

Flint Hills Wildland Fire Update

March 18, 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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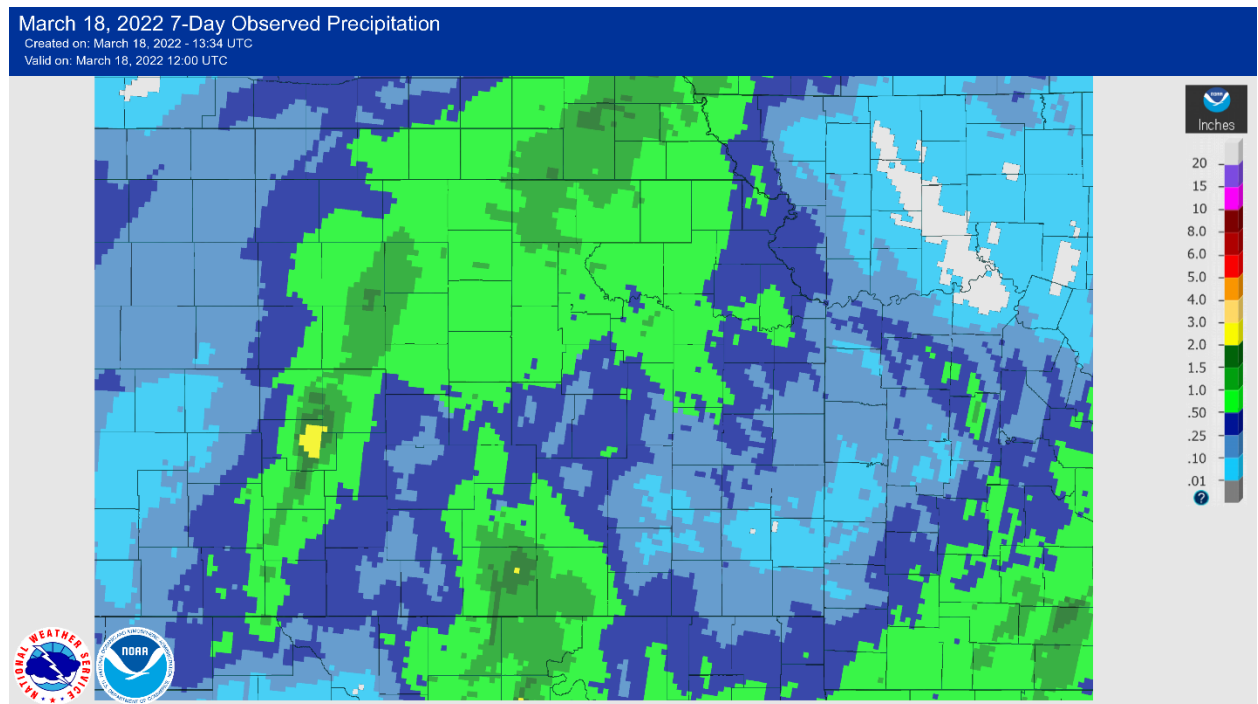
This website was developed as part of the development of the Kansas Flint Hills Smoke Management Plan. Kansas State University hosts the webpage and it includes important information for ranchers and others who might be interested in the Flint Hills. It provides training, regulations, policies, publications, 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

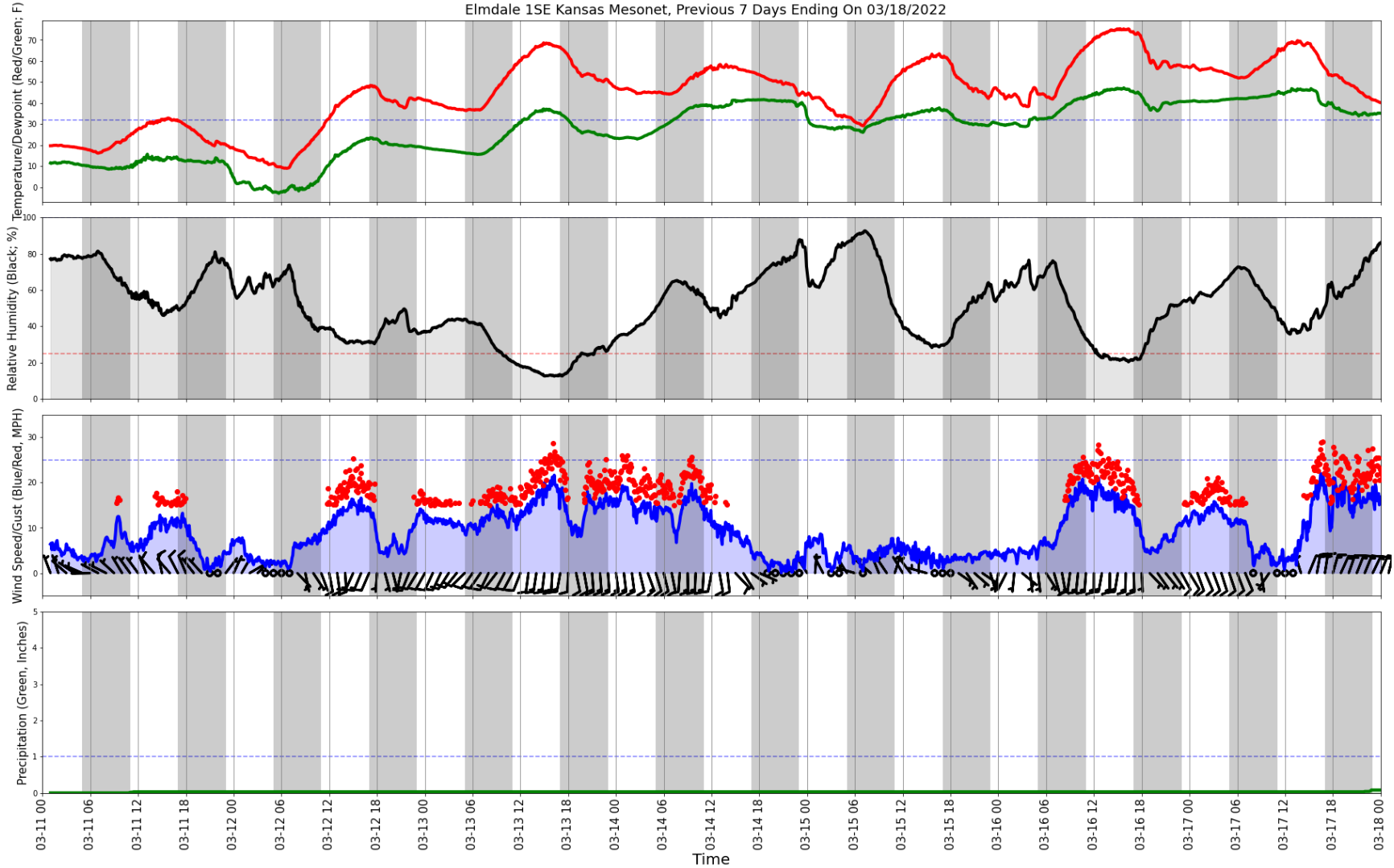
Precipitation primarily in the form of snowfall occurred early Friday (March 11) for parts of the Flint Hills with below normal temperatures. Seasonably cool conditions continued Saturday (March 12) before temperatures soared back into the 60s to 80s on Sunday (March 13) with the aid of strong south winds. Monday (March 14) saw a weak cold front bring in cloud cover and light and variables winds. Tuesday (March 15) saw seasonable temperatures, light winds, and sunny skies before strong south winds and dry conditions (low relative humidity) returned on Wednesday (March 16) which led to high to very high fire danger. The next storm system began impacting the weather on Thursday (March 17) with winds turning to the north, becoming gusty, and light precipitation arriving by the evening. Precipitation totals over the past week ranged from a mere tenth of an inch to nearly two inches with snow, rain, and thunderstorms all observed in the past week.

Precipitation



NOAA/NWS Observed Total Precipitation for Mar. 11-17, 2022.

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7-day (Mar. 11-17, 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 11-17, 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.

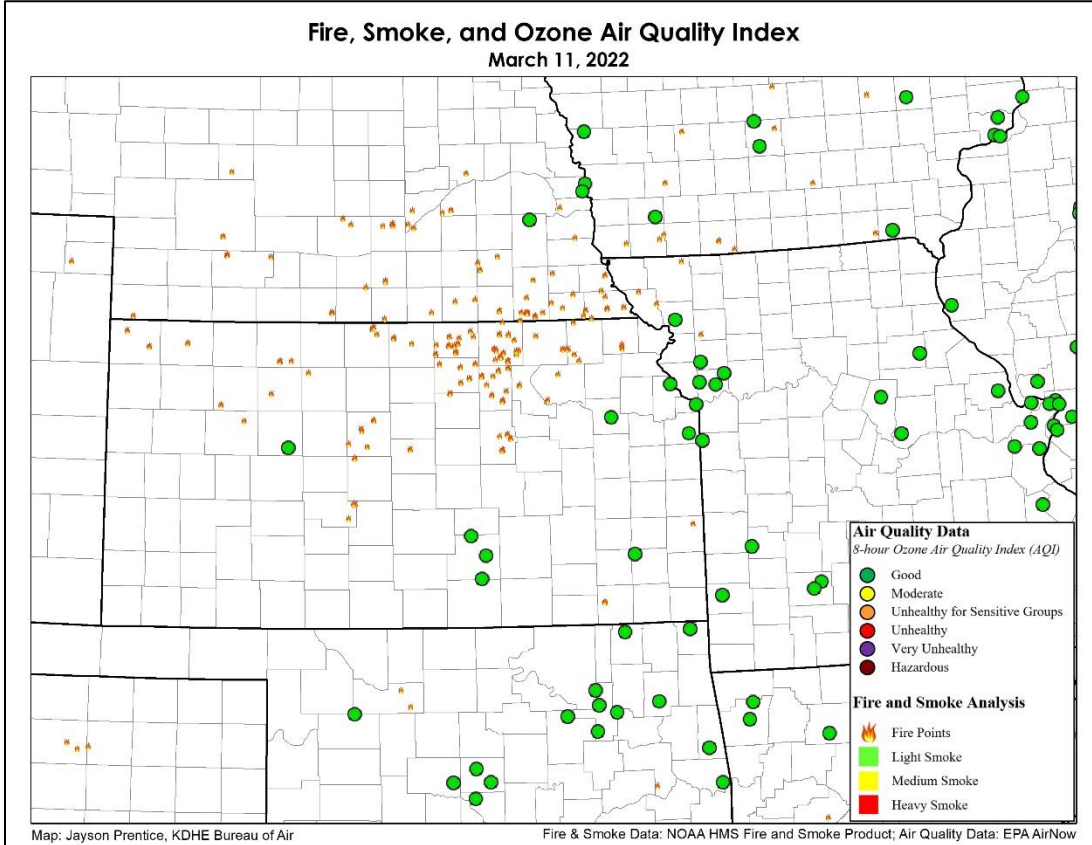
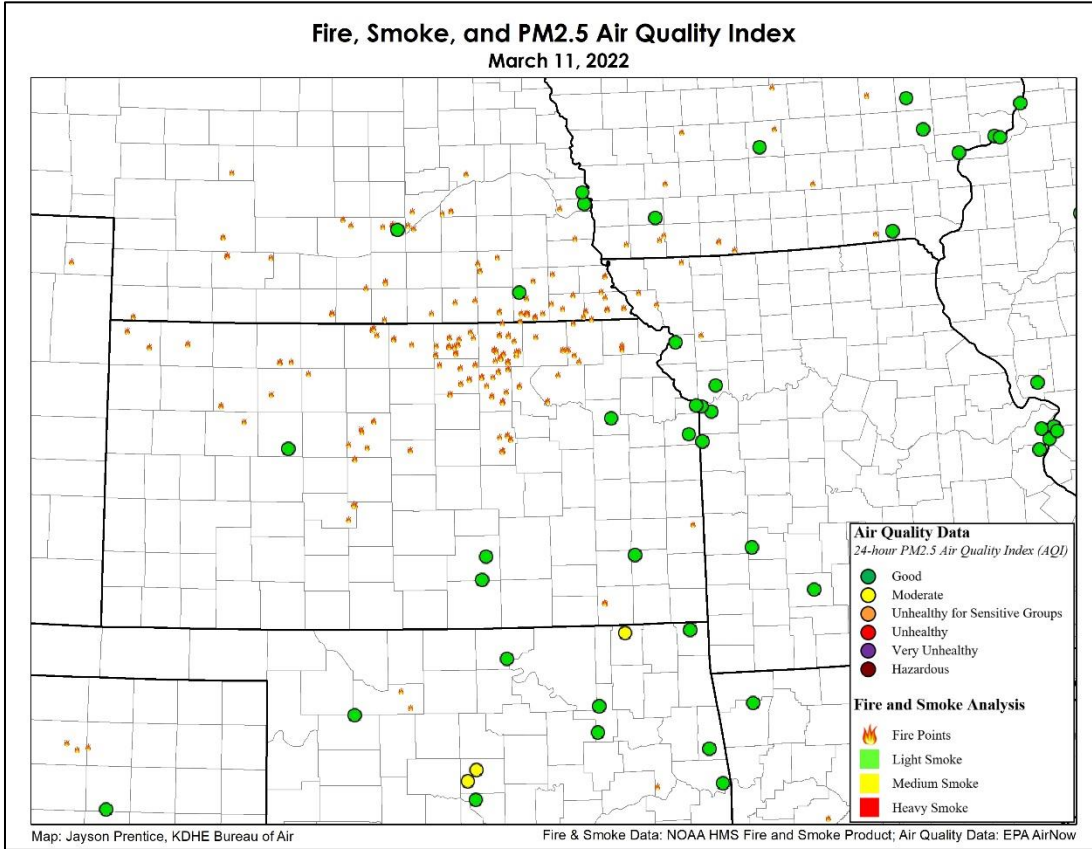
PM_{2.5}: Preliminary data indicates no exceedances of the NAAQS daily 24-hour average maximum of 35 µg/m³.

Snow cover for much of the Flint Hills limited any burning on Friday (March 11) and Saturday (March 12) to pile burns, but the snow quickly melted away and provided some limited burning on Sunday (March 13). Breezy conditions on Monday (March 14) limited prescribed burning, although cloudy conditions likely shielded some burn activity from being analyzed. Warm temperatures and reasonable relative humidity values provided the opportunity for more widespread prescribed burning on Tuesday (March 15) with some prescribed burning continuing Wednesday (March 16) east of the Flint Hills while much of the Flint Hills saw high fire danger and subsequent burn bans for the day. Some prescribed fire activity continued Thursday (March 17) ahead of the next round of precipitation, especially east of the Flint Hills; Cloud cover likely inhibited any fires from being detected for most of the Flint Hills.

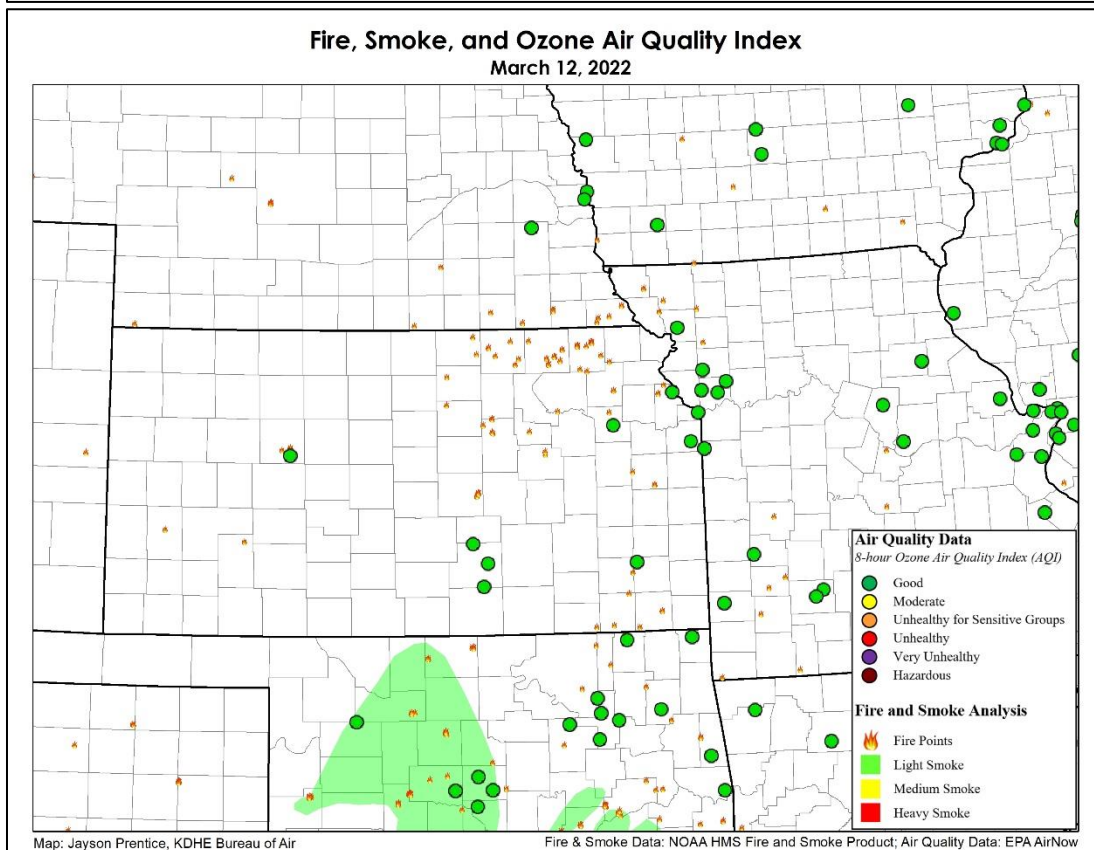
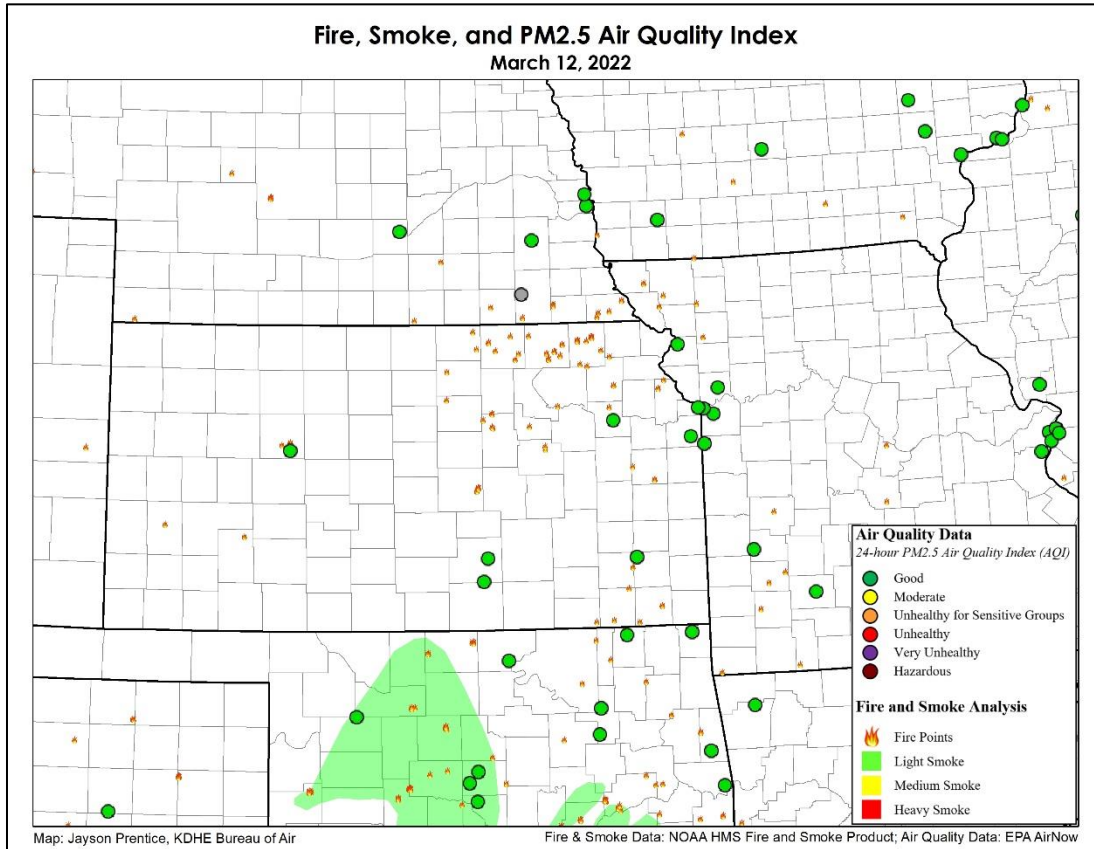
Air quality impacts were seen on Tuesday and Wednesday owing to more widespread burning. Light and variable winds on Tuesday led to localized impacts through the evening before stronger south-southwest winds pushed smoke impacts across eastern Kansas and Oklahoma, and through parts of Nebraska, Iowa, and Missouri. Smoke was even analyzed reaching into the Great Lakes on Wednesday due to the regional fire activity. Some continued air quality impacts were observed on Thursday with regional fire and smoke contributing to Moderate daily Air Quality Index (AQI) values at multiple monitors.

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.

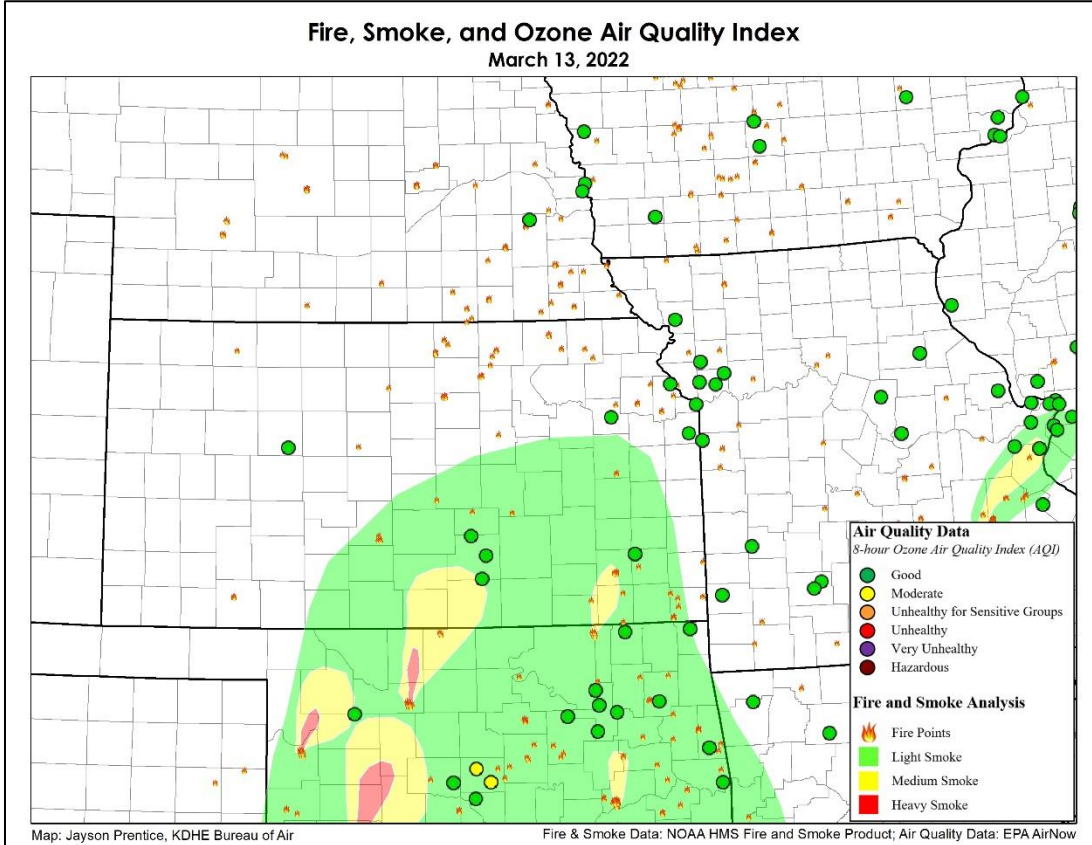
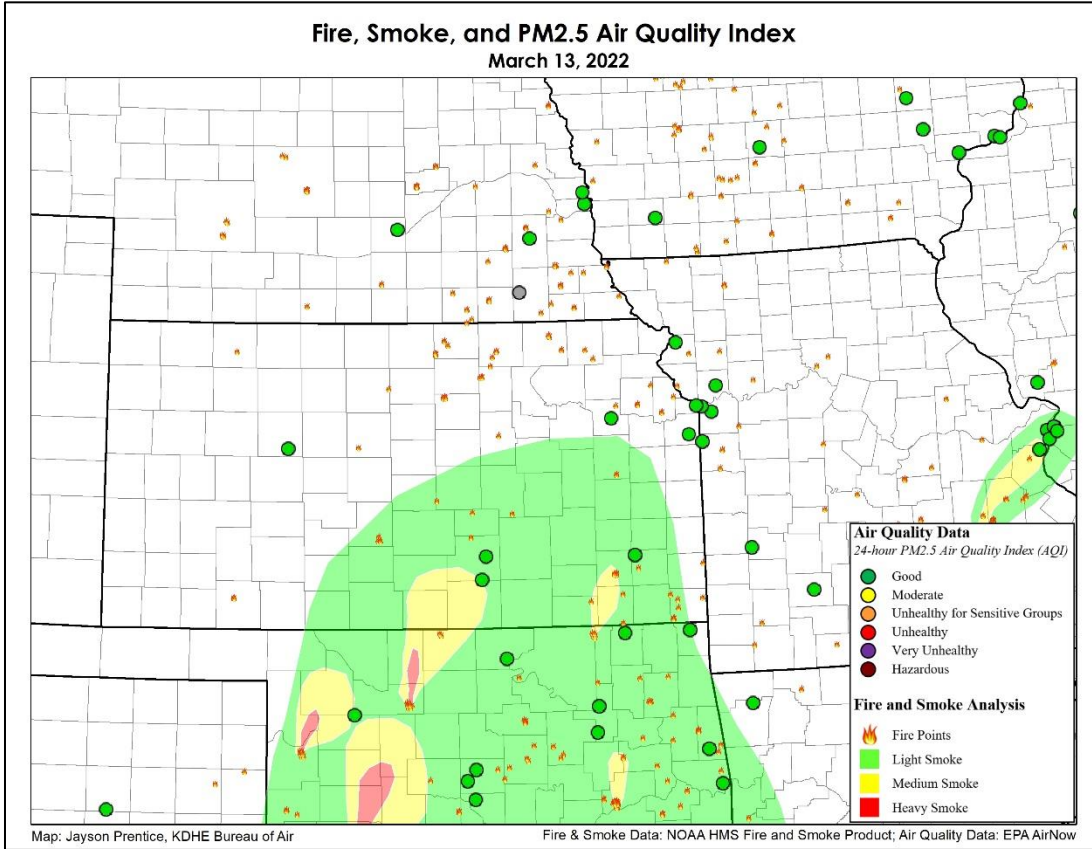
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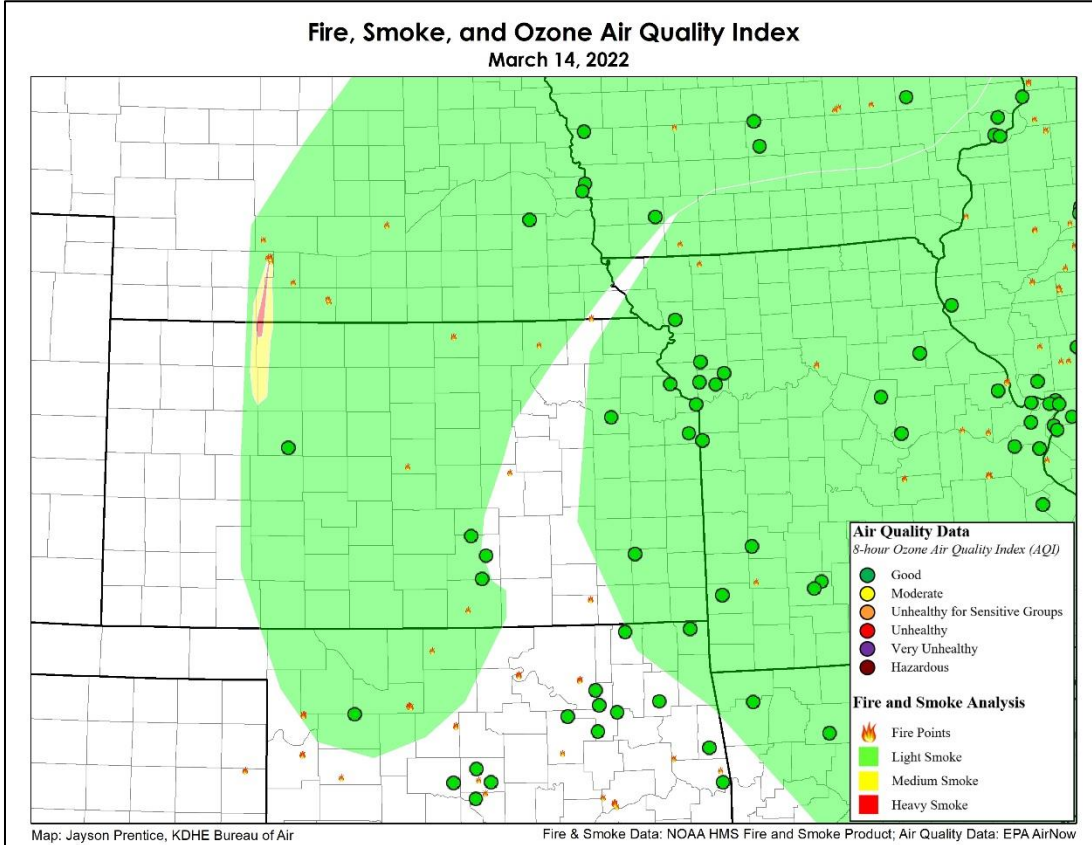
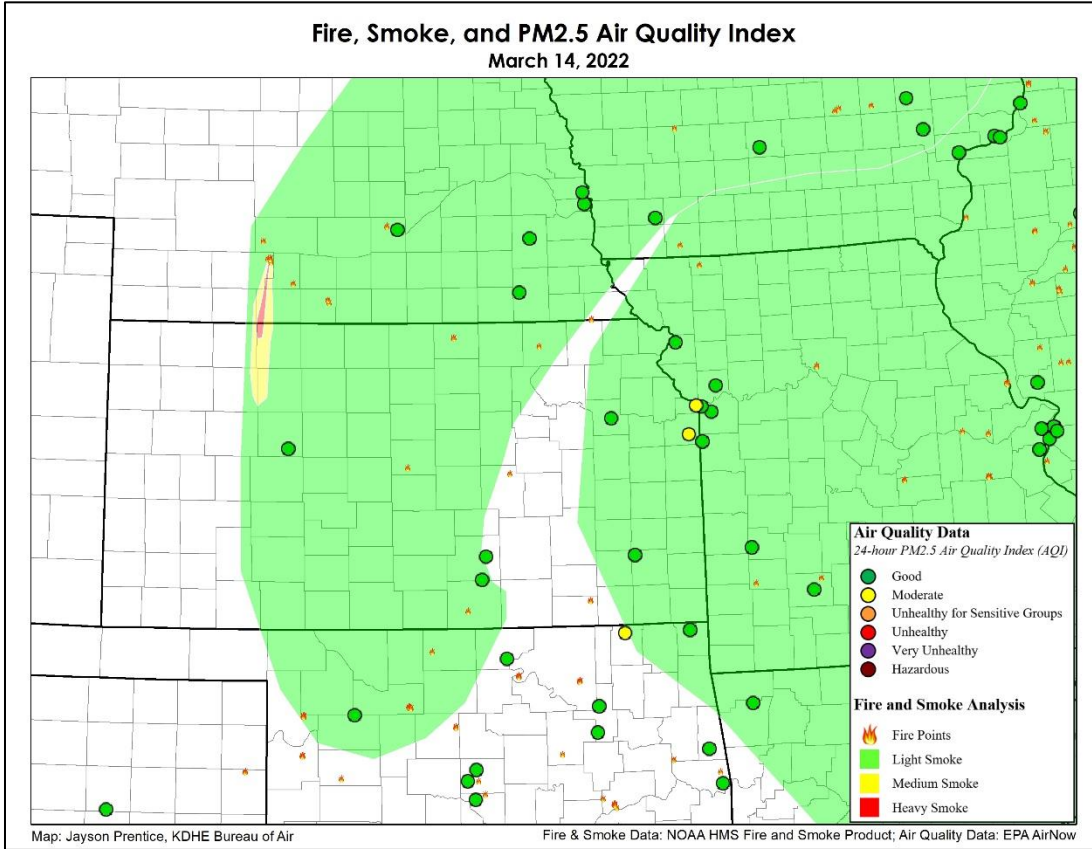
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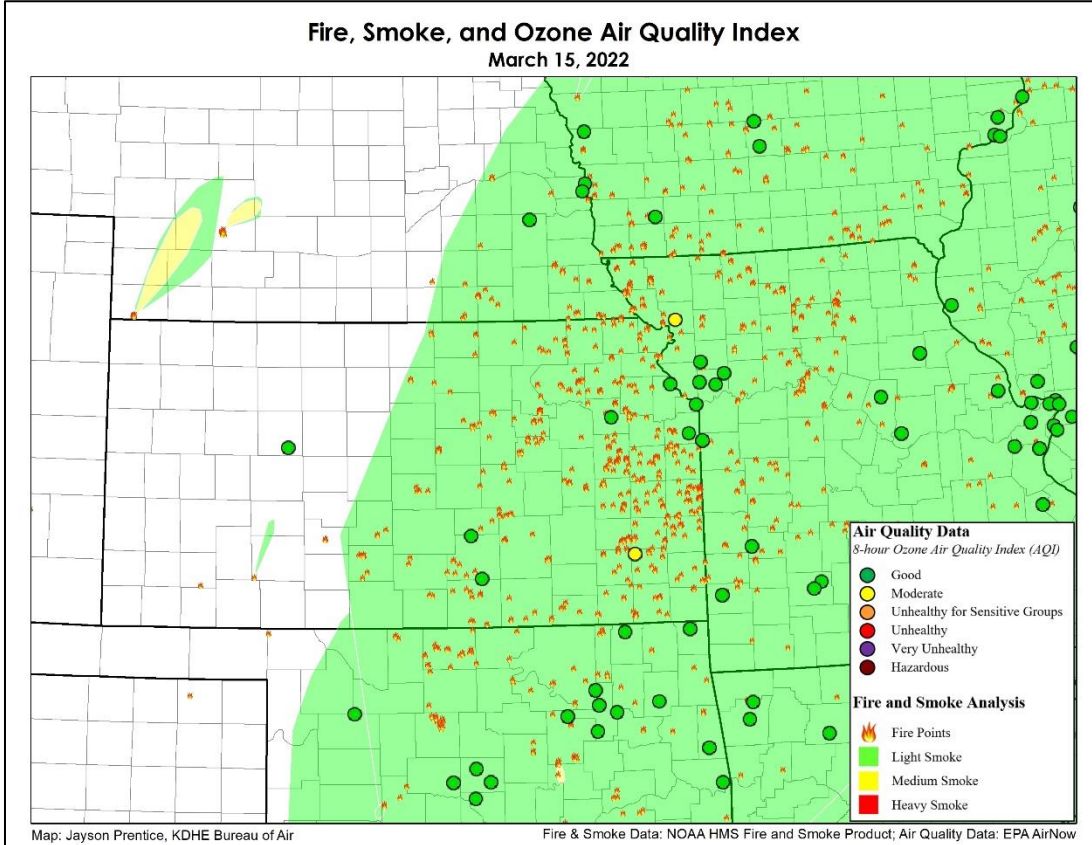
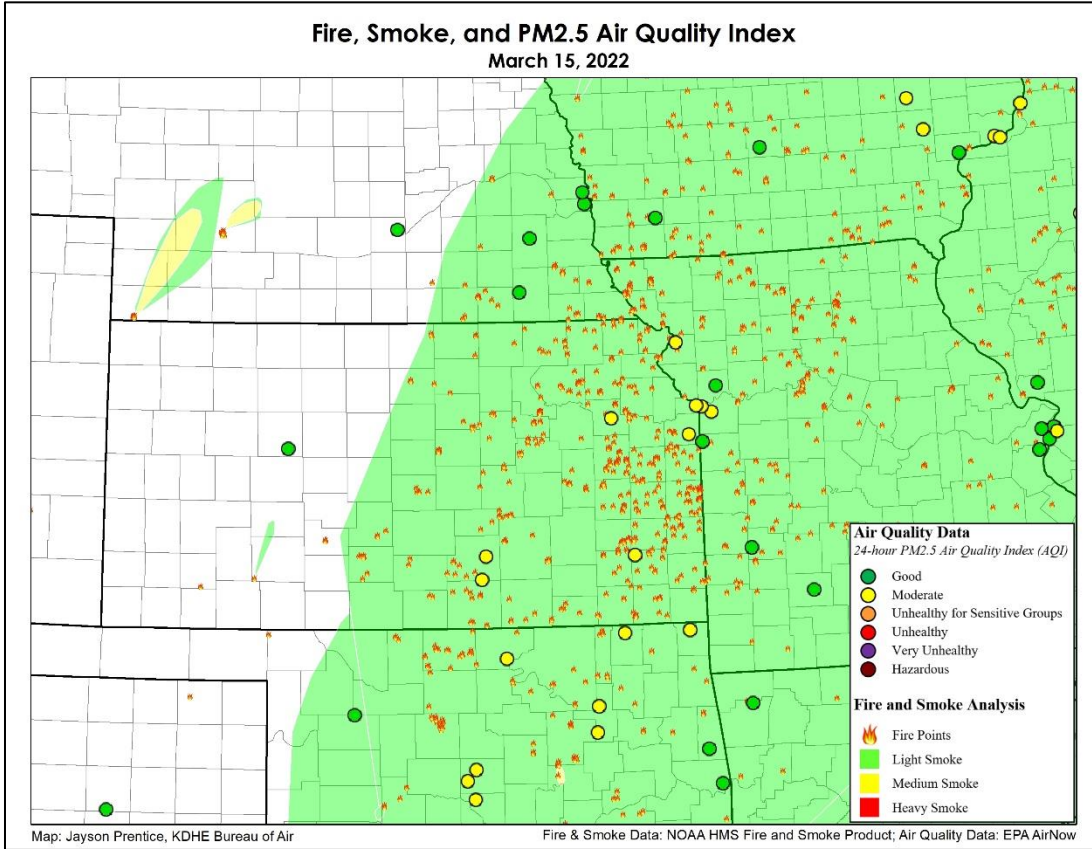
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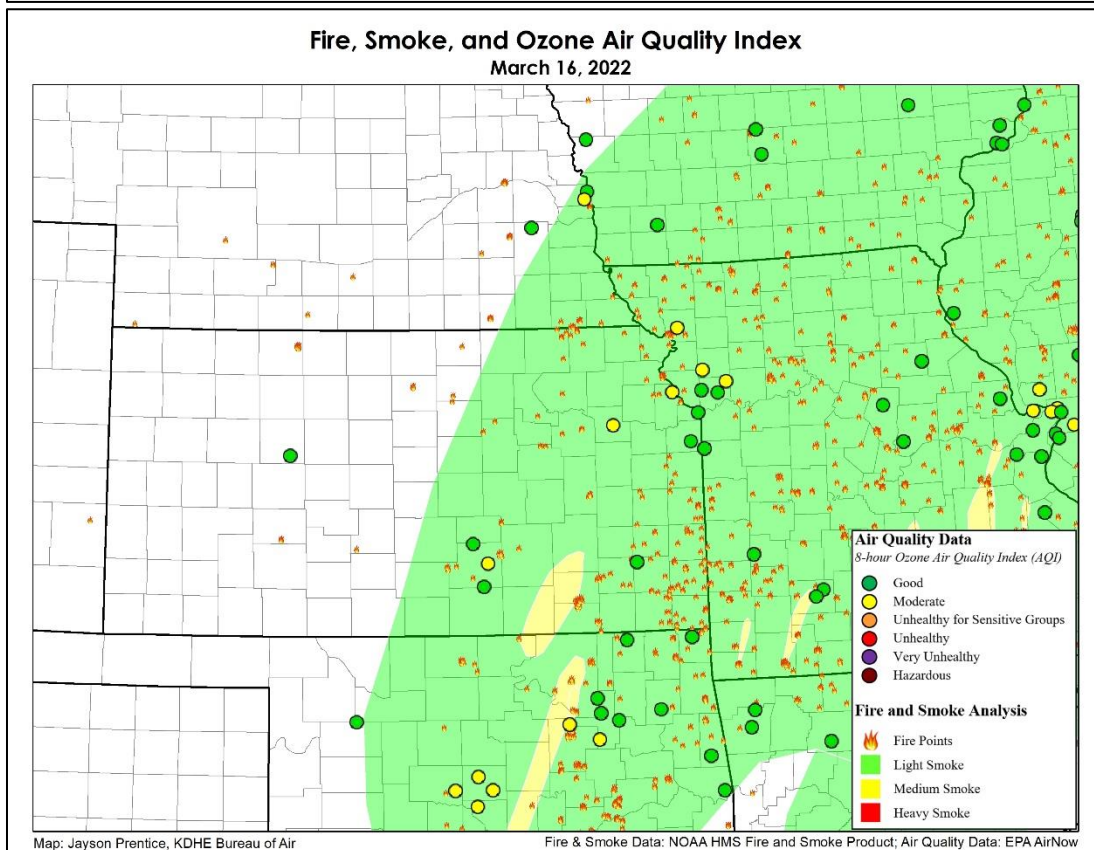
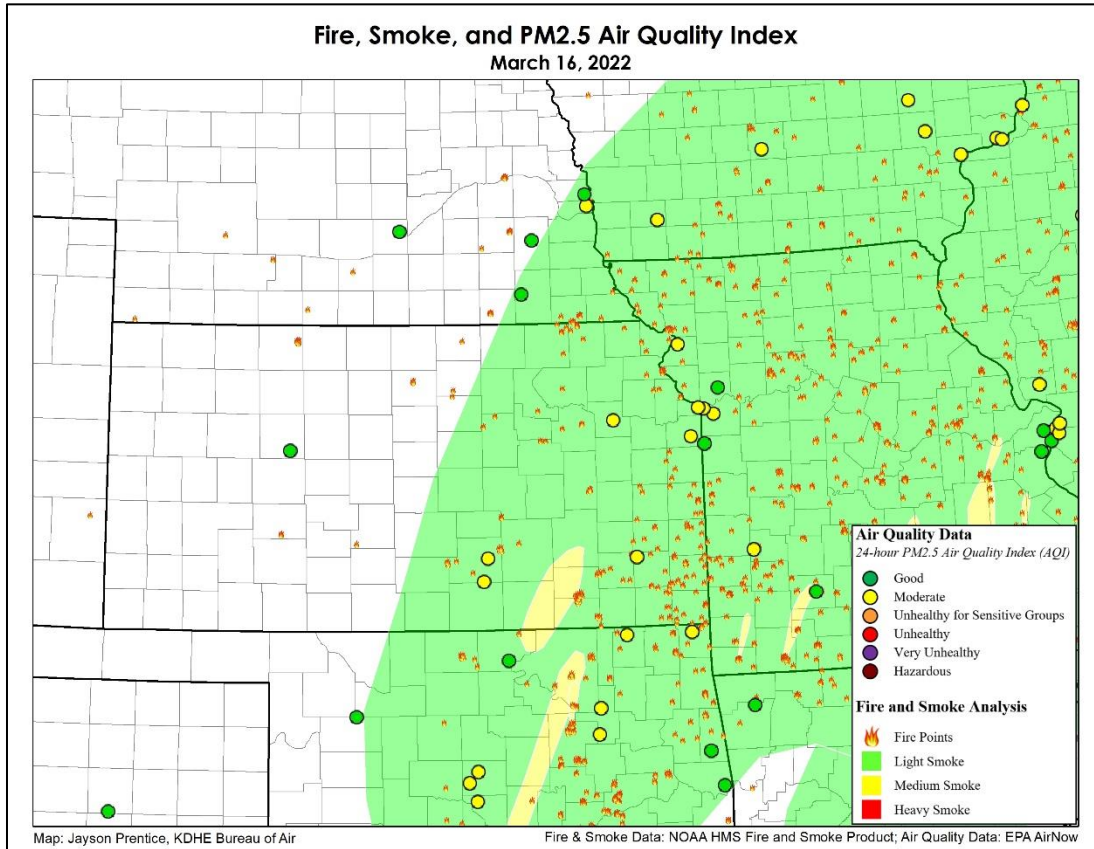
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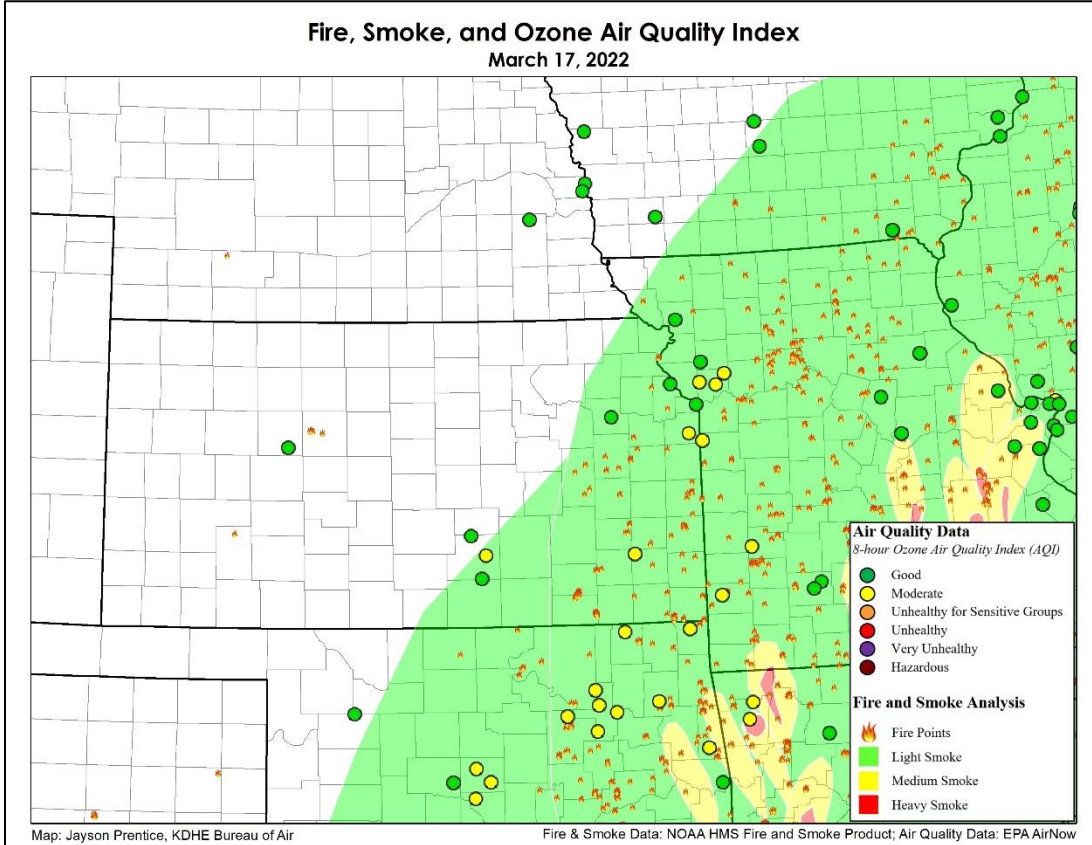
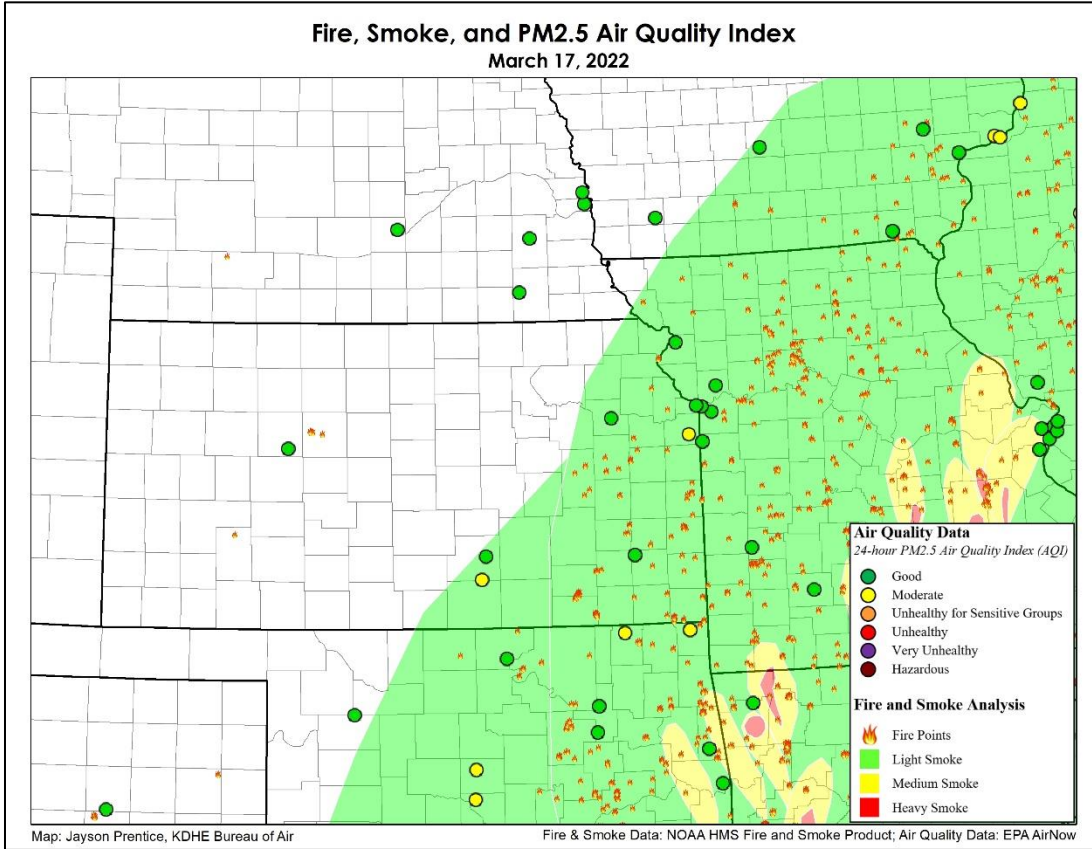
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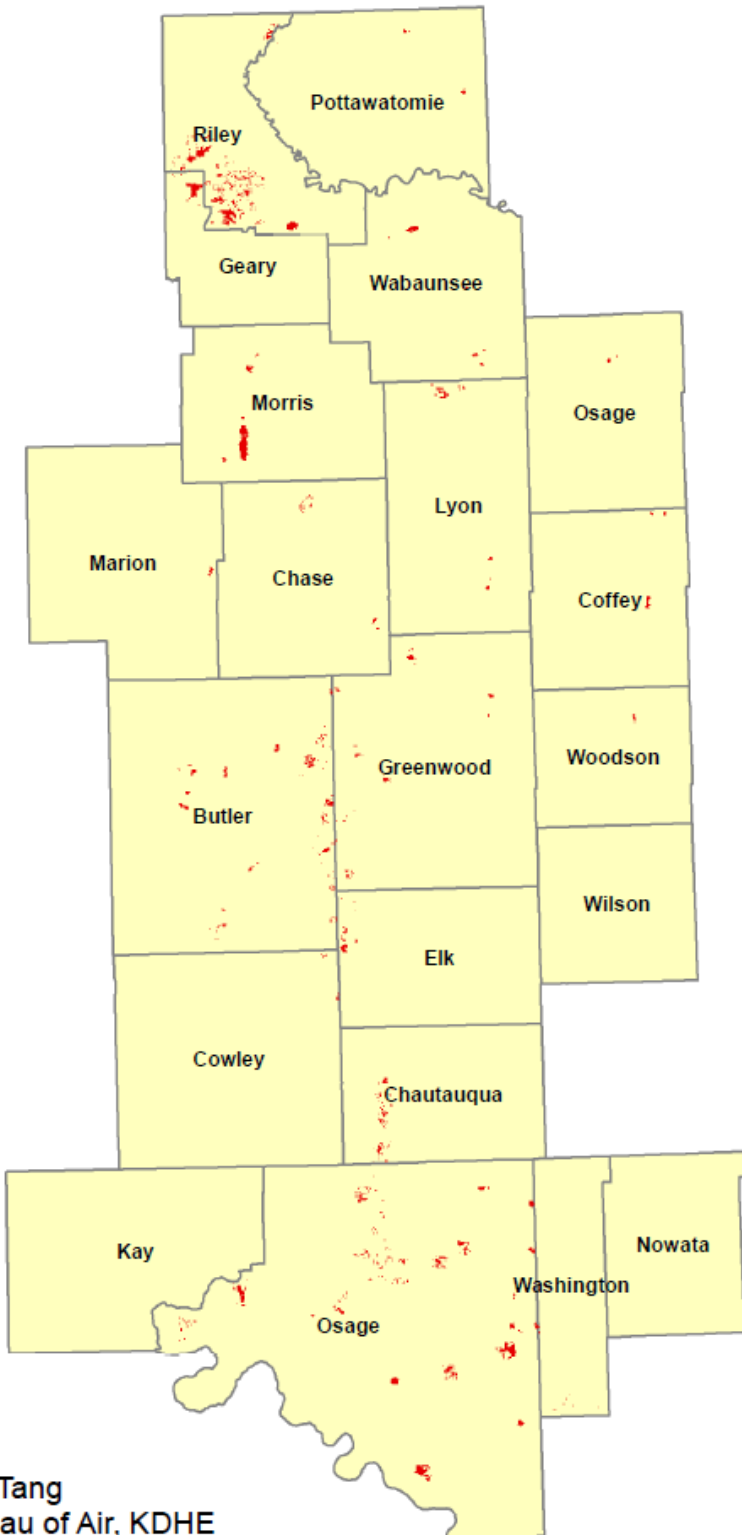


Flint Hills Wildland Fire Update





Flint Hills Acreage Burned (Feb. 14 – Mar. 13, 2022)



<u>Counties</u>	<u>Acres Burned</u>	
Butler	5,637	
Chase	649	
Chautauqua	2,209	
Coffey	849	
Cowley	278	
Elk	1,143	
Geary	1,915	
Greenwood	2,054	
Lyon	1,529	
Marion	340	
Morris	4,232	
Osage (KS)	247	*
Pottawatomie	355	*
Riley	10,842	*
Wabaunsee	1,220	*
Wilson	0	
Woodson	216	
Nowata (OK)	0	
Osage (OK)	13,777	
Washington (OK)	247	
Kay (OK)	0	
Total	47,739	
* Denotes county was partly or completely covered by clouds during latest analysis.		

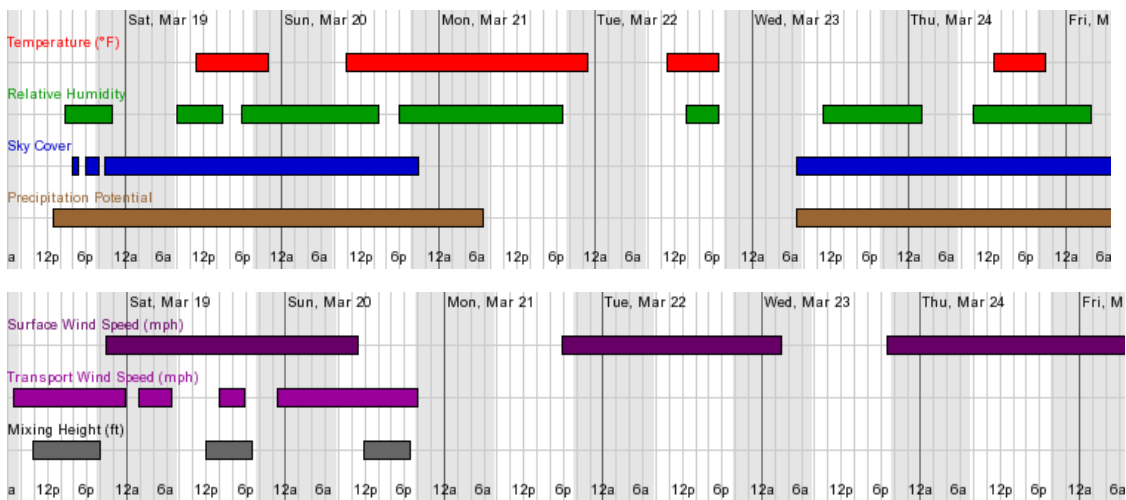
Yao Tang
Bureau of Air, KDHE



Upcoming Look at Fires and Smoke

Precipitation is expected to continue for most of the Flint Hills this morning into this afternoon before dry conditions return for the remainder of the weekend. Temperatures quickly warm-up but expect relative humidity values to drop to near 30-percent or lower for both Saturday and Sunday afternoon. Wind speeds also increase for Sunday and Monday with breezy/windy conditions expected. Another good potential for precipitation also arrives for Monday and continue through Tuesday. Wednesday appears to be on the chilly side with highs struggling to even reach 50 degrees before warming somewhat for Thursday. Overall, the potential for prescribed burning looks limited for the next week with perhaps some opportunity existing for Saturday and Sunday, and again by Thursday.

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 18, 2022.

For more information, contact:

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