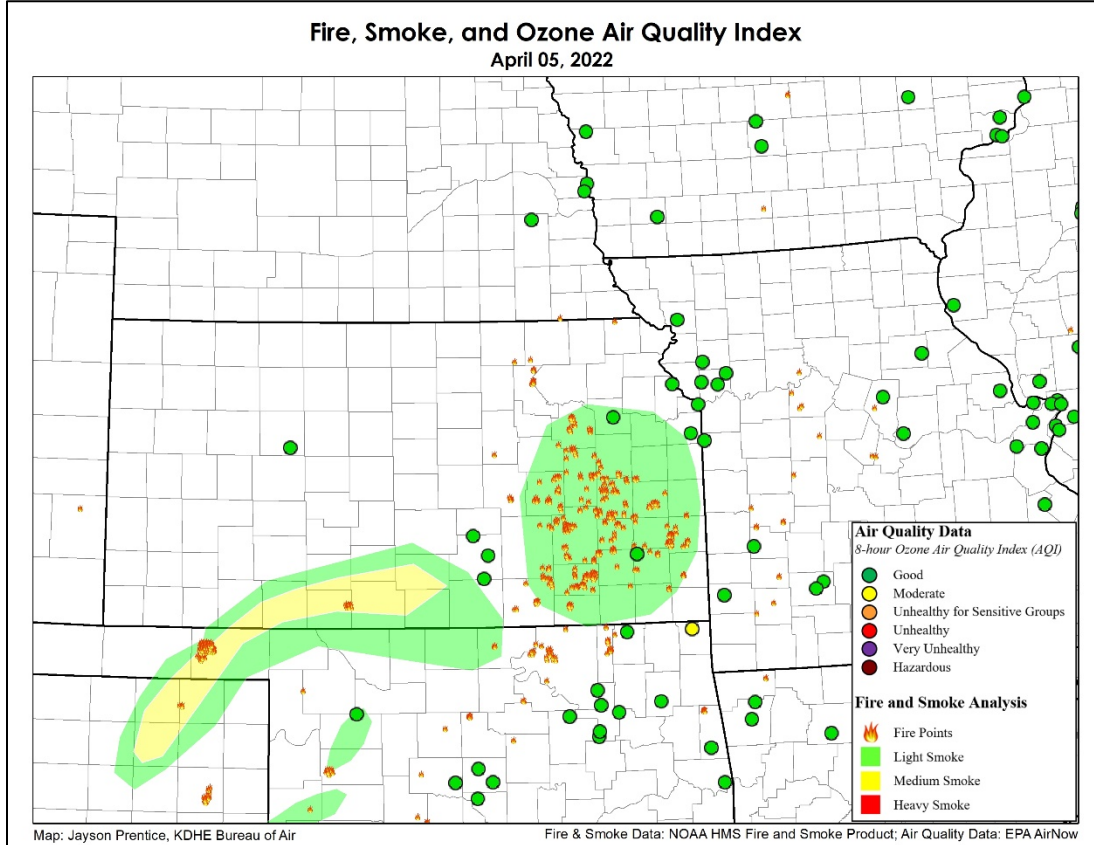
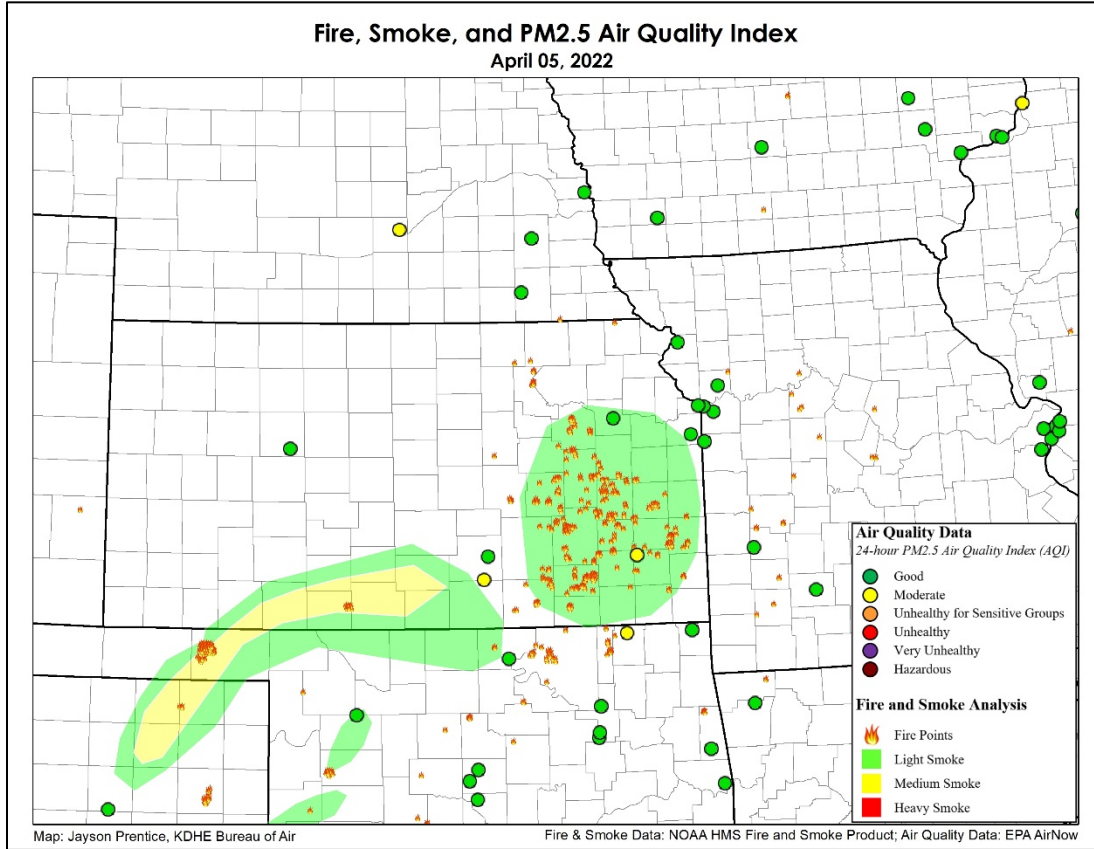


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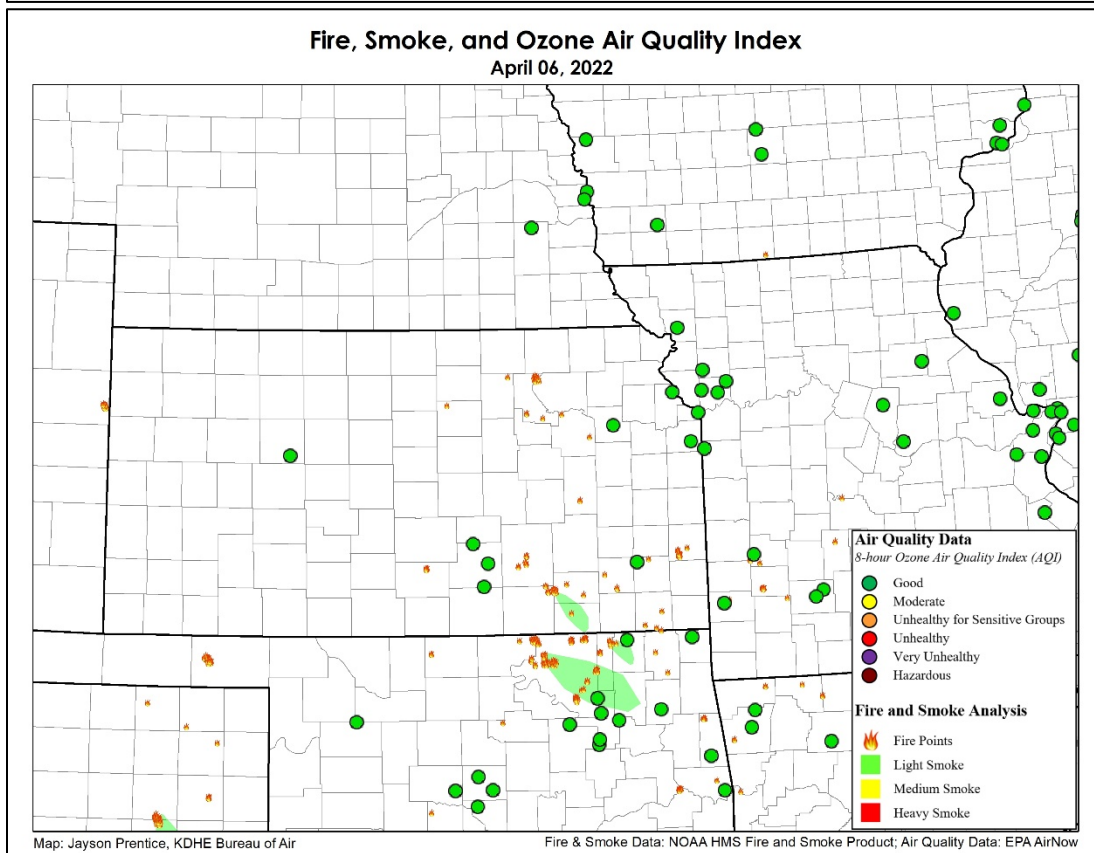
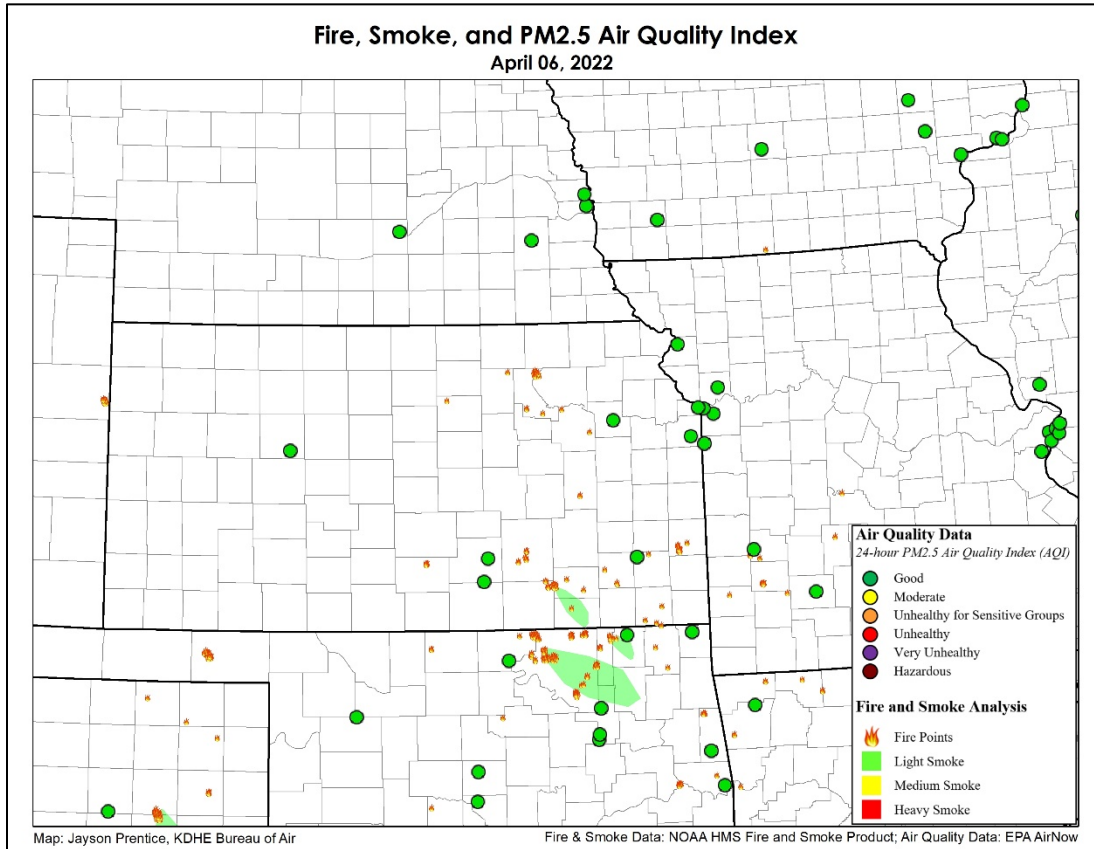




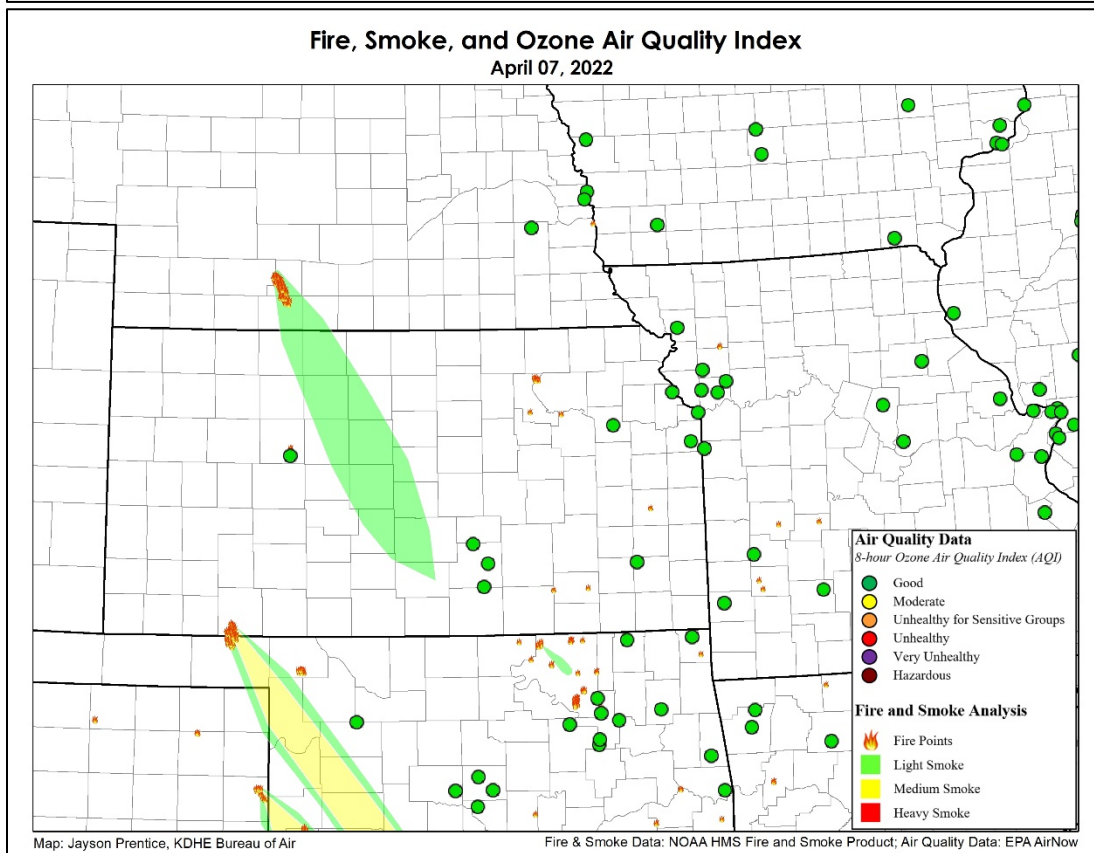
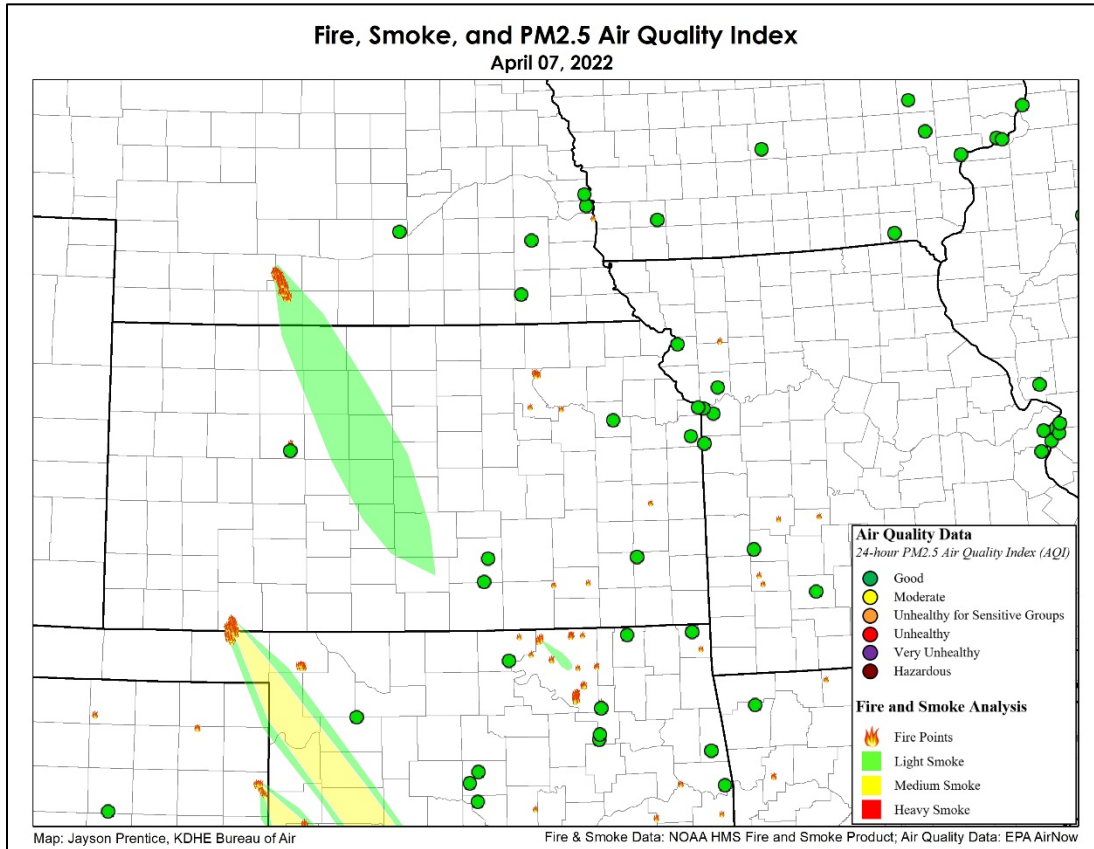
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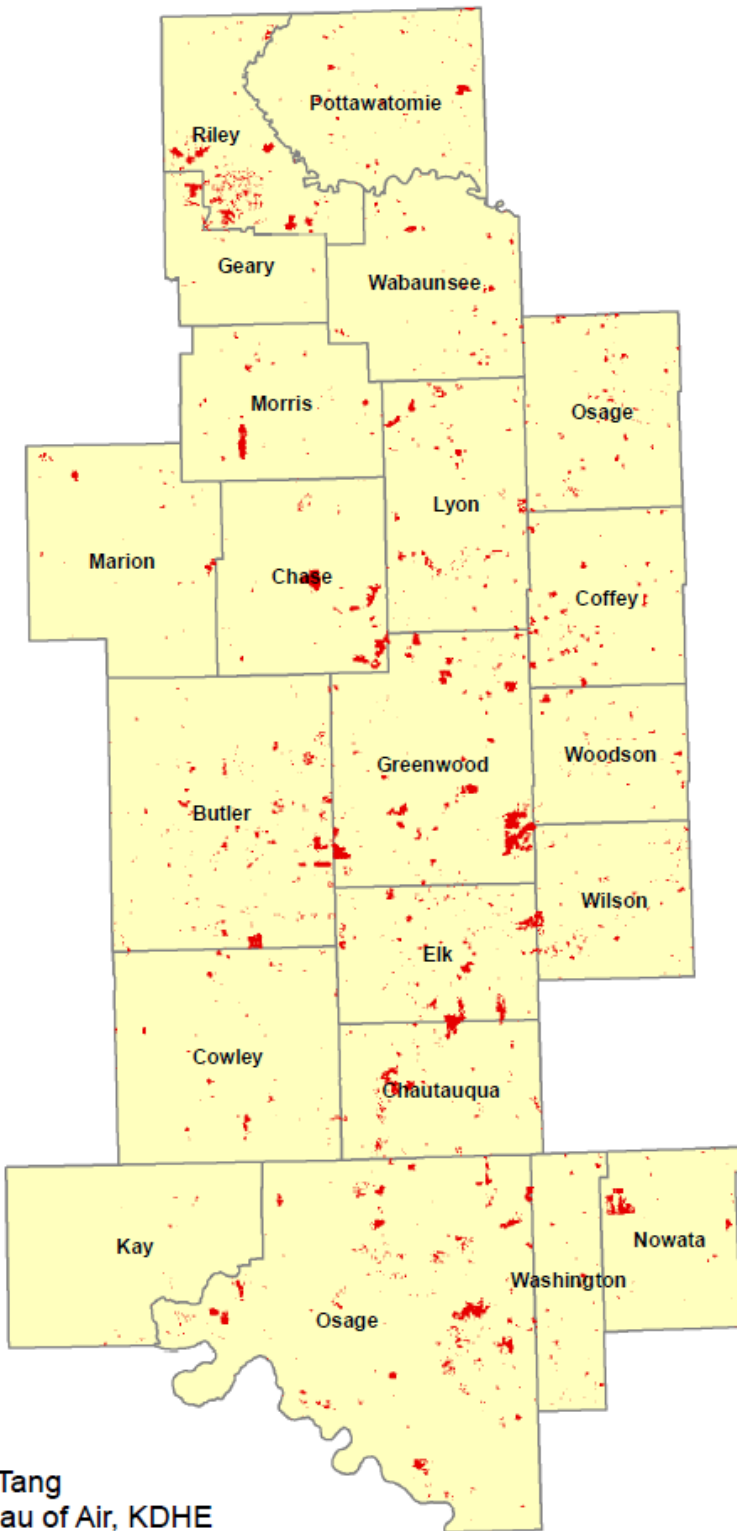


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## Flint Hills Acreage Burned (Feb. 14 – Mar. 28, 2022)



Yao Tang  
Bureau of Air, KDHE

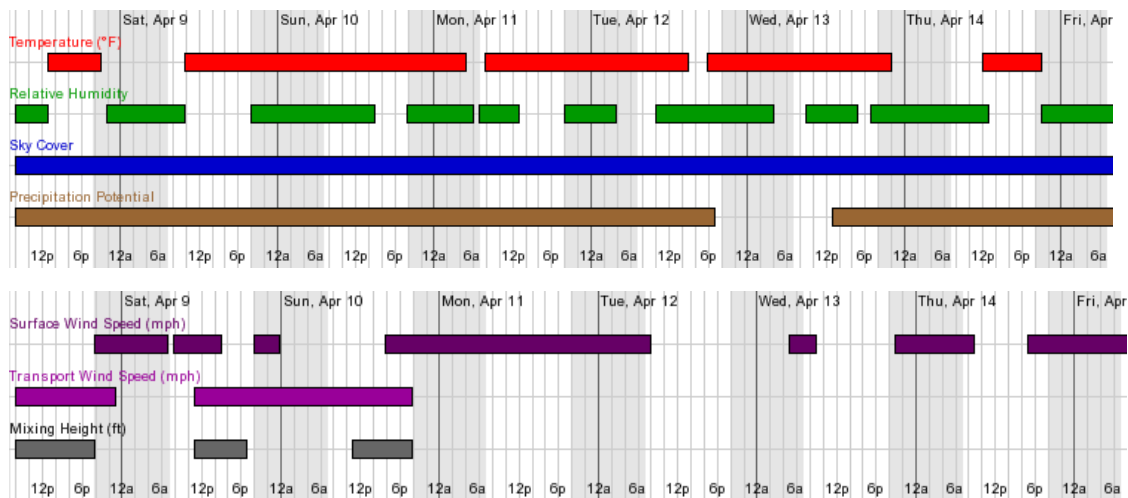
<u>Counties</u>	<u>Acres Burned</u>	
<b>Butler</b>	18,881	
<b>Chase</b>	13,221	
<b>Chautauqua</b>	12,000	
<b>Coffey</b>	7,815	*
<b>Cowley</b>	4,896	
<b>Elk</b>	15,908	
<b>Geary</b>	3,243	*
<b>Greenwood</b>	30,981	
<b>Lyon</b>	12,000	*
<b>Marion</b>	3,120	*
<b>Morris</b>	5,931	*
<b>Osage (KS)</b>	6,687	*
<b>Pottawatomie</b>	5,560	
<b>Riley</b>	17,050	
<b>Wabaunsee</b>	5,035	*
<b>Wilson</b>	6,409	
<b>Woodson</b>	3,877	
<b>Nowata (OK)</b>	6,518	
<b>Osage (OK)</b>	34,549	
<b>Washington (OK)</b>	3,212	
<b>Kay (OK)</b>	602	
<b>Total</b>	<b>217,502</b>	
* Denotes county was partly or completely covered by clouds during latest analysis.		



## Upcoming Look at Fires and Smoke

Conditions will remain windy for today (Friday, April 8) with high to very high fire danger conditions continuing. Winds subside somewhat for Saturday (April 9) but occasionally breezy and dry conditions will continue. Winds continue to be strong for most of the daytime on Sunday (April 10) before a reprieve from the wind finally arrives. Monday (April 11) features warm temperature and reasonable winds, but relative humidity values are expected to remain below 30 percent for much of the afternoon. Such dry conditions will continue to promote very active fire behavior regardless of the winds. As another storm system moves into the region expect the potential for thunderstorms on Tuesday (April 12) into Wednesday (April 13) alongside breezy to windy afternoons for Tuesday through Thursday (April 14) next week. Given the current forecast any prescribed fires during the daytime hours will have excellent smoke dispersion.

### 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](https://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 April 8, 2022.*

For more information, contact:

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