

Flint Hills Wildland Fire Update

April 19, 2024

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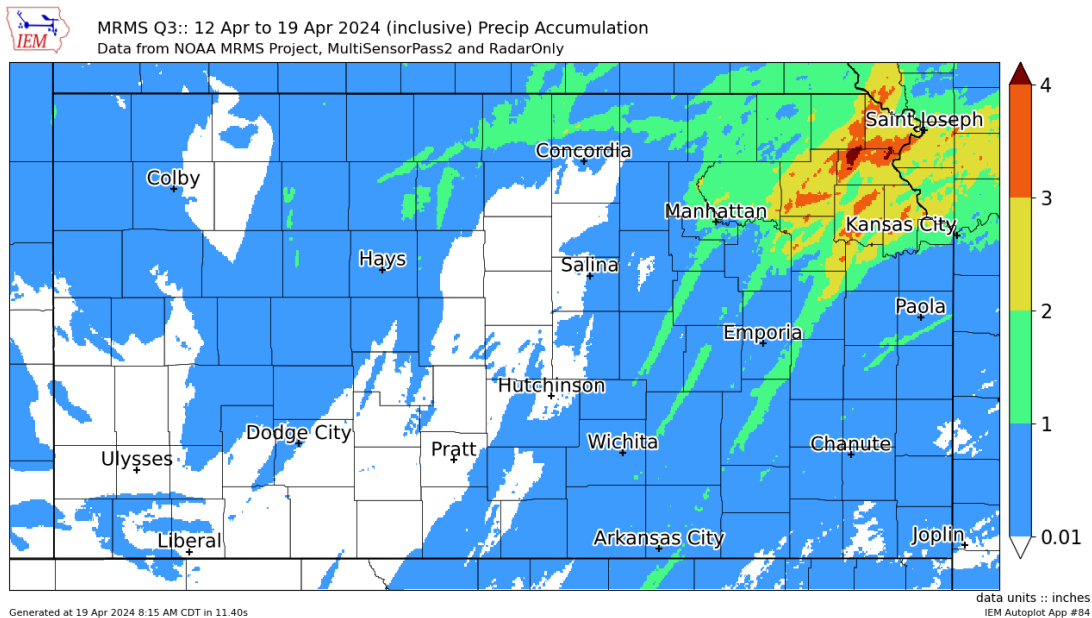
This website was developed as part of the development of the Kansas Flint Hills Smoke Management Plan. Kansas State University hosts the webpage, and it includes important information for ranchers and others who might be interested in the Flint Hills. It provides training, regulations, policies, publications,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

Last Friday (Apr 12) was a fantastic Spring day with light southerly winds, sunny skies, and high temperatures in the 70s for much of the Flint Hills. Temperatures continued to warm on Saturday (Apr 13) under breezy conditions with wind gusts from the south surpassing 30 mph. Sunday (Apr 14) was the warmest day of the year for most with highs in the upper 80s and relatively light and variable winds. Monday (Apr 15) gave way to cloud cover and a return to gusty south winds as a storm system moved across the region. Rain showers and thunderstorms moved through on Tuesday (Apr 16) with otherwise strong southwest to west winds. Conditions rebounded with light south winds, clear skies, and highs near 80 degrees on Wednesday (Apr 17) before another round of thunderstorms moved through overnight along a cold front, primarily in the northern Flint Hills. Thursday featured well below normal temperatures, clouds, and a strong north wind. Total precipitation amounts ranged from near zero to swaths above an inch, and then upwards of two inches for some, especially over northeast Kansas.

Precipitation



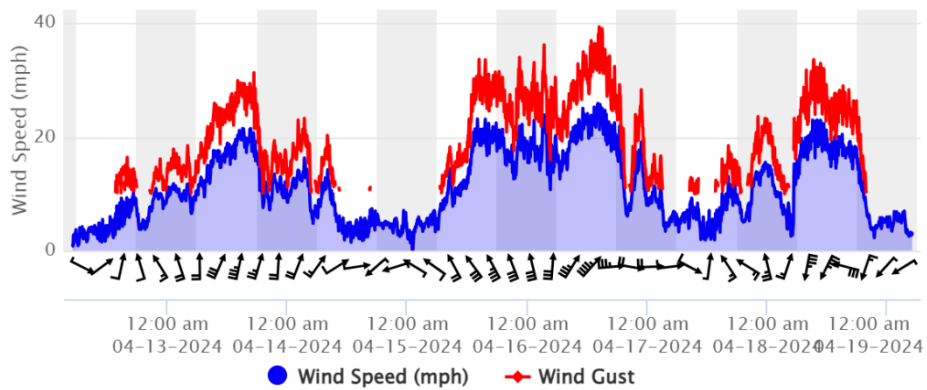
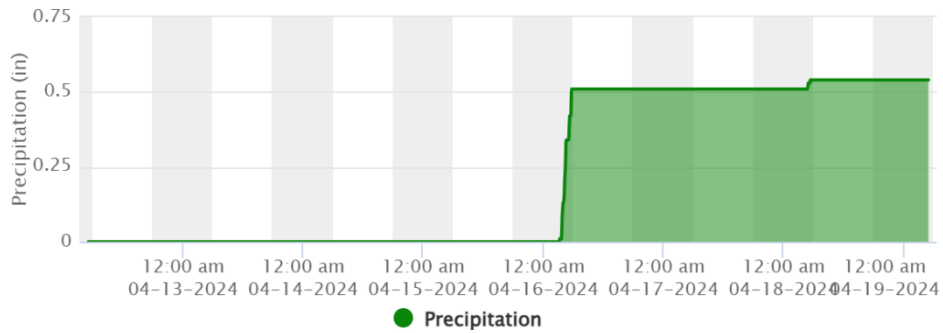
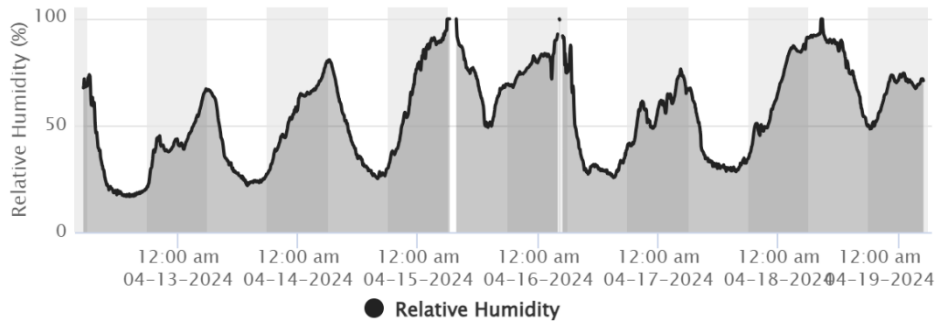
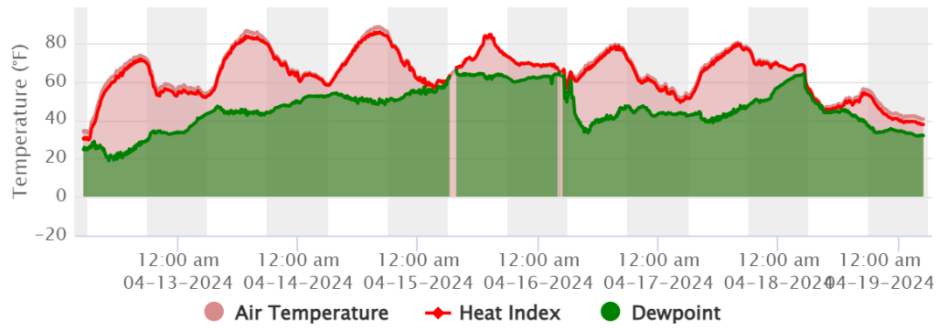
NOAA/NWS Observed Total Precipitation for April 12-19, 2024.

Note typical NOAA/NWS mapping was unavailable, so an alternative product was used.

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Meteogram for Elmdale 1SE



7-day (April 12-19, 2024) 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 12-18, 2024, there was one preliminary air quality exceedances that were potentially influenced by prescribed fire within the Flint Hills.

Ozone: Preliminary data indicates one exceedances of the NAAQS daily 8-hour average maximum of 70 ppb. On Sunday, April 14 the ozone monitor in Liberty, MO (Kansas City Metropolitan Area) measured a preliminary value of 73 ppb.

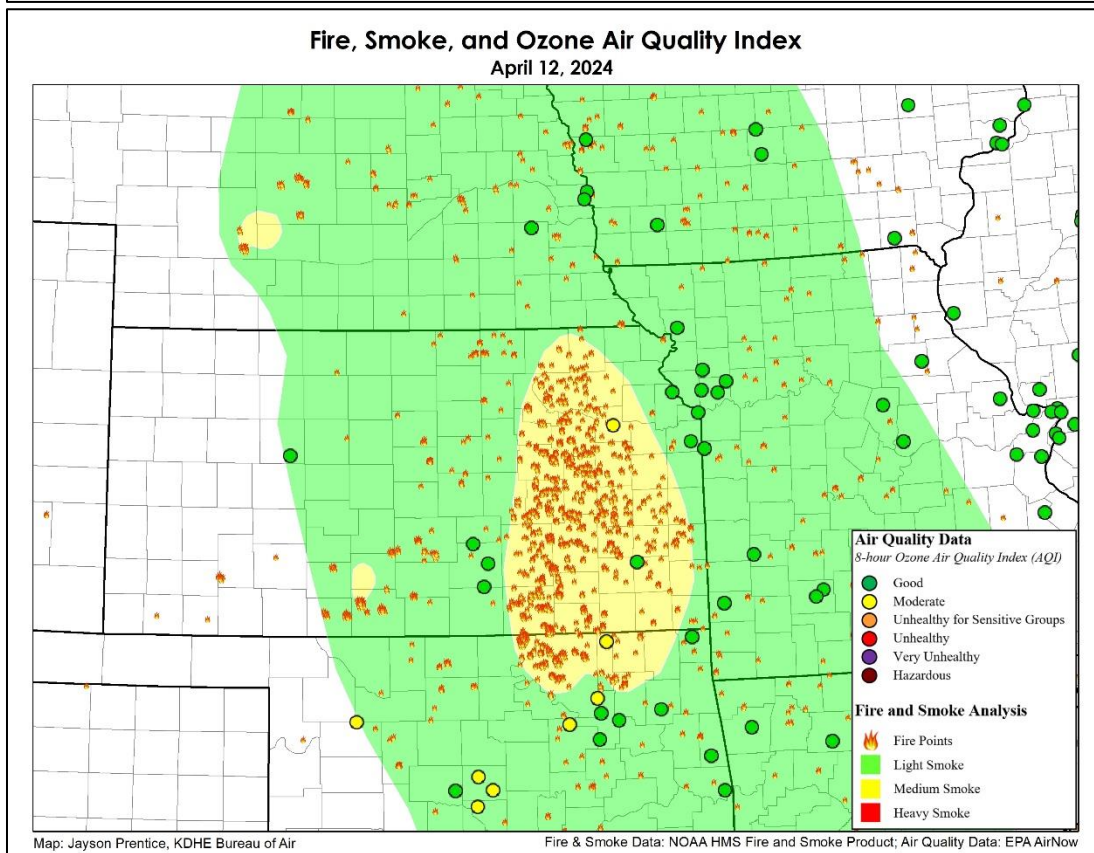
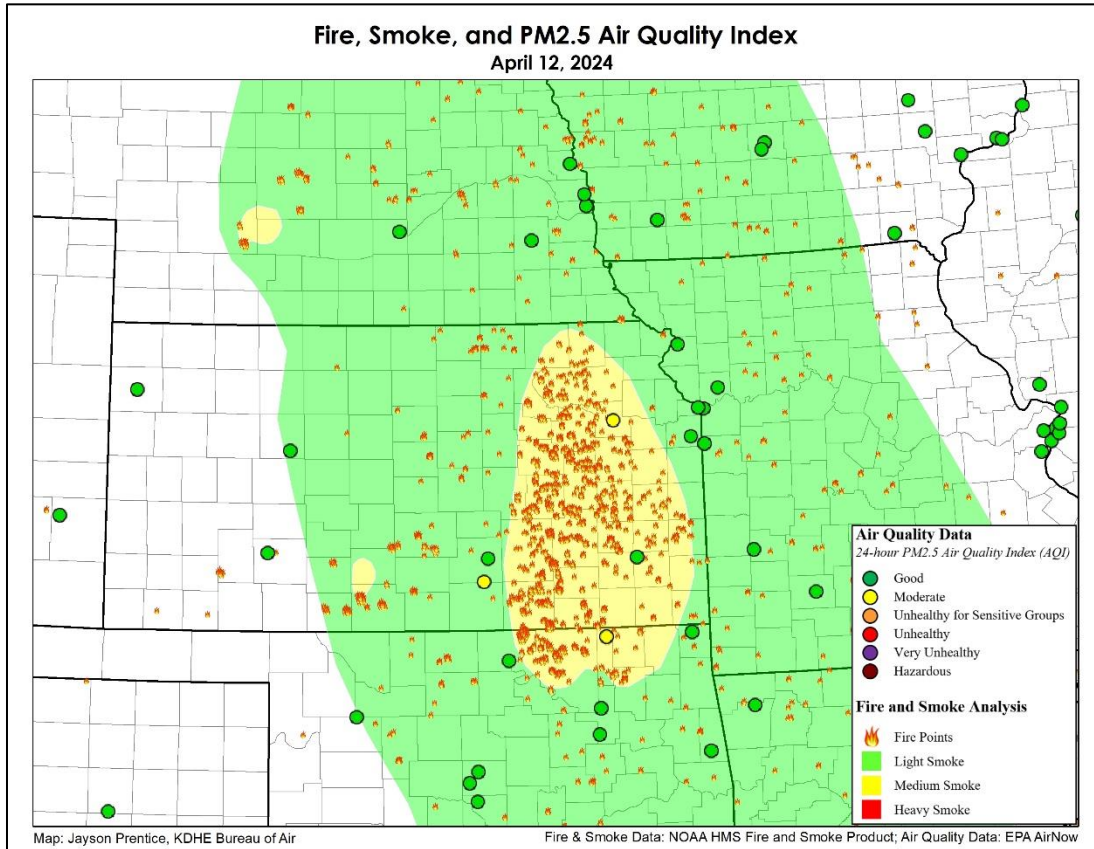
PM_{2.5}: Preliminary data indicates no exceedances of the NAAQS daily 24-hour average maximum of 35 µg/m³.

Significant prescribed fire activity occurred on Friday (Apr 12) under ideal conditions; Light winds but otherwise good dispersion conditions resulted in primarily Moderate air quality although localized impacts were more significant near fire activity within the Flint Hills. Activity waned on Saturday (Apr 13) as winds increased, but some activity was still observed in the southern Flint Hills with strong south winds pushing smoke to the north. As light south-southwest winds returned for Sunday (Apr 14) we saw an increase in prescribed fire activity once again; With sunny skies and very warm temperatures this resulted in some enhanced ozone production which included an exceedance in the Kansas City Metro.

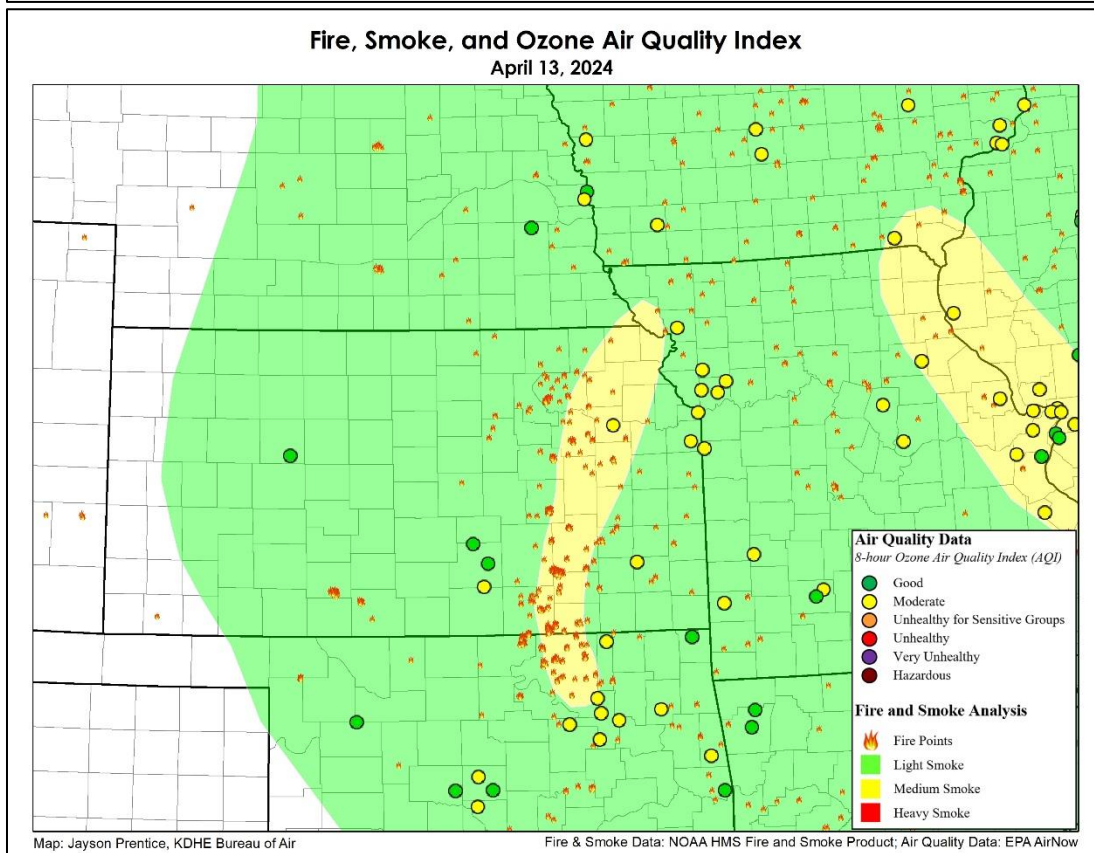
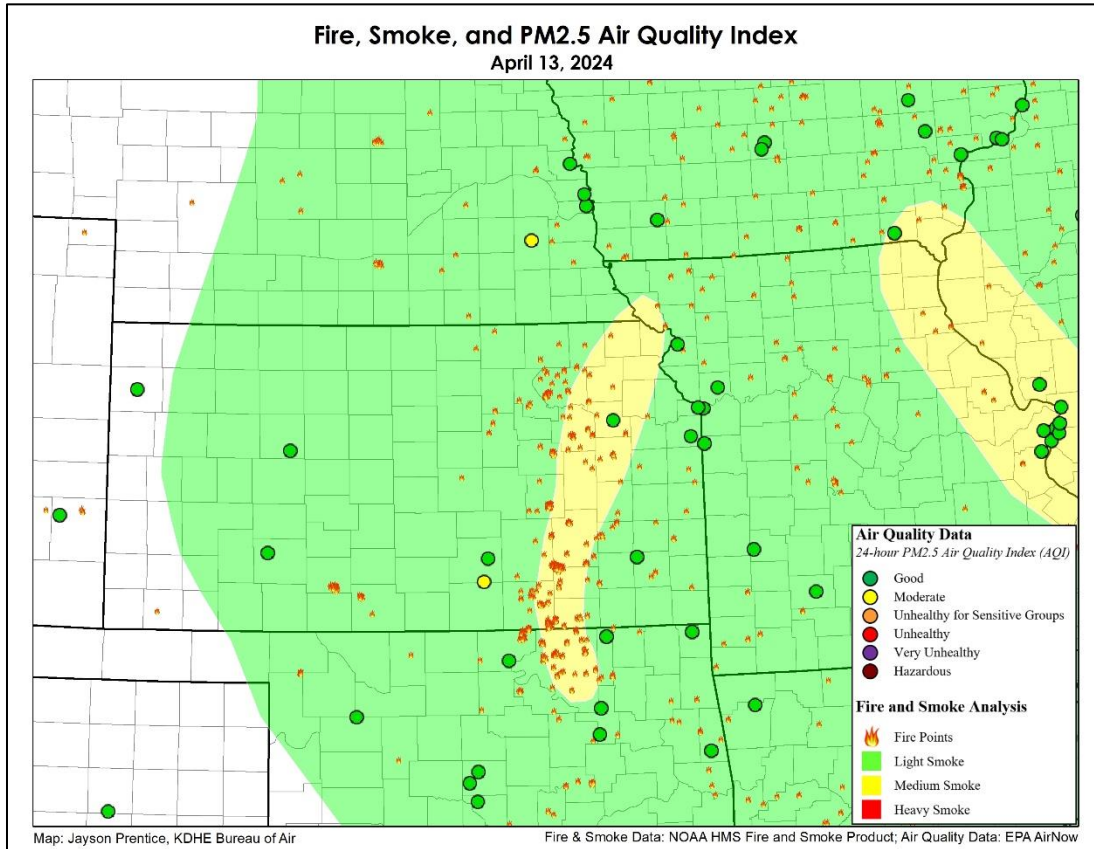
Prescribed fire activity was nearly non-existent for Monday (Apr 15) and Tuesday (Apr 16) due to strong winds, cloud cover, and thunderstorm chances across the region. A nice Spring afternoon on Wednesday (Apr 17) under light south winds resulted in some increase in activity; Air quality impacts were primarily localized to nearby downwind areas and brief with good dispersion. A cold front swept through the area on Thursday (Apr 18) which resulted in strong winds, cloud cover, and areas of light precipitation for some which once again inhibited prescribed fire activity.

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.

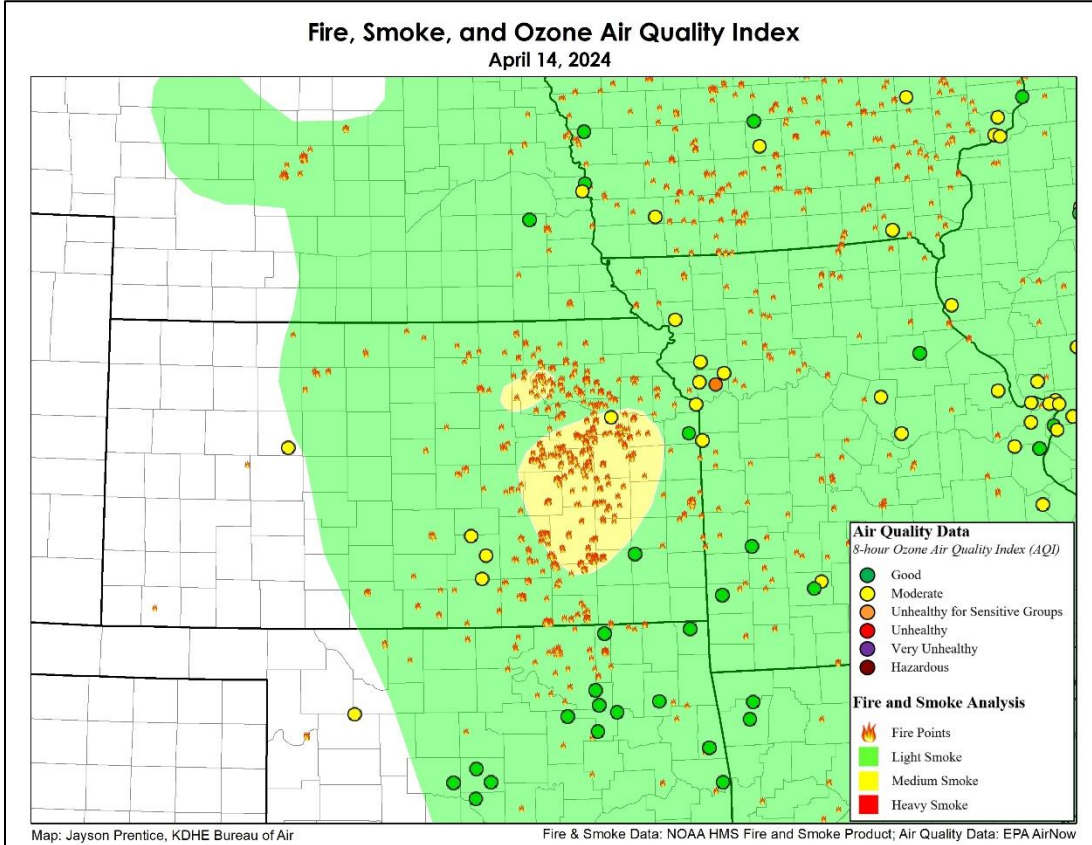
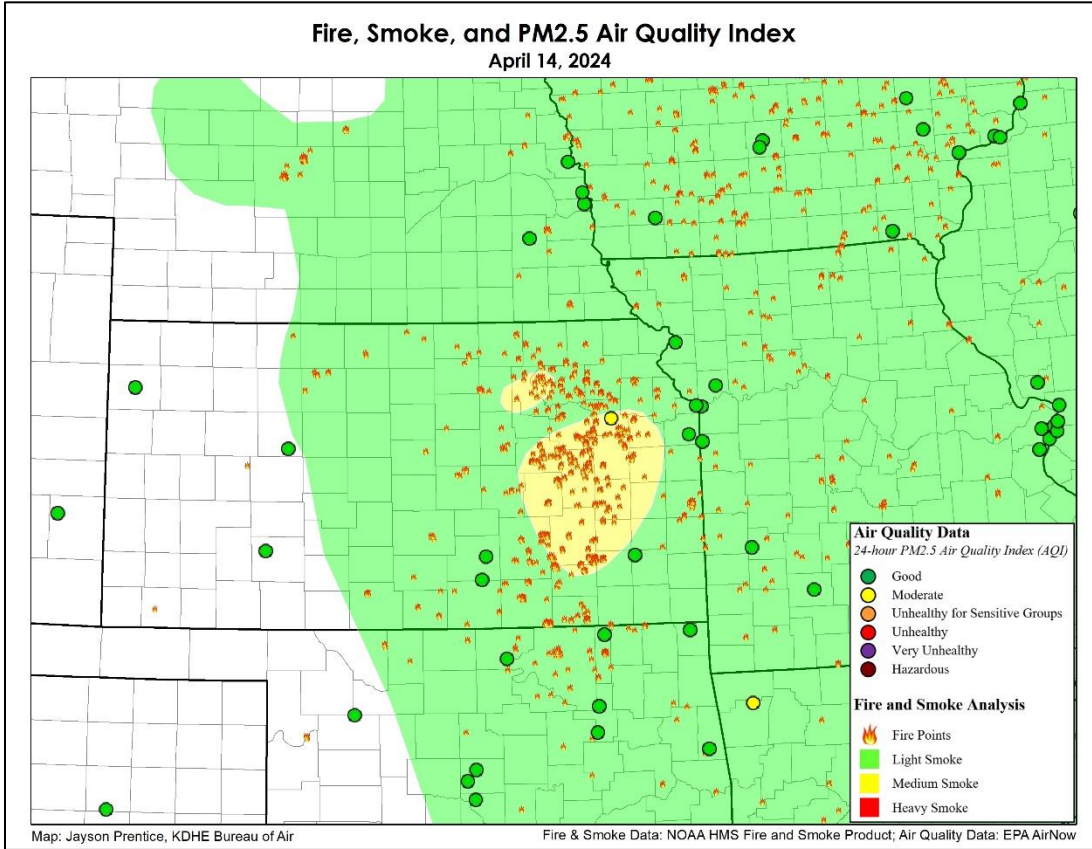
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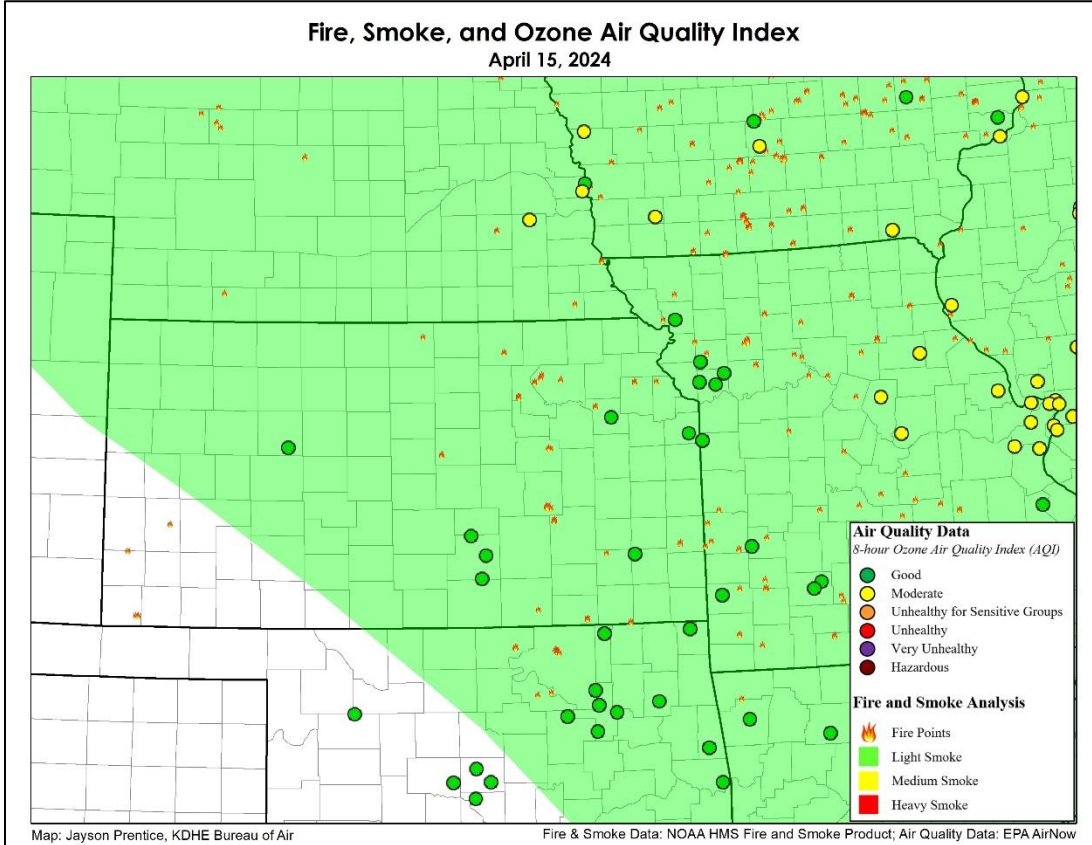
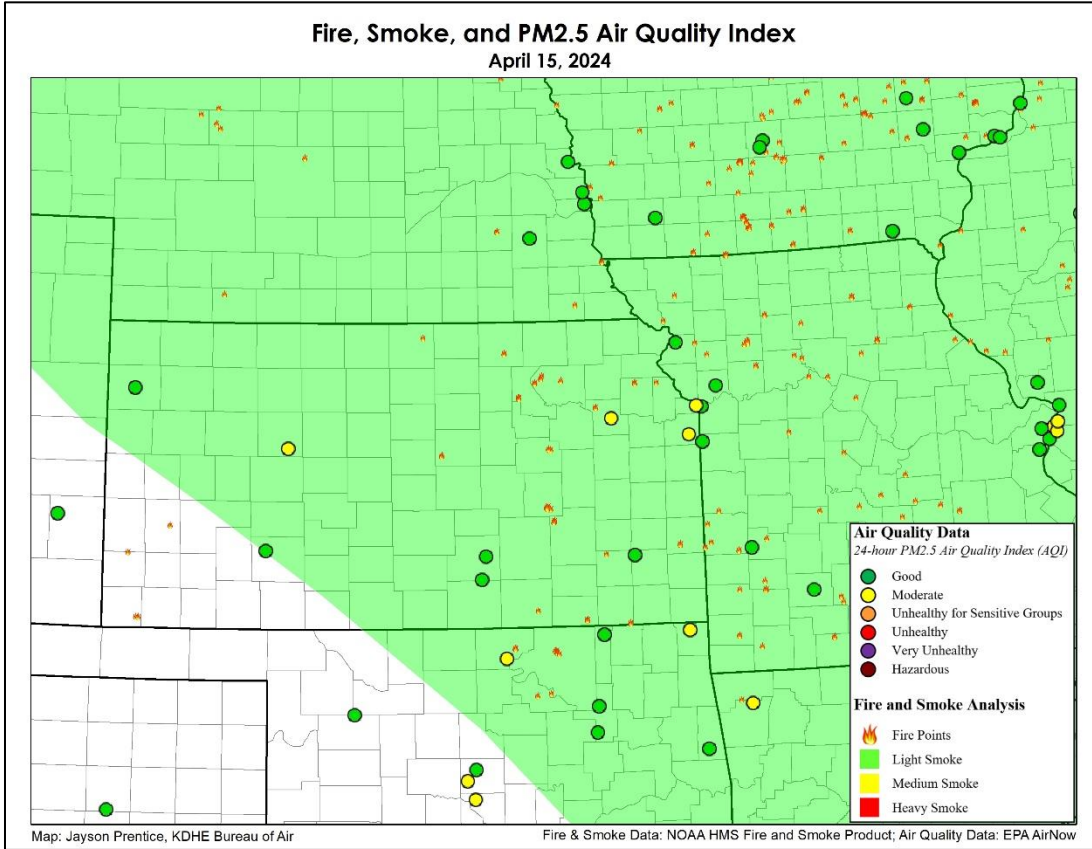
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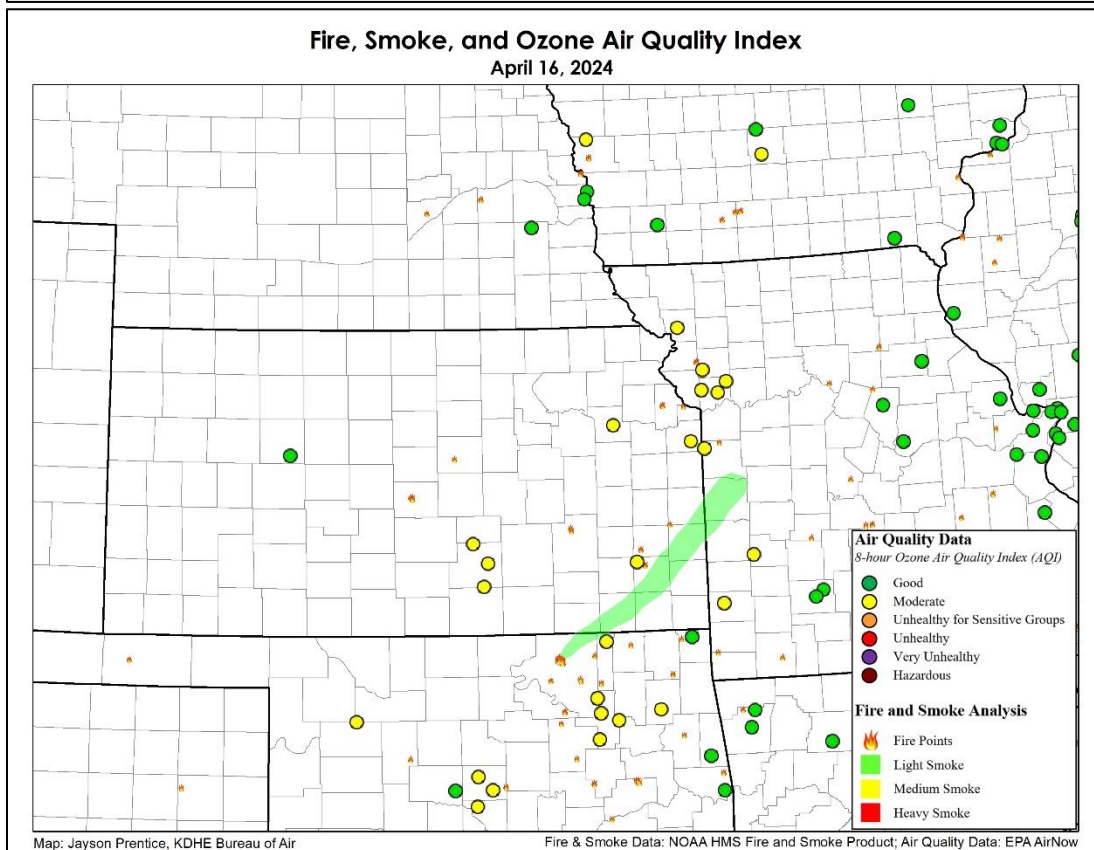
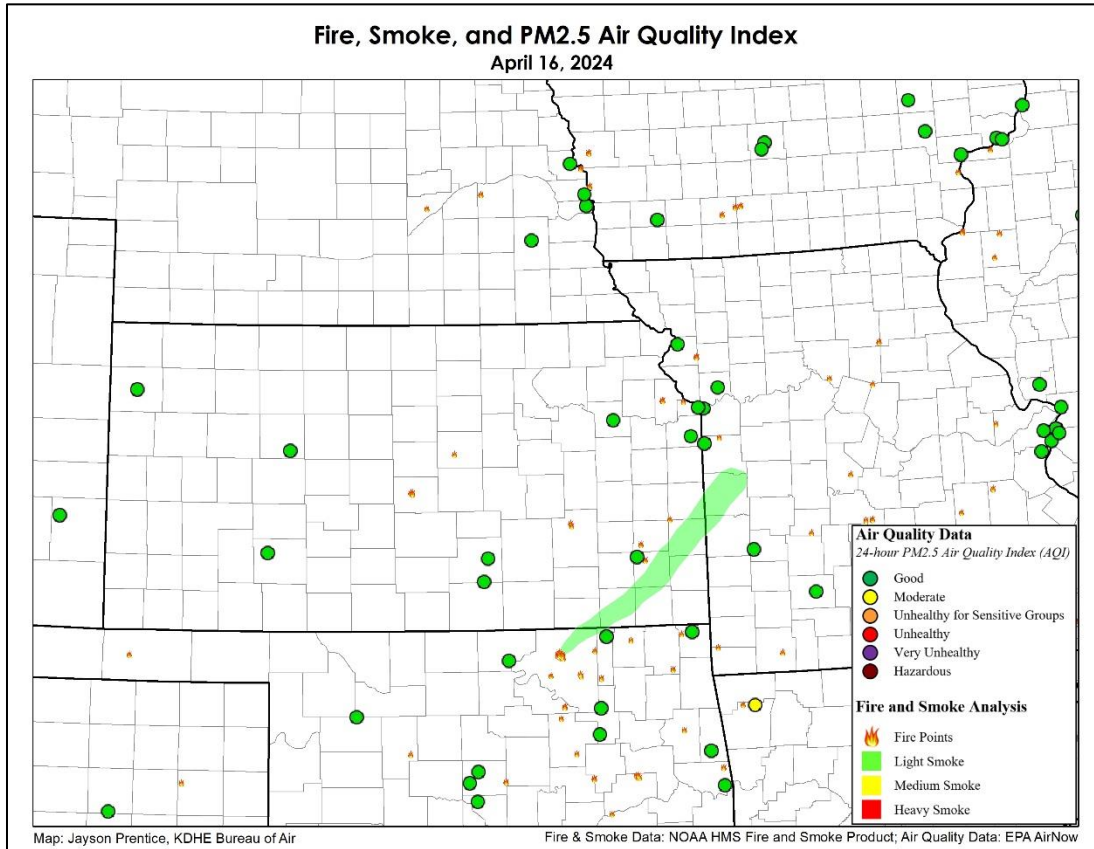
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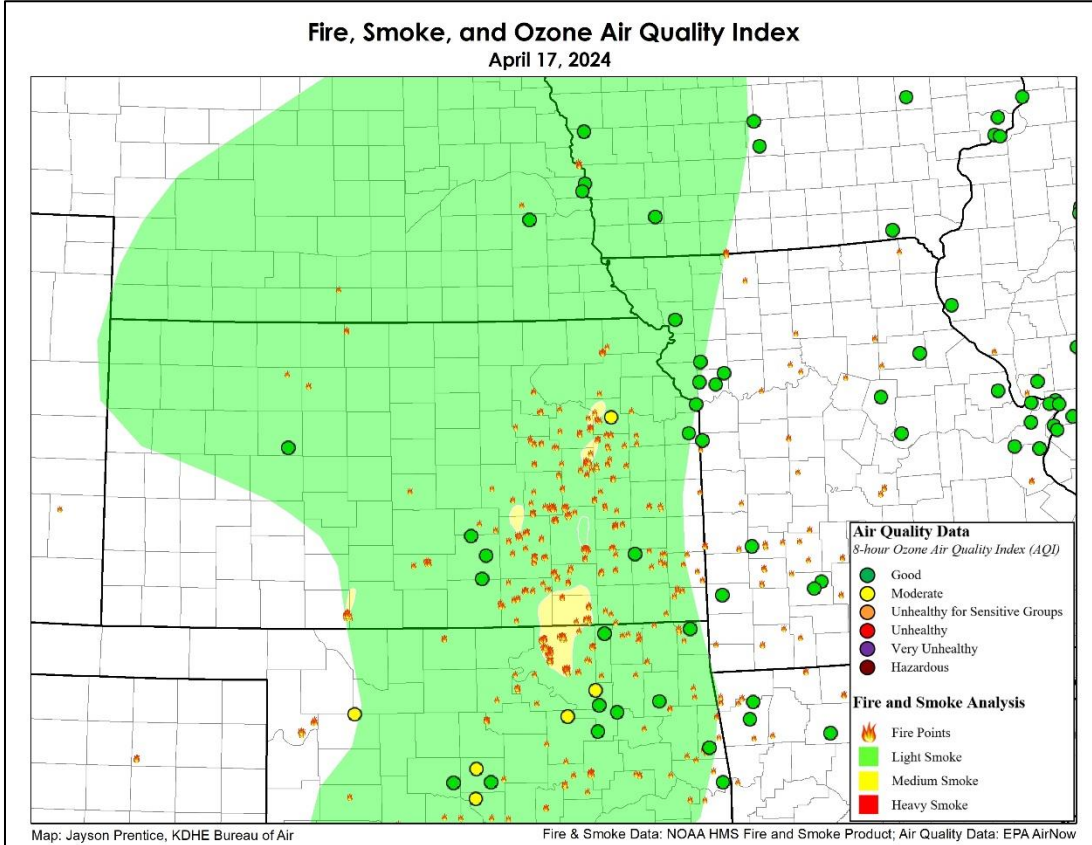
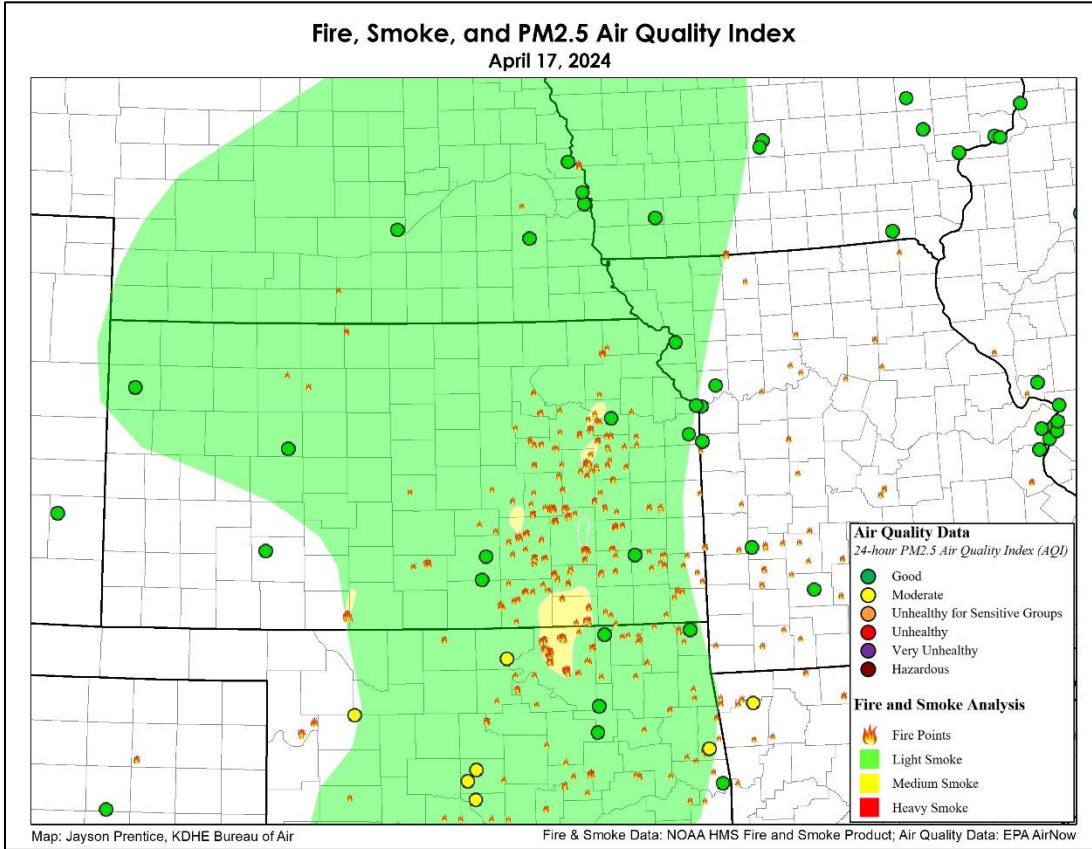
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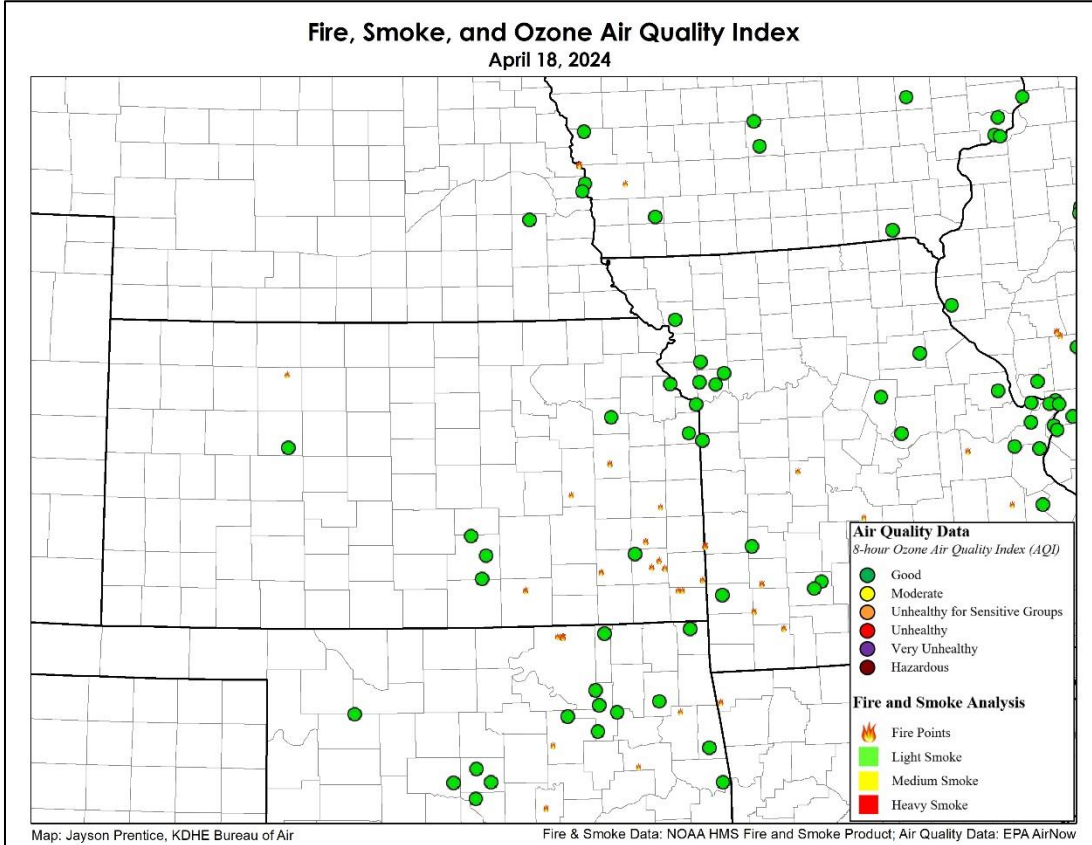
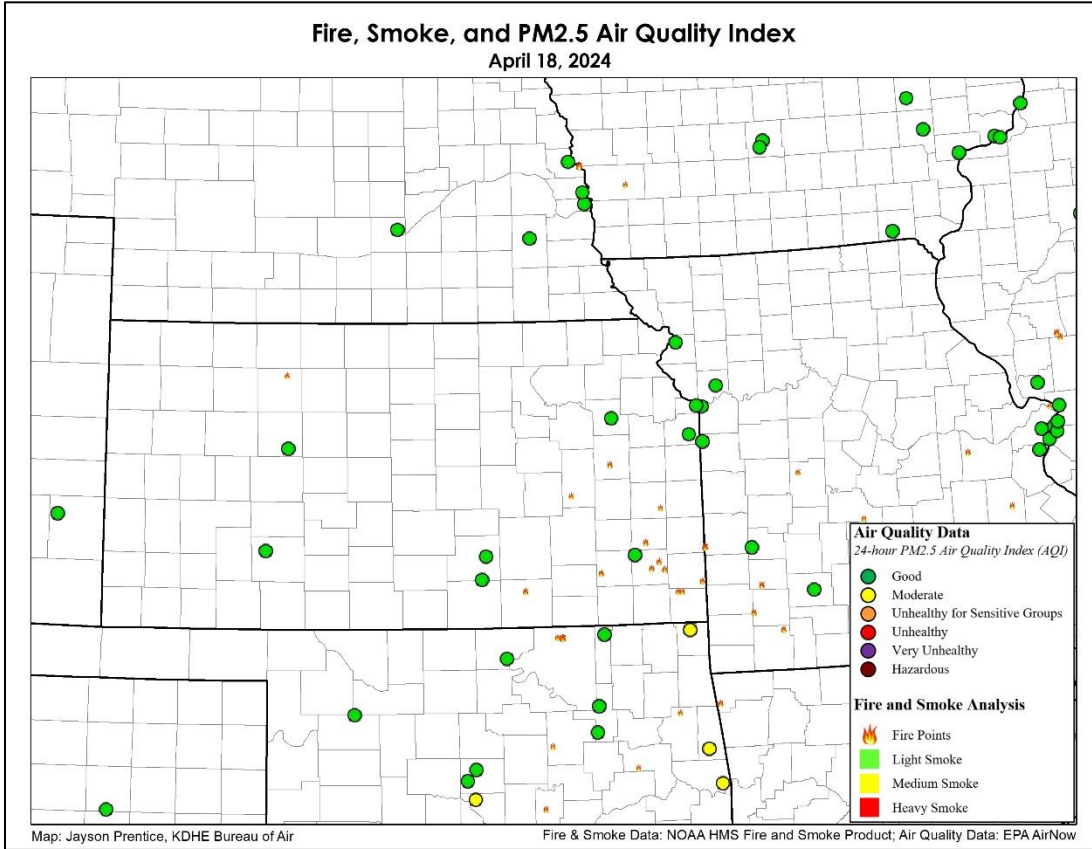
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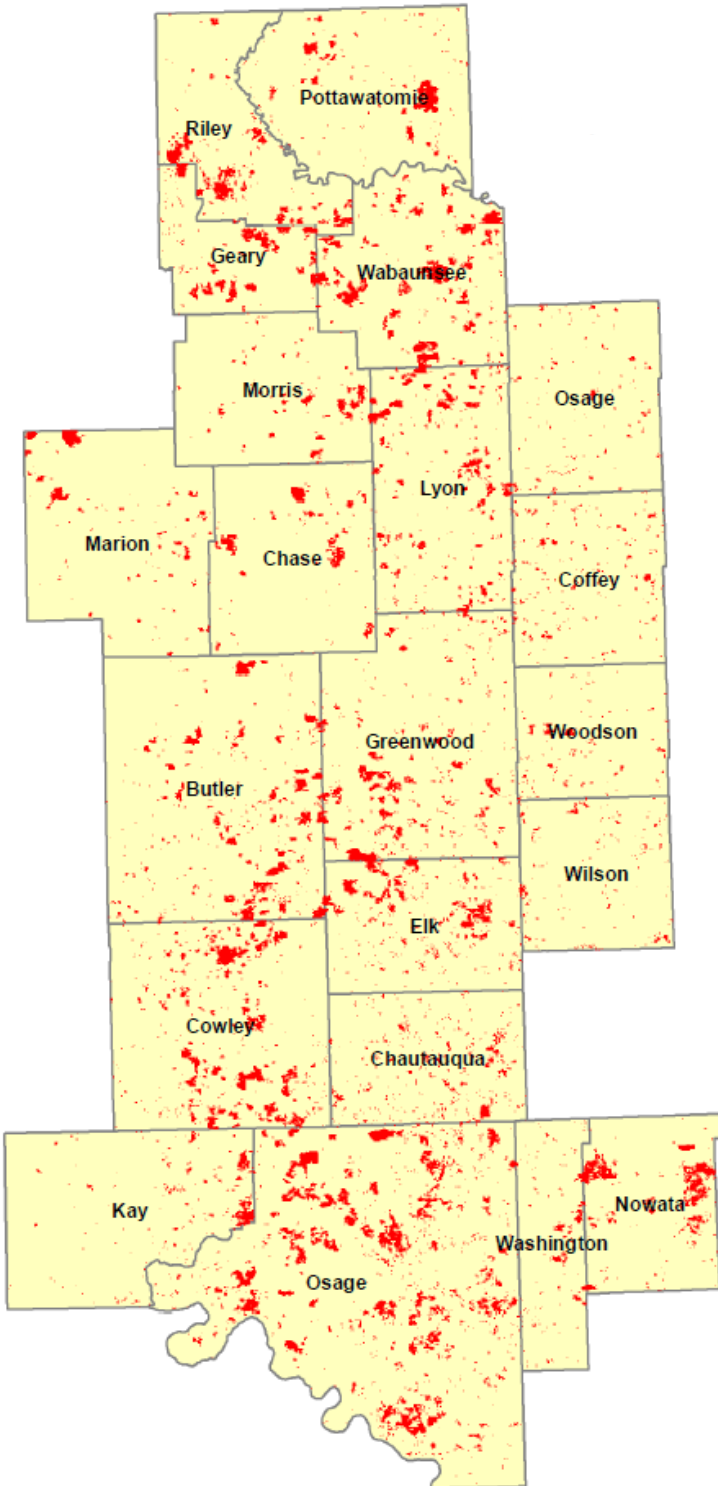


Flint Hills Wildland Fire Update





Flint Hills Acreage Burned (February 14 – April 13, 2024)



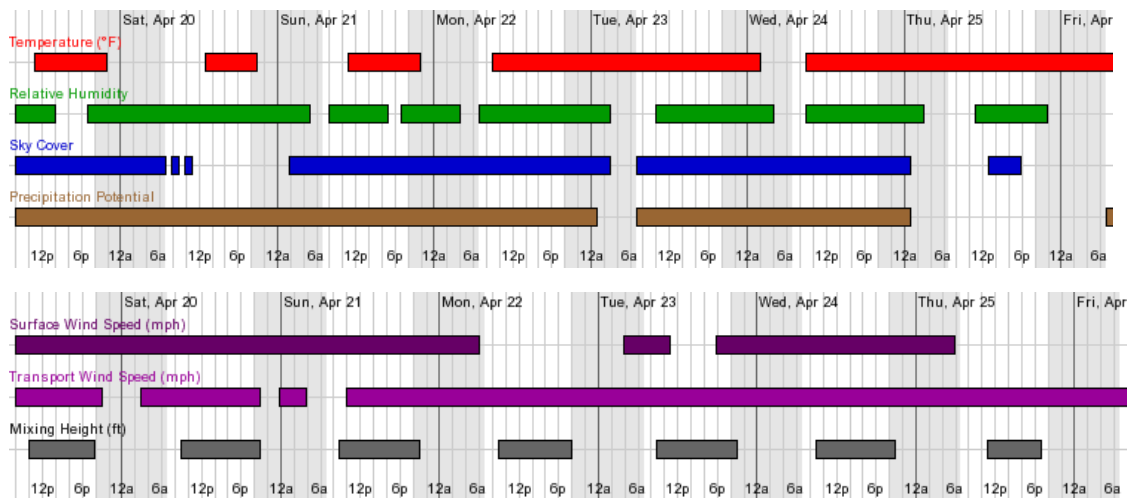
<u>Counties</u>	<u>Acres Burned</u>	
Butler	96,018	
Chase	86,674	
Chautauqua	26,765	
Coffey	19,614	
Cowley	110,366	
Elk	42,719	
Geary	36,680	
Greenwood	74,643	
Lyon	74,210	
Marion	28,062	
Morris	69,144	
Osage (KS)	23,429	
Pottawatomie	42,997	
Riley	33,576	*
Wabaunsee	108,342	
Wilson	10,410	
Woodson	21,977	
Nowata (OK)	43,785	
Osage (OK)	214,862	
Washington (OK)	28,232	
Kay (OK)	30,008	
Total	1,222,513	
* Denotes county was partly or completely covered by clouds during latest analysis.		



Upcoming Look at Fires and Smoke

Despite somewhat low relative humidity values this afternoon anticipate the opportunity for prescribed fires today (Apr 19) provided light winds and sunny skies. Cloudy and cool conditions are forecast for Saturday (Apr 20) along with slight chance of precipitation in the southern Flint Hills, all of which will limit ideal prescribed burning conditions. Sunday (Apr 21) offers another afternoon with good opportunity given light winds and clear skies. Breezy conditions are forecast for Monday (Apr 22) ahead of the next chance for precipitation with a cold front providing breezy northerly winds on Tuesday (Apr 23). Opportunity may exist on Wednesday (Apr 24) for prescribed fire although winds should be on the increase throughout the day ahead of our next storm system which arrives on Thursday (Apr 25) with widespread precipitation chances.

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. Forecast valid: 8am April 19, 2024.

For more information, contact:

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