

Flint Hills Wildland Fire Update

April 22, 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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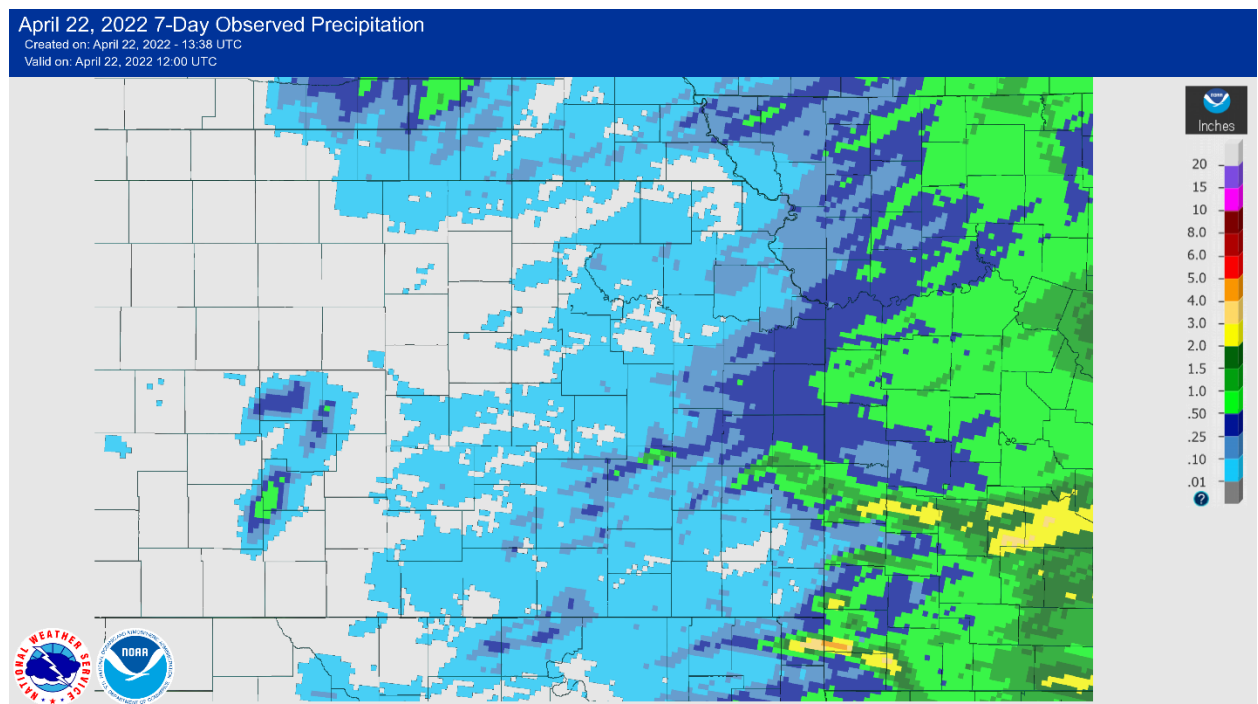
This website was developed as part of the development of the Kansas Flint Hills Smoke Management Plan. Kansas State University hosts the webpage and it includes important information for ranchers and others who might be interested in the Flint Hills. It provides training, regulations, policies, publications, 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

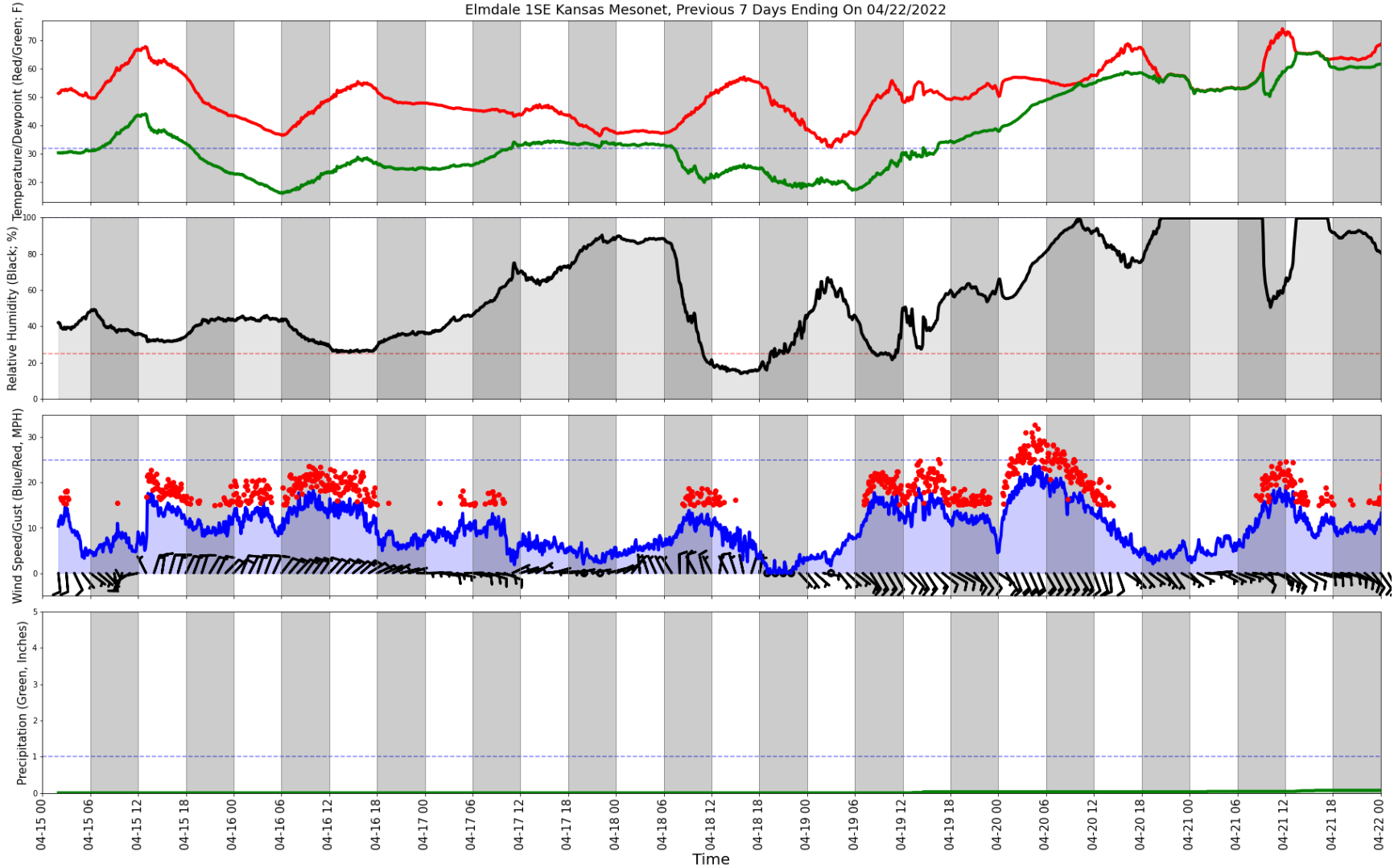
Seasonable temperatures last Friday (April 15) despite a weak cold front moving through the region and switching winds back to the north. Cooler temperatures settled in for Saturday (April 16) under the northerly winds. Cloudy and cool was the setting for Easter (April 17) with light precipitation observed in parts of the Flint Hills. Sunny skies and an eventual return to southerly winds occurring on Monday (April 18) with temperatures beginning to bounce back towards normal. Breezy to windy conditions with the south winds were observed on Tuesday (April 19) and Wednesday (April 19) with occasional clouds and precipitation for some. The clouds continued Thursday (April 20) as a warm front moved north across the region; Above normal temperatures, breezy southerly winds, and scattered rain showers were all seen Thursday afternoon/evening. Total precipitation amounts varied from zero to a few hundredths of an inch for most of the Flint Hills. A few showers/thunderstorms brought isolated high amounts.

Precipitation



NOAA/NWS Observed Total Precipitation for Apr. 15-22, 2022.

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7-day (Apr. 15-22, 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 15-22, 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_{2.5}: Preliminary data indicates no exceedances of the NAAQS daily 24-hour average maximum of 35 µg/m³.

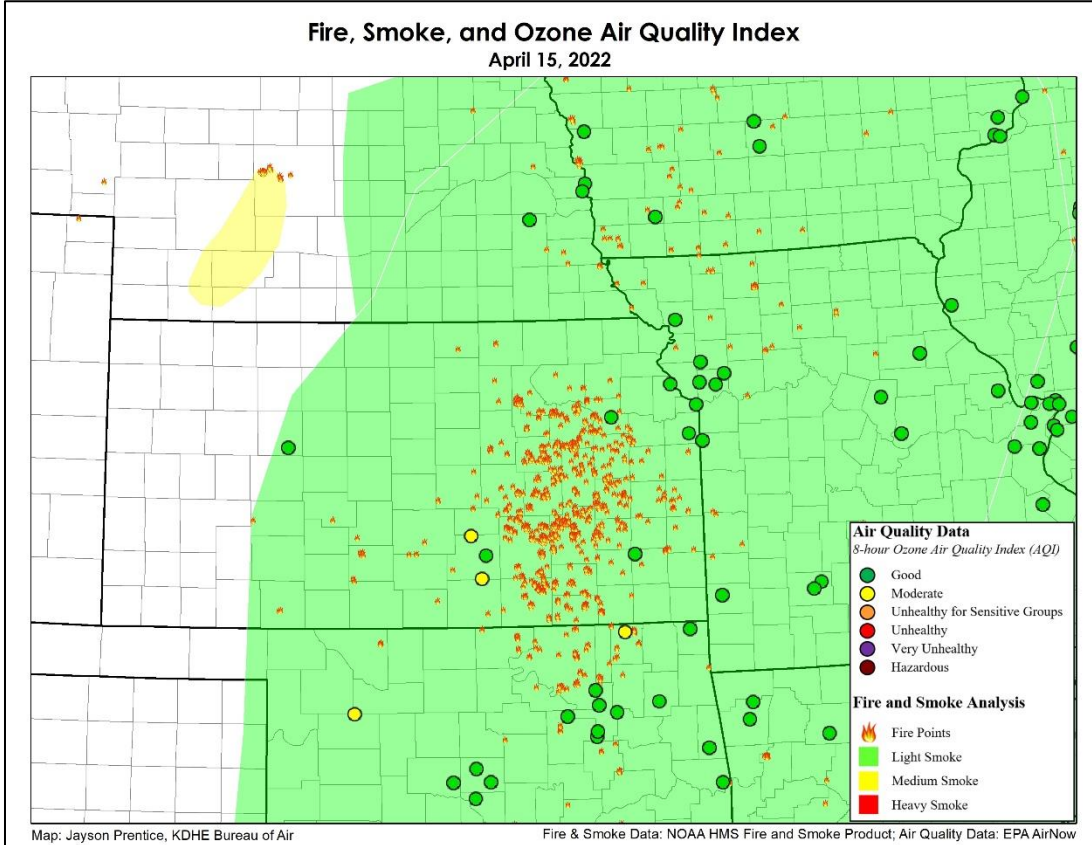
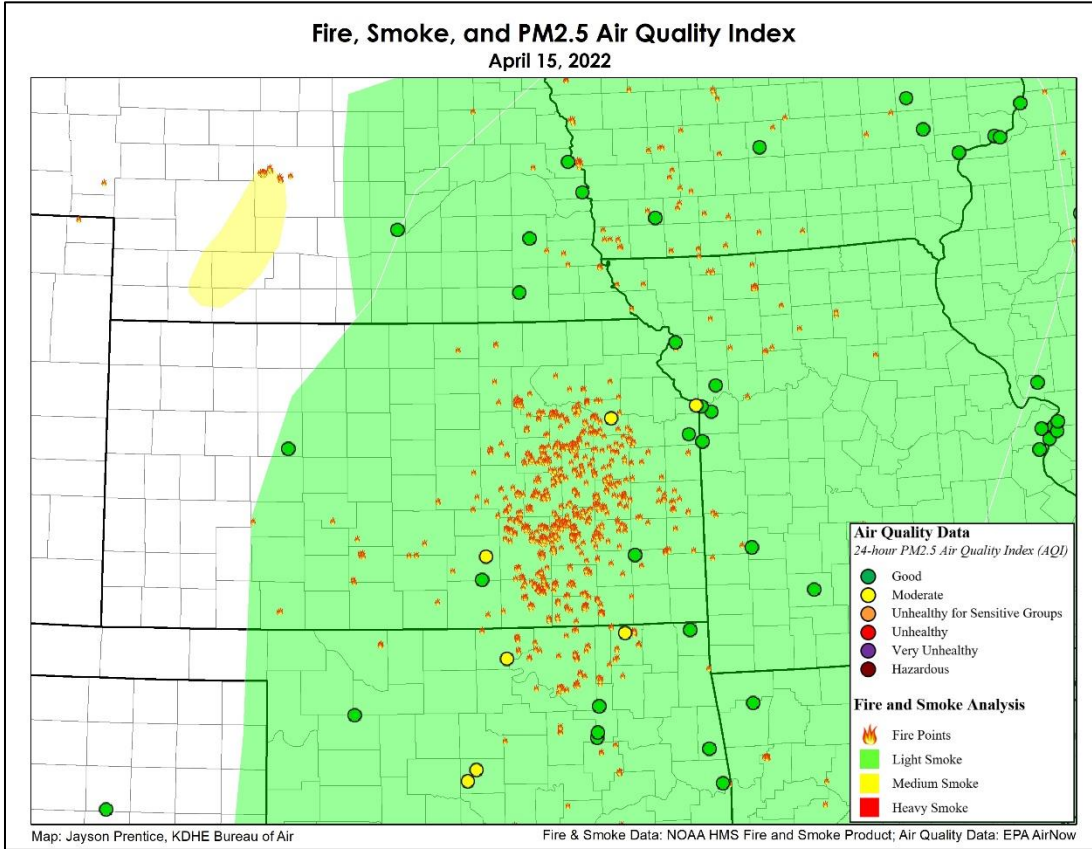
Initial south winds Friday (April 15) morning became northerly and gusty at times by the afternoon hours. Conditions were favorable for prescribed burning though which prompted widespread burning within the Flint Hills with Moderate air quality impacts for parts of eastern Kansas and central/eastern Oklahoma. Gusty northeast winds on Saturday (April 16) limited prescribed burning although lingering smoke led to more Moderate Air Quality Index (AQI) values for some.

Cloudy skies and light rain early Sunday (April 17) gave way to light winds and clearing skies by late in the day; Expect that some prescribed burning occurred late in the day however cloud cover limited the ability to satellite to detect any fires. Clear skies and northerly winds provided another opportunity for widespread prescribed burning on Monday (April 18) with smoke impacts also observed over central/eastern Kansas and Oklahoma. Gusty south winds returned on Tuesday (April 19) and scattered rain showers limited new prescribed burning, but transported smoke from the prior day back over much of Kansas and further north – albeit with short term Moderate AQI impacts.

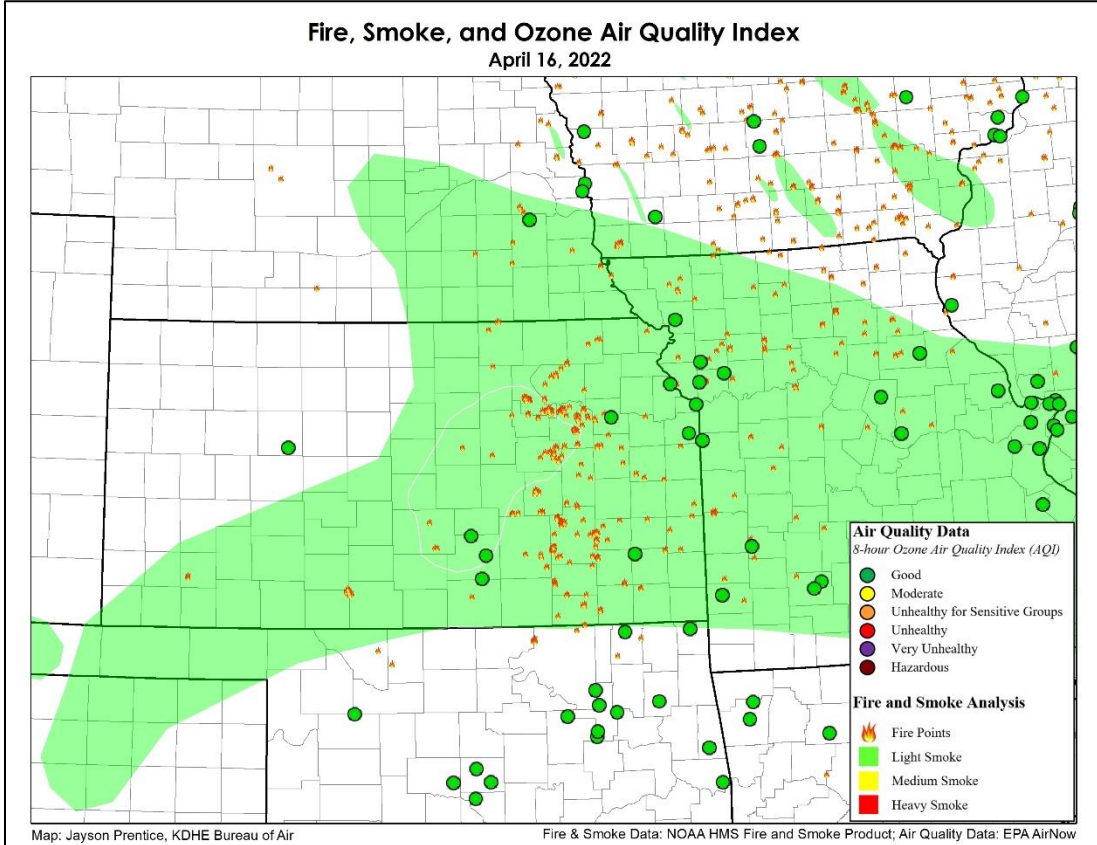
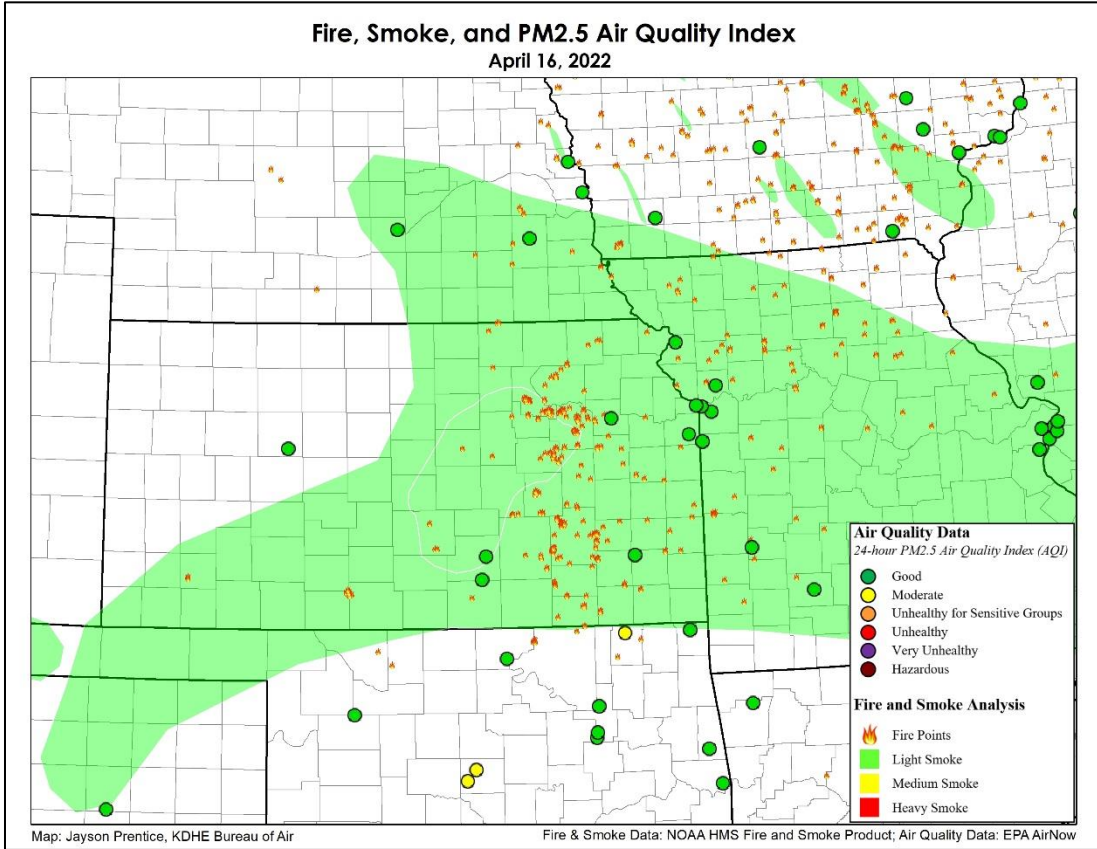
Periods of rain, cloud cover, and breezy conditions limited prescribed burning for both Wednesday (April 20) and Thursday (April 21). Widespread light smoke was analyzed on several days this week and heavier smoke in the far western extent of the included images; This is smoke from several wildfires occurring in Arizona and New Mexico.

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.

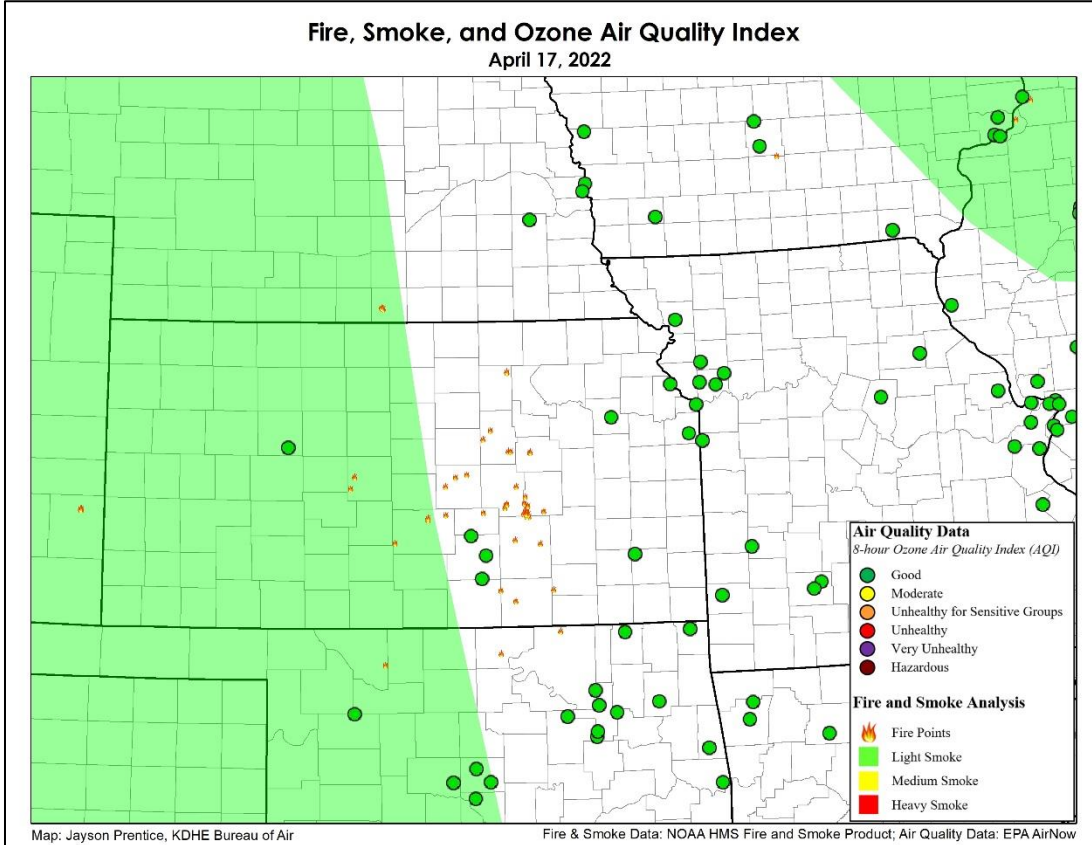
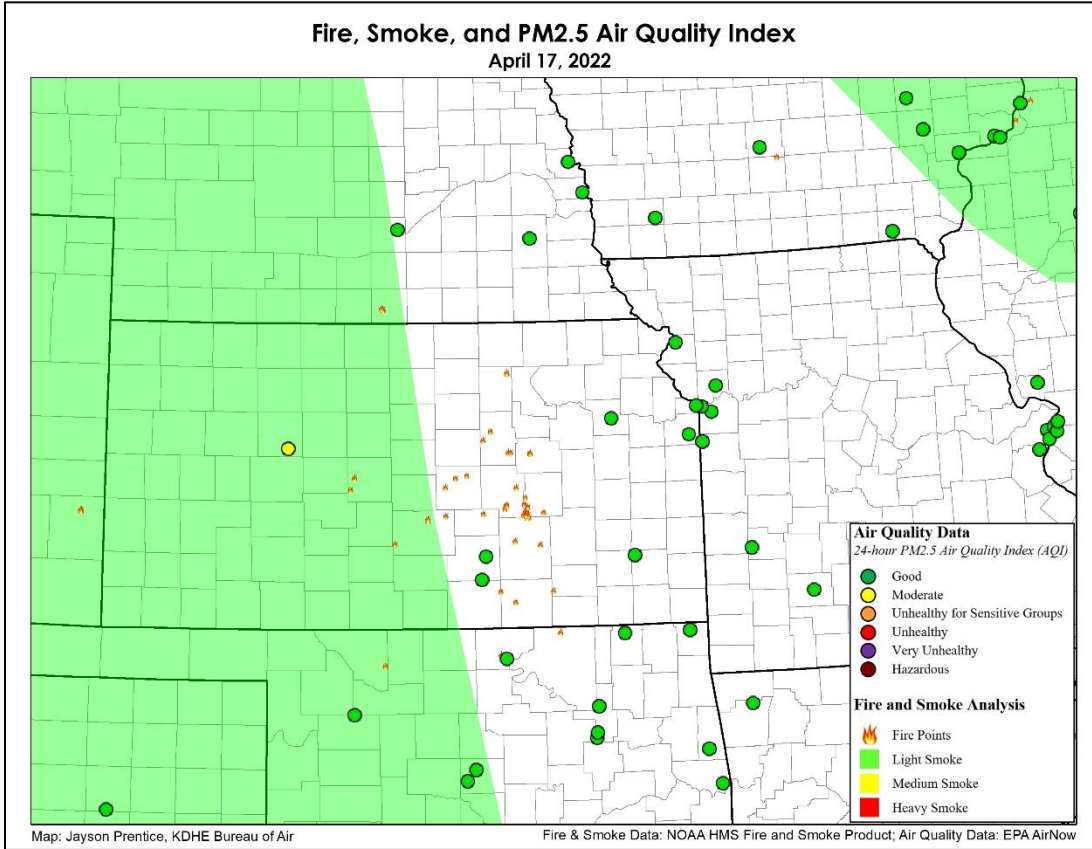
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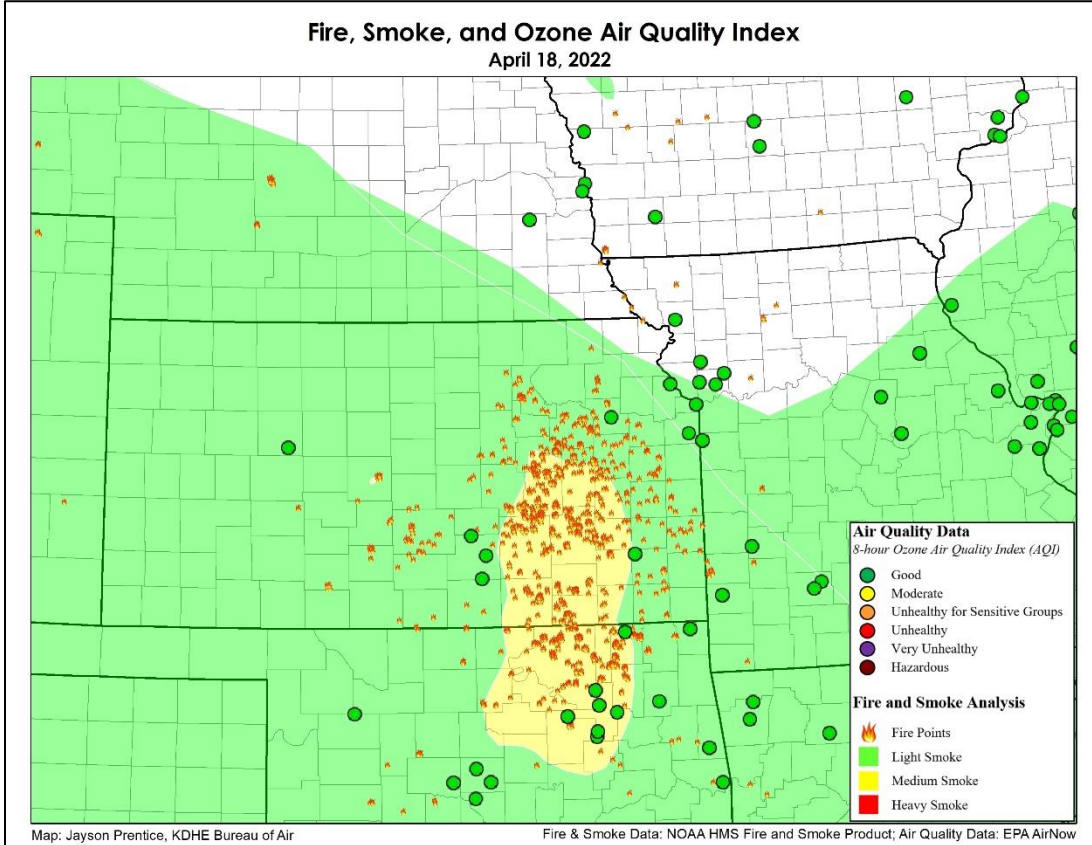
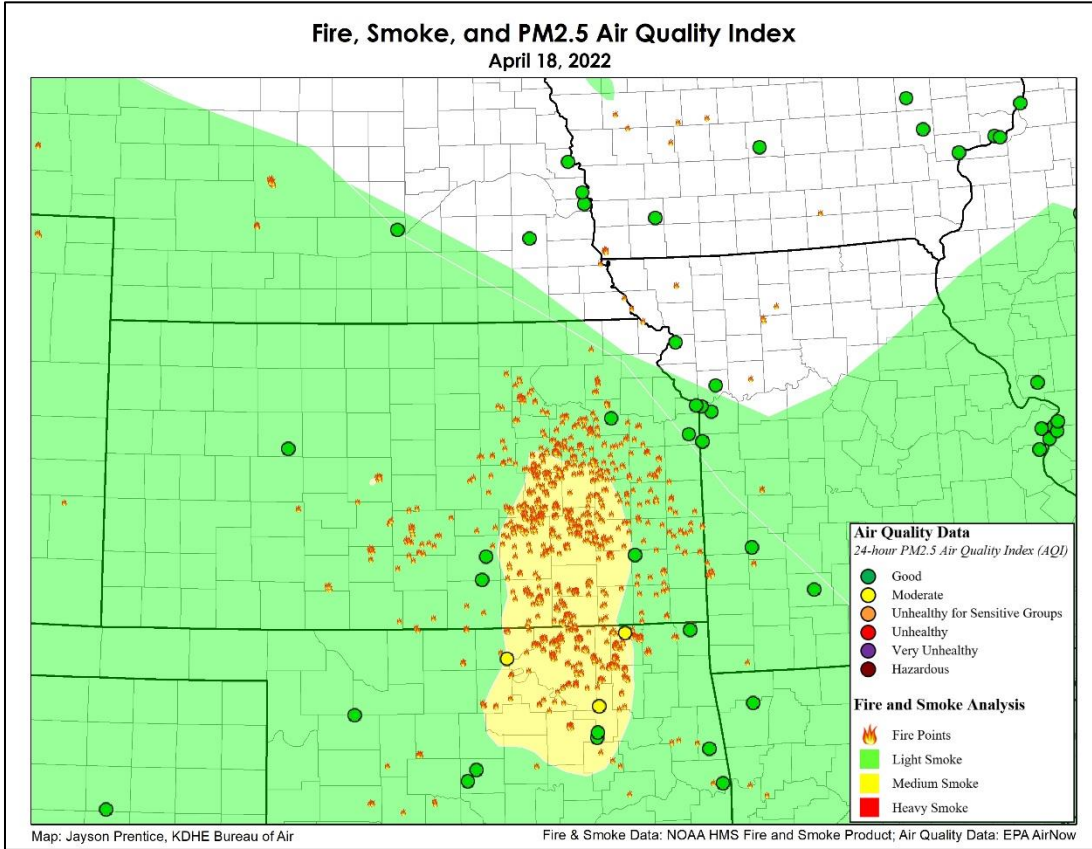
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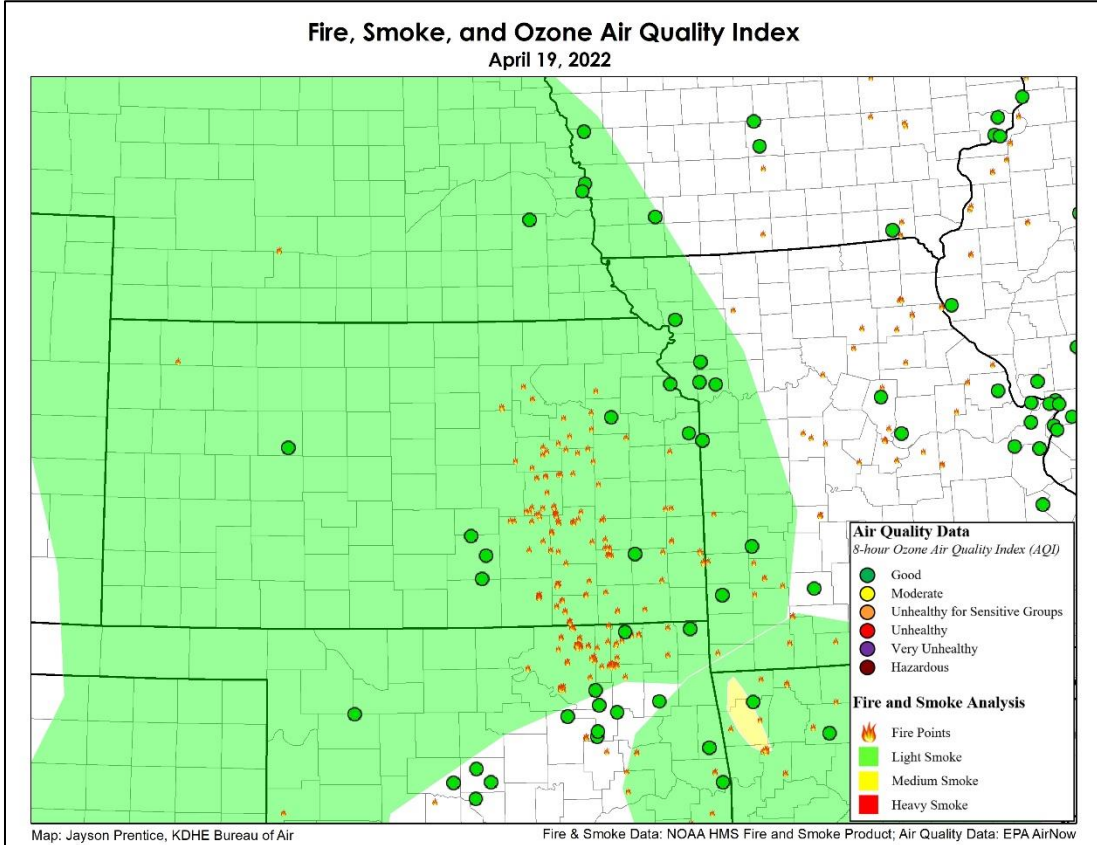
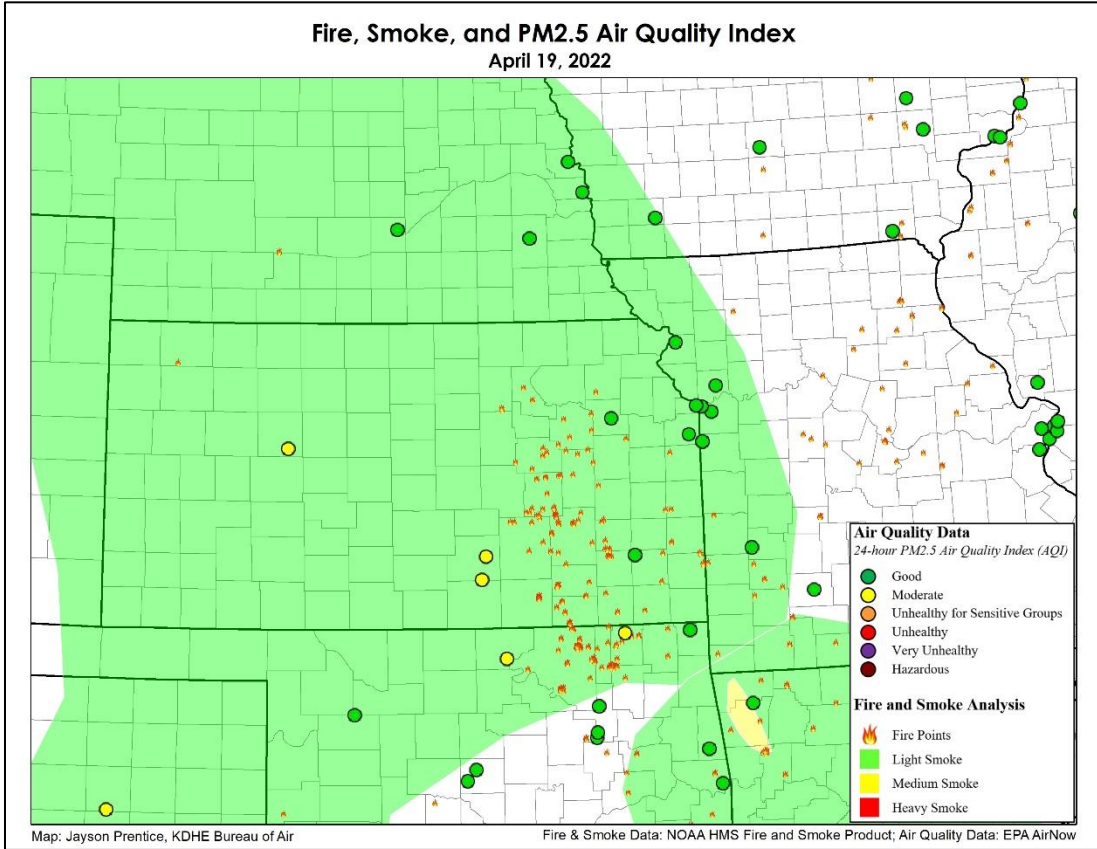
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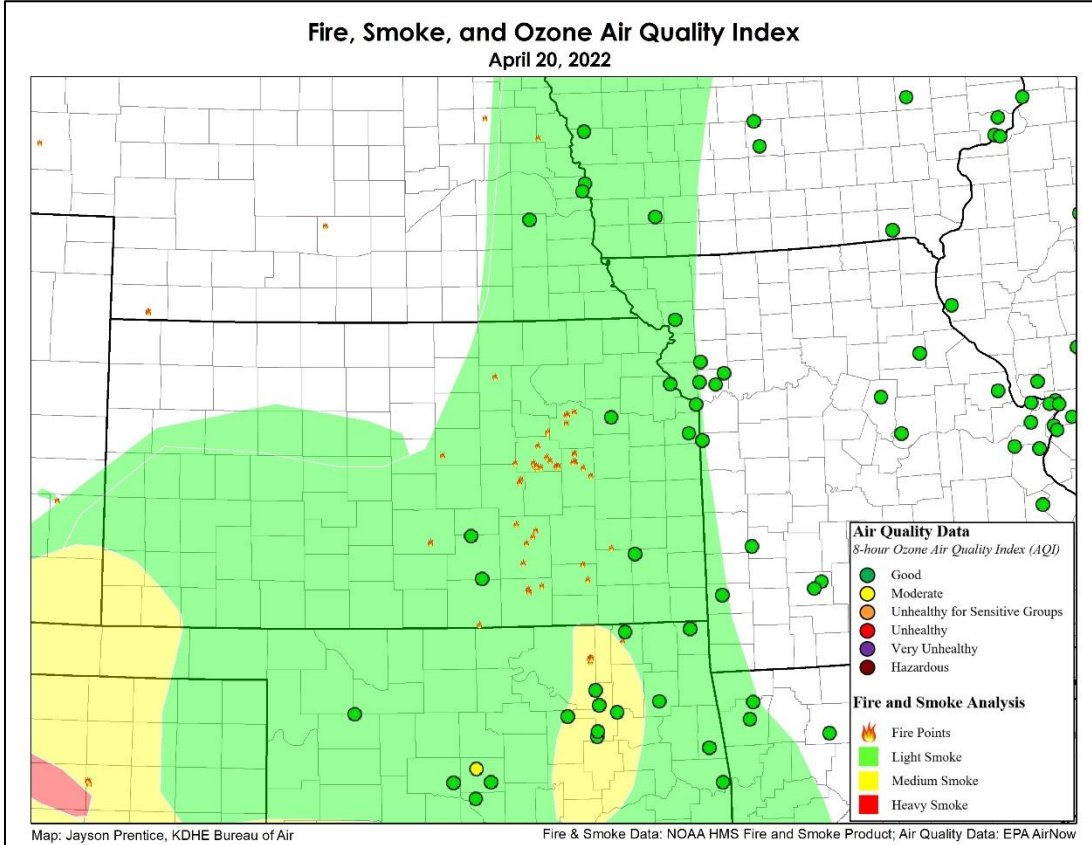
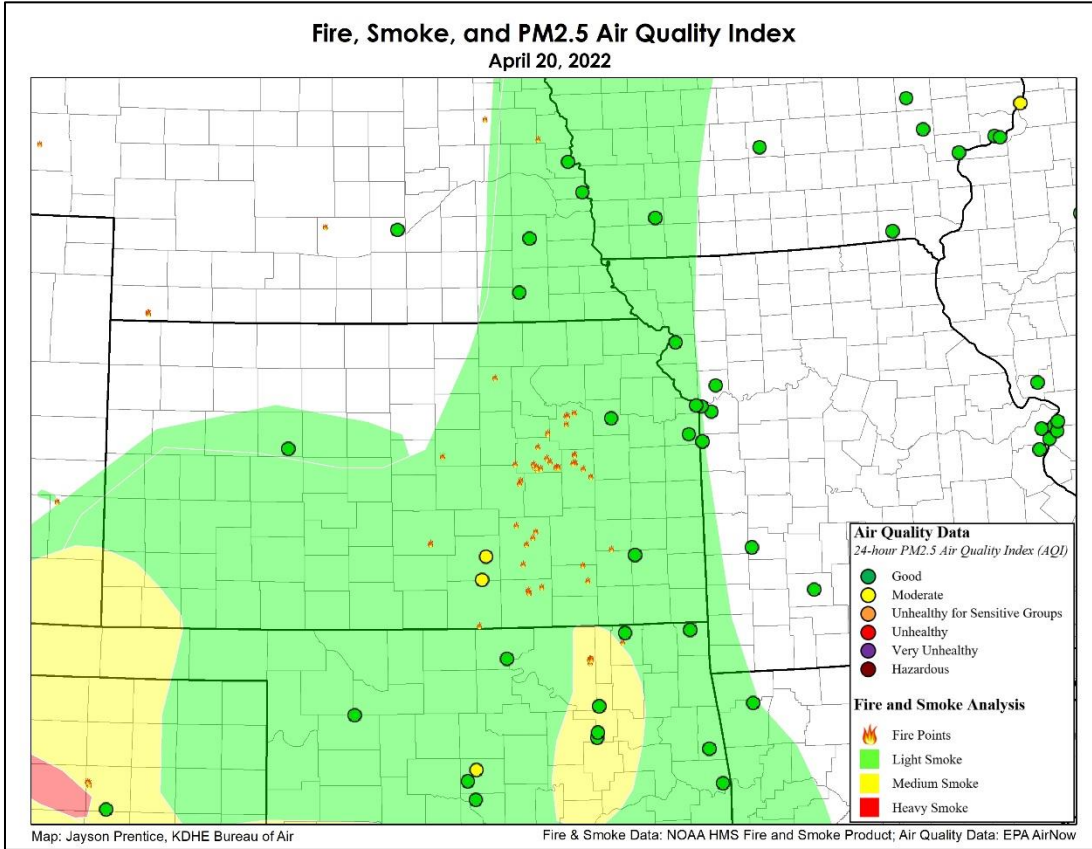
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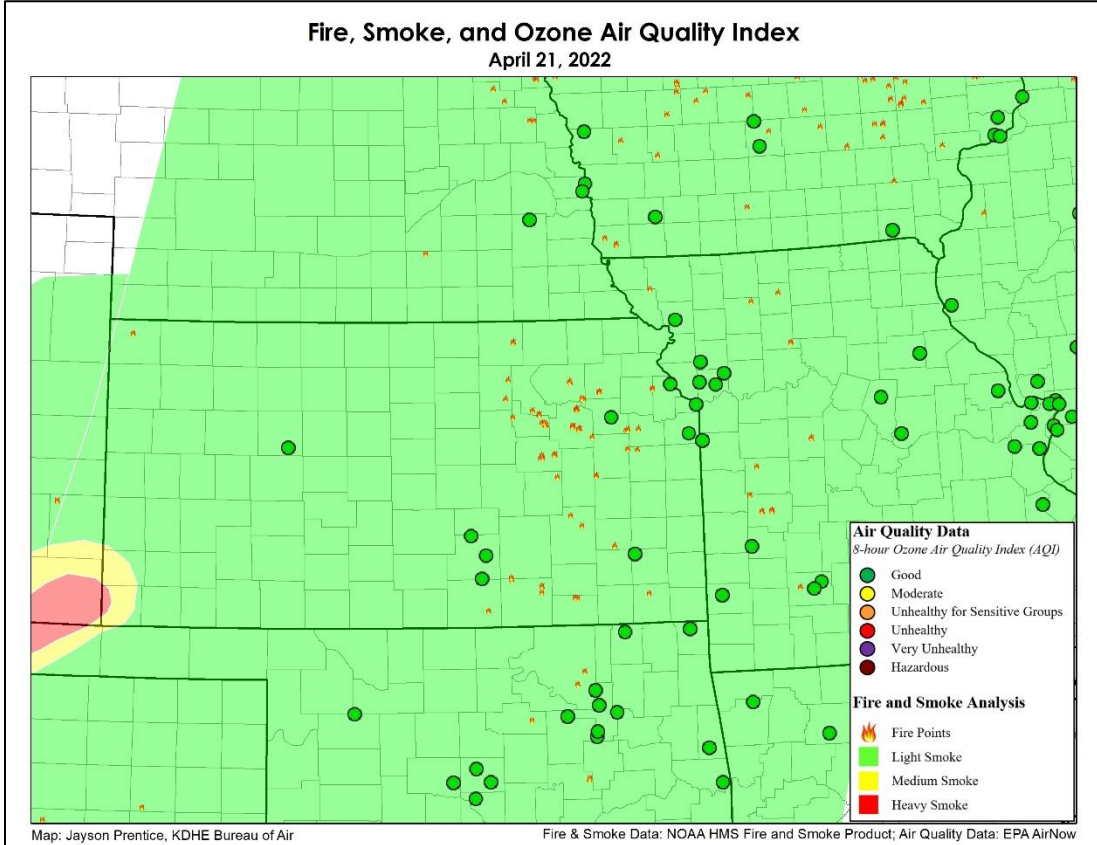
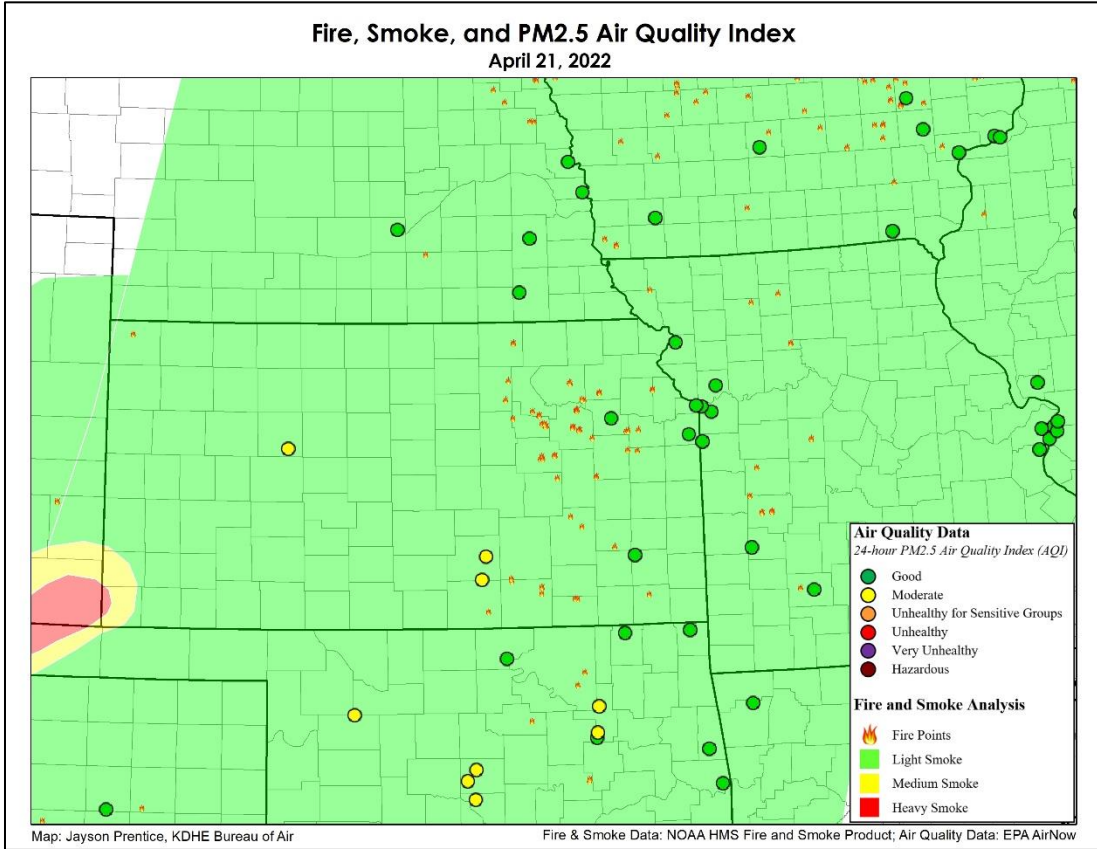
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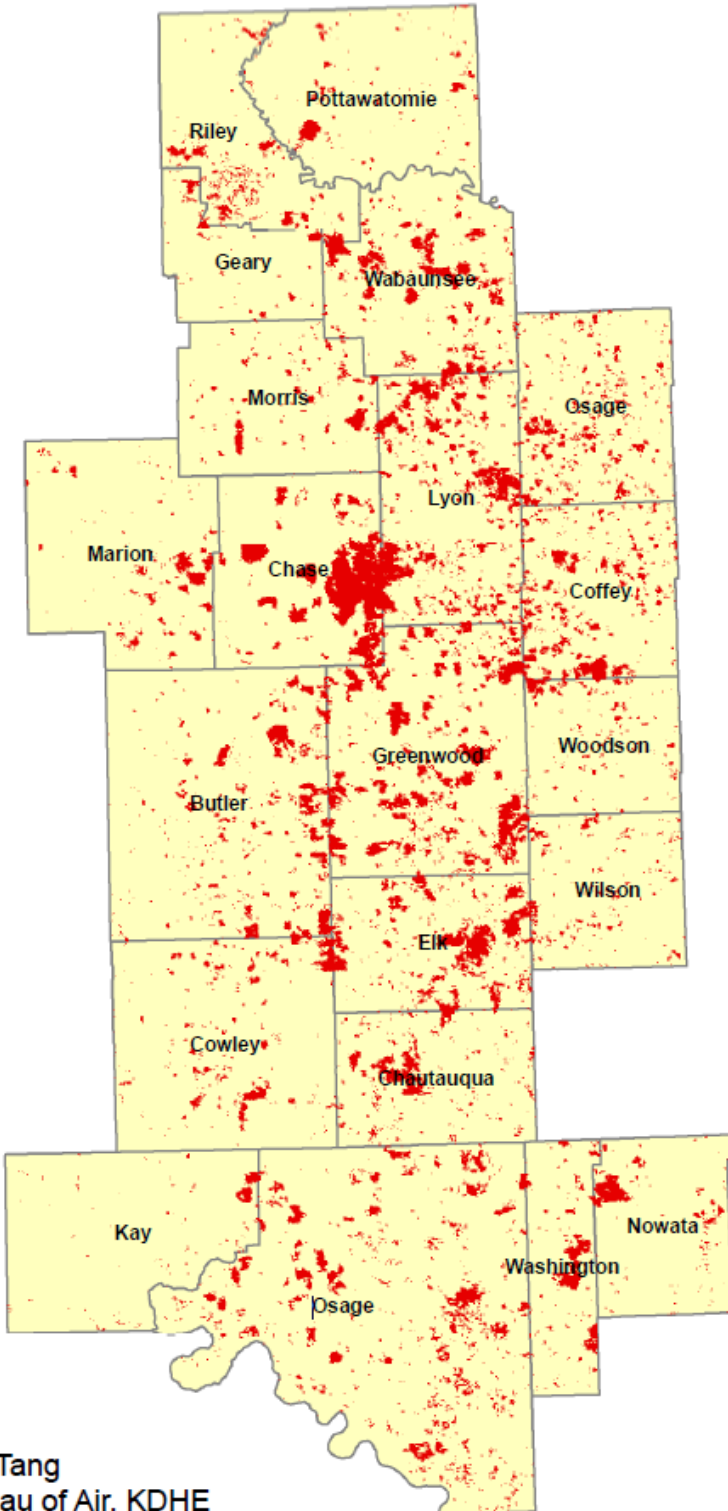


Flint Hills Wildland Fire Update





Flint Hills Acreage Burned (Feb. 14 – Apr. 9, 2022)



Yao Tang
Bureau of Air, KDHE

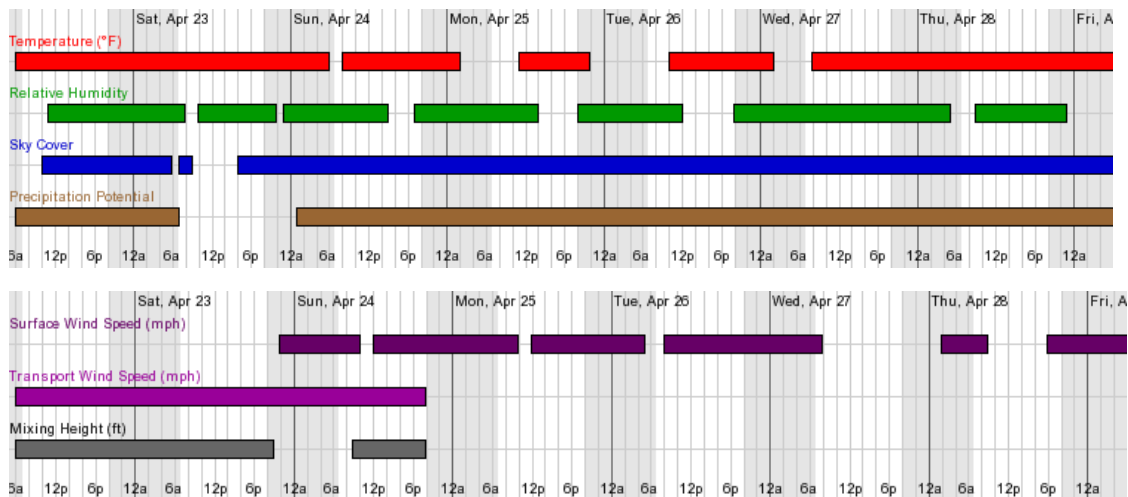
<u>Counties</u>	<u>Acres Burned</u>	
Butler	60,279	*
Chase	96,049	
Chautauqua	33,128	
Coffey	49,700	*
Cowley	30,317	*
Elk	63,832	*
Geary	8,062	
Greenwood	119,168	*
Lyon	91,801	*
Marion	22,672	*
Morris	20,634	
Osage (KS)	39,321	*
Pottawatomie	15,707	
Riley	26,348	*
Wabaunsee	57,592	*
Wilson	15,599	
Woodson	14,641	
Nowata (OK)	17,885	
Osage (OK)	103,230	*
Washington (OK)	22,950	
Kay (OK)	8,108	*
Total	917,023	
* Denotes county was partly or completely covered by clouds during latest analysis.		



Upcoming Look at Fires and Smoke

Breezy to windy conditions are expected both today (Friday, April 20) and Saturday (April 21) as a storm system moves through the region. Showers and thunderstorms are likely across much of the Flint Hills on Saturday too. Brief gusty northwest winds are forecast early on Sunday (April 22) before becoming a steadier 5-15 mph. Lighter north winds are expected on Monday (April 23) but a very dry air mass in place will drop afternoon relative humidity values into the 20-30% range for most; Look for very similar conditions on Tuesday (April 24) with the exception of wind direction as it becomes southerly. Breezy conditions look to return for both Wednesday (April 25) and Thursday (April 26) with south winds bringing warmer temperatures and more moisture to the air. Smoke impacts are possible across southeast Kansas and central/eastern Oklahoma on Sunday and Monday; And over central/eastern Kansas and central Nebraska on Tuesday if ample prescribed burning occurs.

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 April 22, 2022.

For more information, contact:

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 Kansas Department of Health & Environment
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