

Flint Hills Wildland Fire Update

April 15, 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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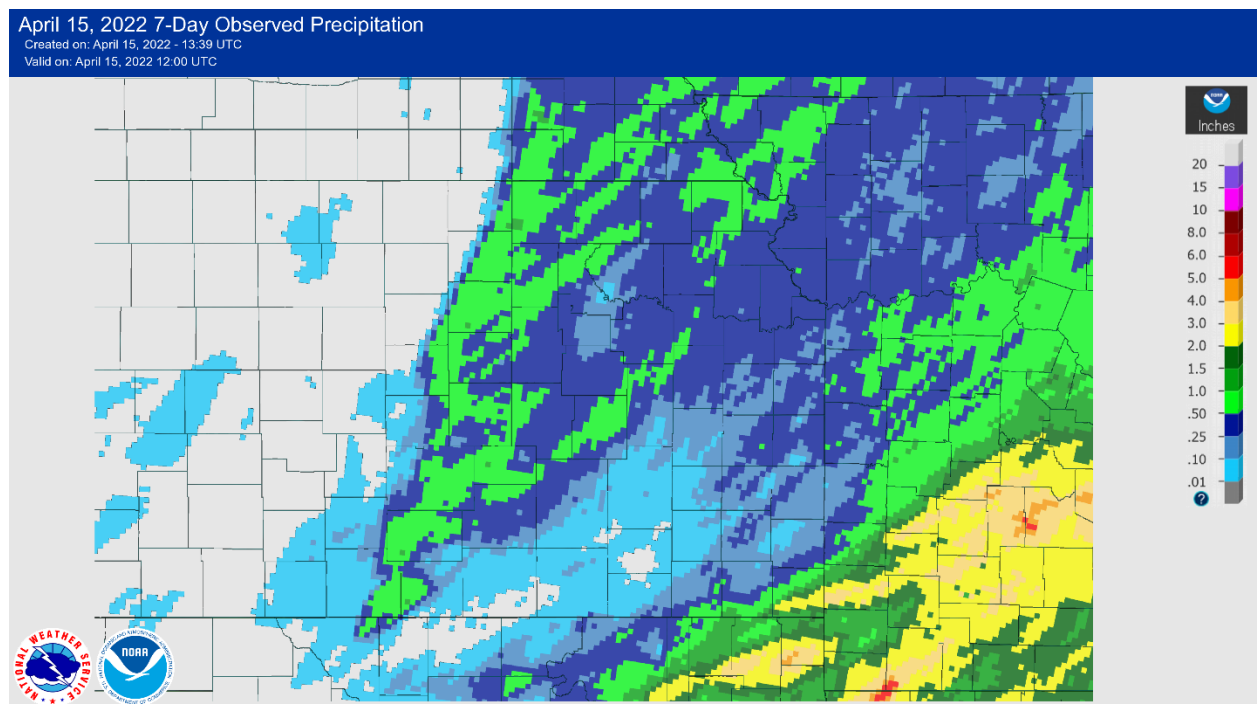
This website was developed as part of the development of the Kansas Flint Hills Smoke Management Plan. Kansas State University hosts the webpage and it includes important information for ranchers and others who might be interested in the Flint Hills. It provides training, regulations, policies, publications, 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

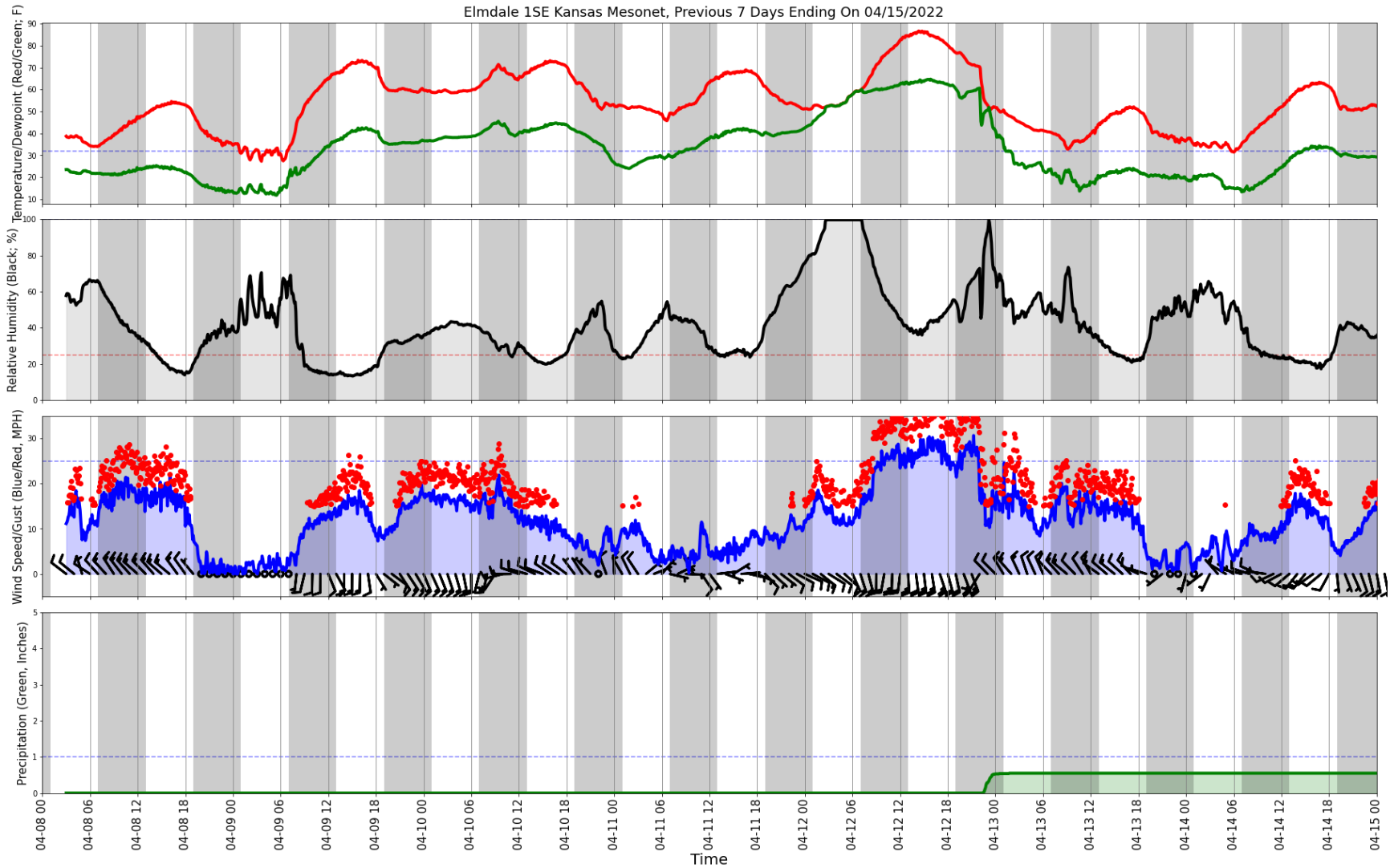
Breezy and a bit cooler than normal on Friday (April 8) under northwest winds gave way to seasonable to above normal temperatures on Saturday (April 9) as winds became southerly. The warm temperatures continued Sunday (April 10) with some gustier south winds. Temperatures and wind speeds both decreased somewhat on Monday (April 11) as the period of primarily sunny skies continued. A strong storm system brought south winds gusting in the range of 45-60 mph across the Flint Hills on Tuesday (April 12) before a strong cold front crashed through the region bringing precipitation to some. Cloudy skies and lingering precipitation, including some snowfall, occurring on Wednesday (April 13) for most of the Flint Hills while the far southern Flint Hills saw thunderstorms. Sunny skies returned on Thursday (April 14) with temperatures remaining a bit cooler than normal. Precipitation amounts over the past week varied from around a half-inch for some to a mere tenth of an inch or less across the Flint Hills with some localized higher amounts with thunderstorms.

Precipitation



NOAA/NWS Observed Total Precipitation for Apr. 8-14, 2022.

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7-day (Apr. 8-14, 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 8-14, 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.

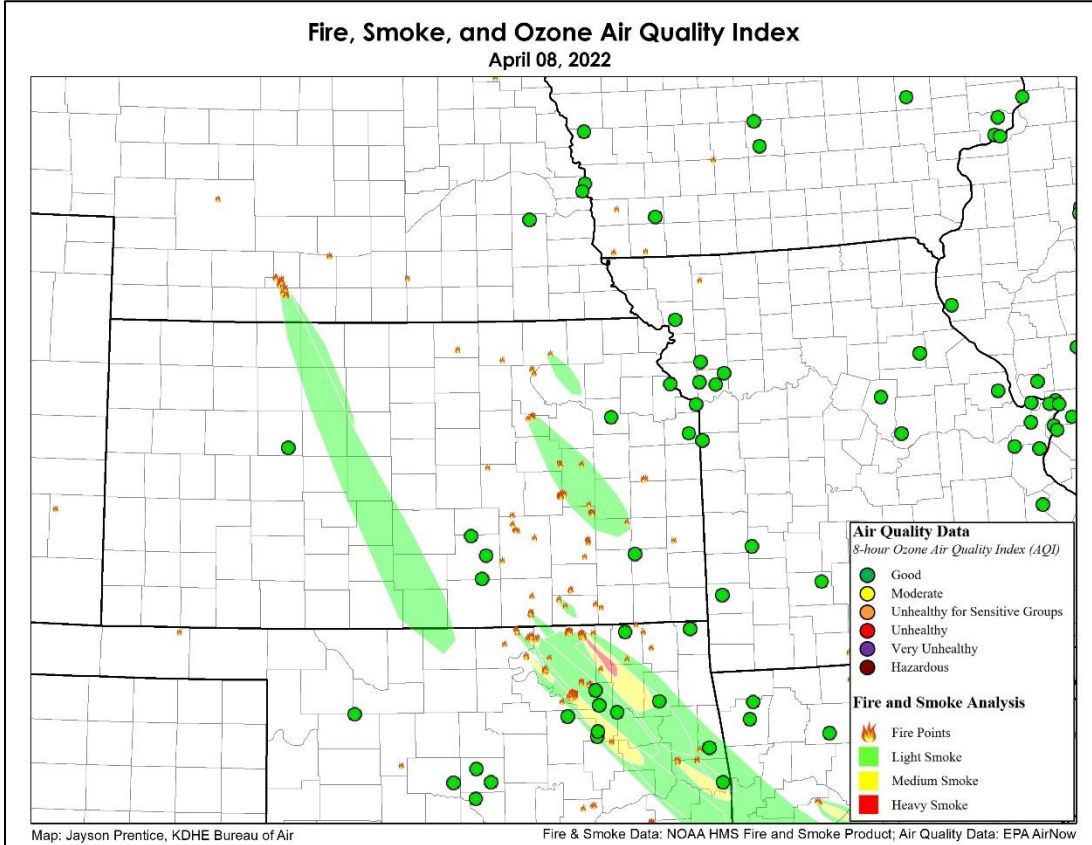
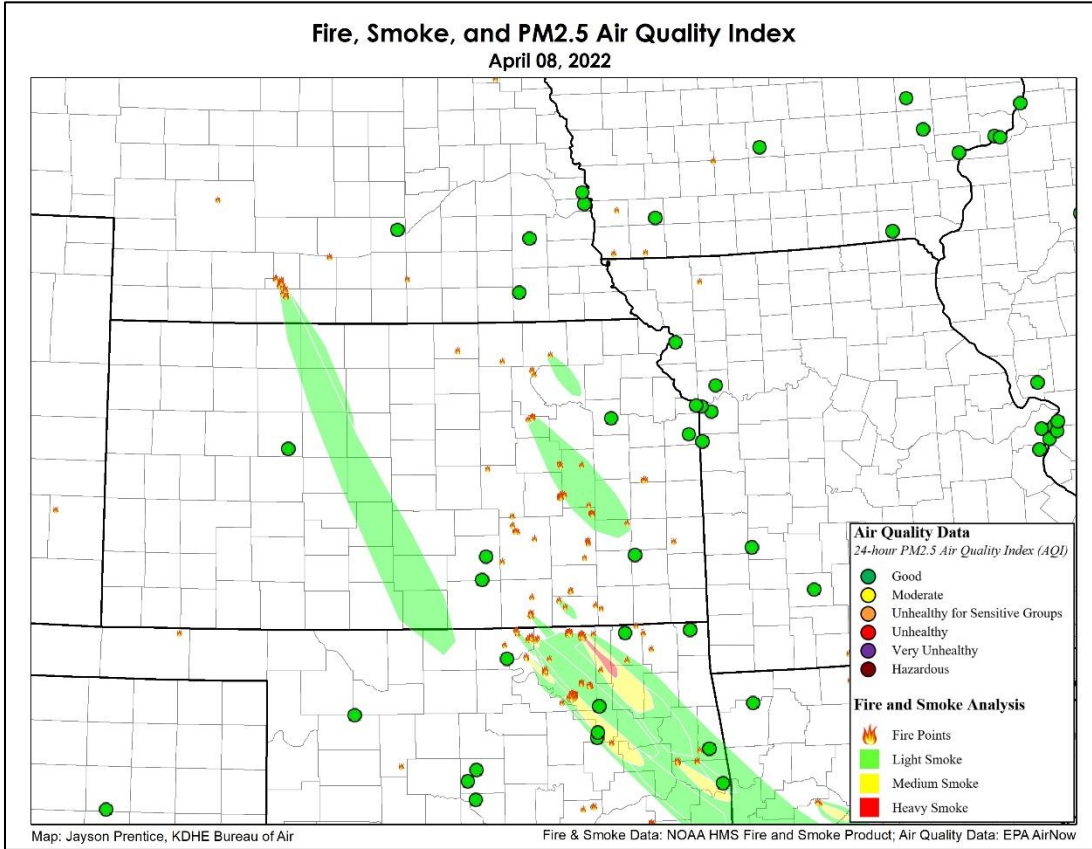
Strong northwest winds and dry conditions on Friday (April 8) led to high fire danger and limited prescribed burning for most of the region. While some prescribed burns took place in the southern Flint Hills many observed fires and smoke plumes were from wildfires. Winds eased on Saturday (April 9) under sunny skies and otherwise good fire weather which prompted widespread burning across the Flint Hills. Smoke was transported primarily northward leading to Moderate Air Quality Index (AQI) for both Fine Particulate Matter and Ozone in the region for the daily value; Hourly values though did increase and lead to short-term air quality impacts considered Unhealthy to Sensitive Groups and even Unhealthy.

Winds increased for Sunday (April 10) but prescribed burning activity continued with widespread Moderate AQI for both particulate matter and ozone continuing in the Flint Hills and nearby areas, including Kansas City. Winds were relatively light on Monday (April 11) under sunny skies and a bit more moisture, which led to another active burn day within the Flint Hills region. Air quality impacts were observed within the Flint Hills as well as parts of central Kansas and central Nebraska from late Monday into Tuesday (April 12). Very strong south winds occurred over the Flint Hills on Tuesday with a strong storm system in the region; Numerous wildfires were reported within the Flint Hills and the region. Widespread dust and general pollution were noted with Moderate AQI for many locations.

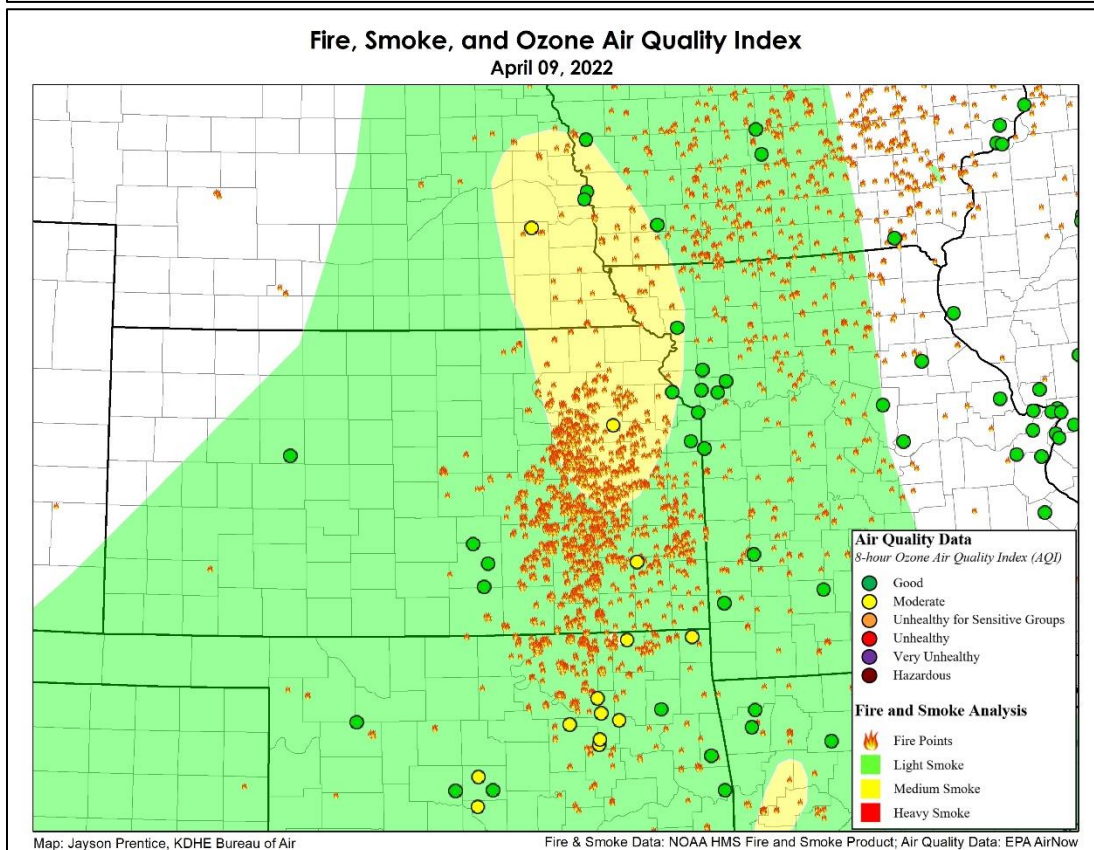
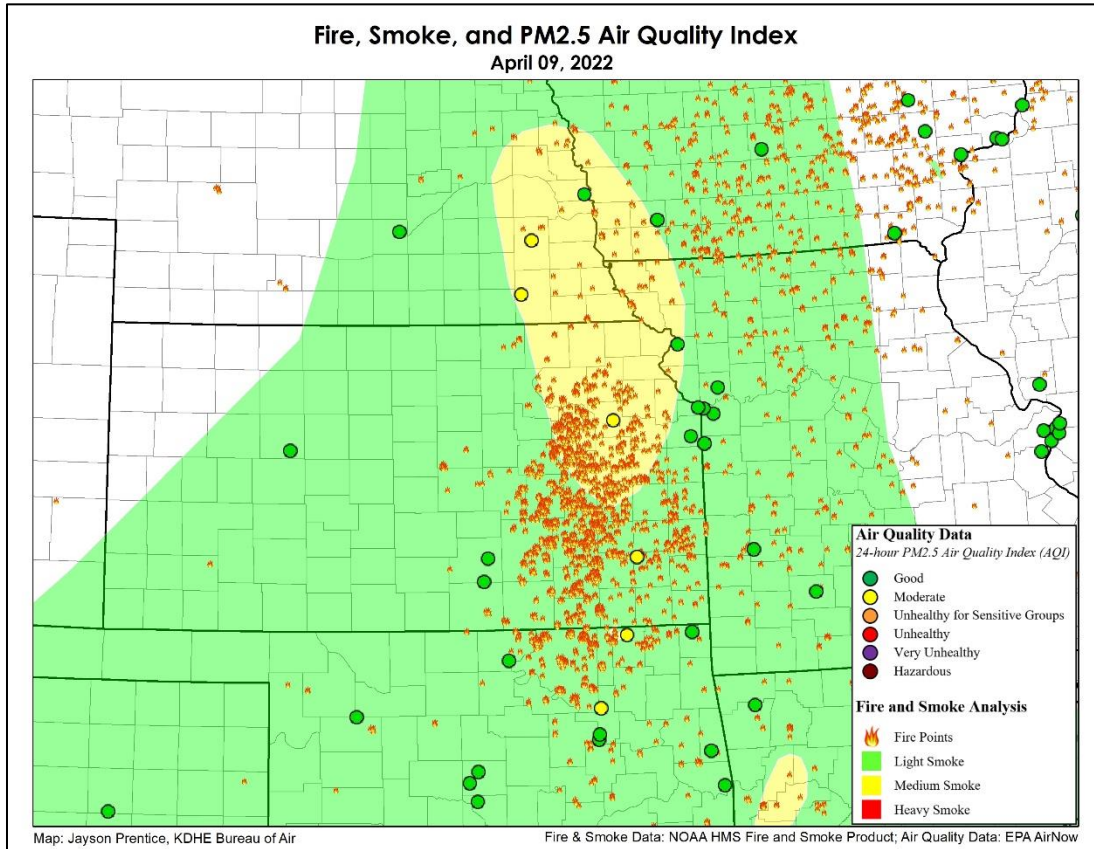
Cooler and breezy conditions limited prescribed fires on Wednesday (April 13). Winds were lighter on Thursday (April 14) and several fires were analyzed, especially in the southern Flint Hills with smoke impacts seen across parts of eastern Kansas into western Missouri including the Kansas City Metro.

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.

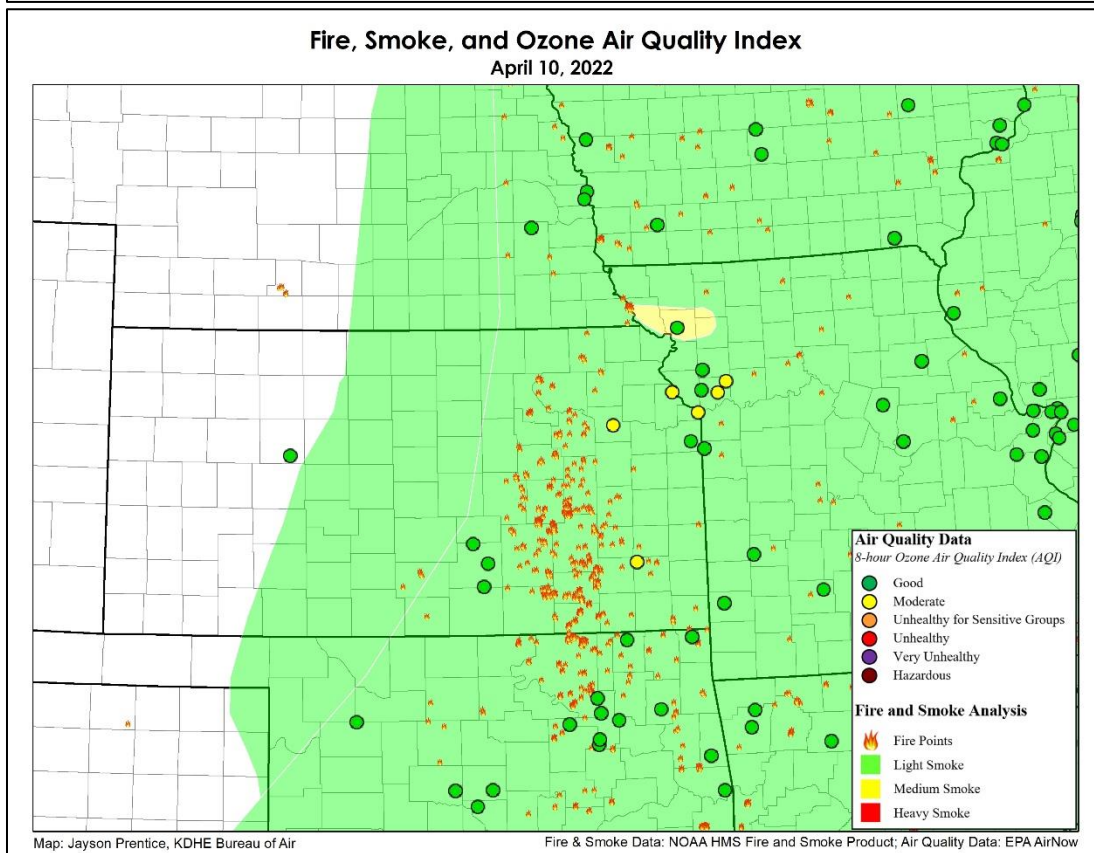
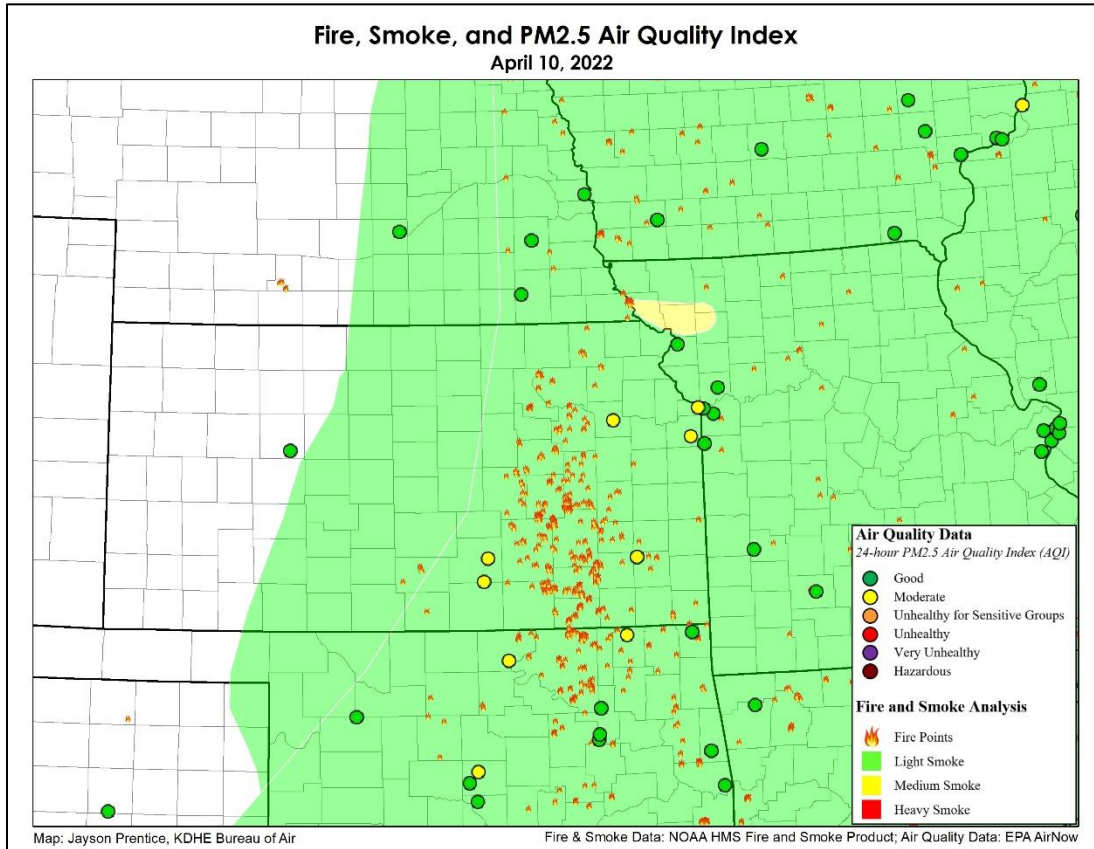
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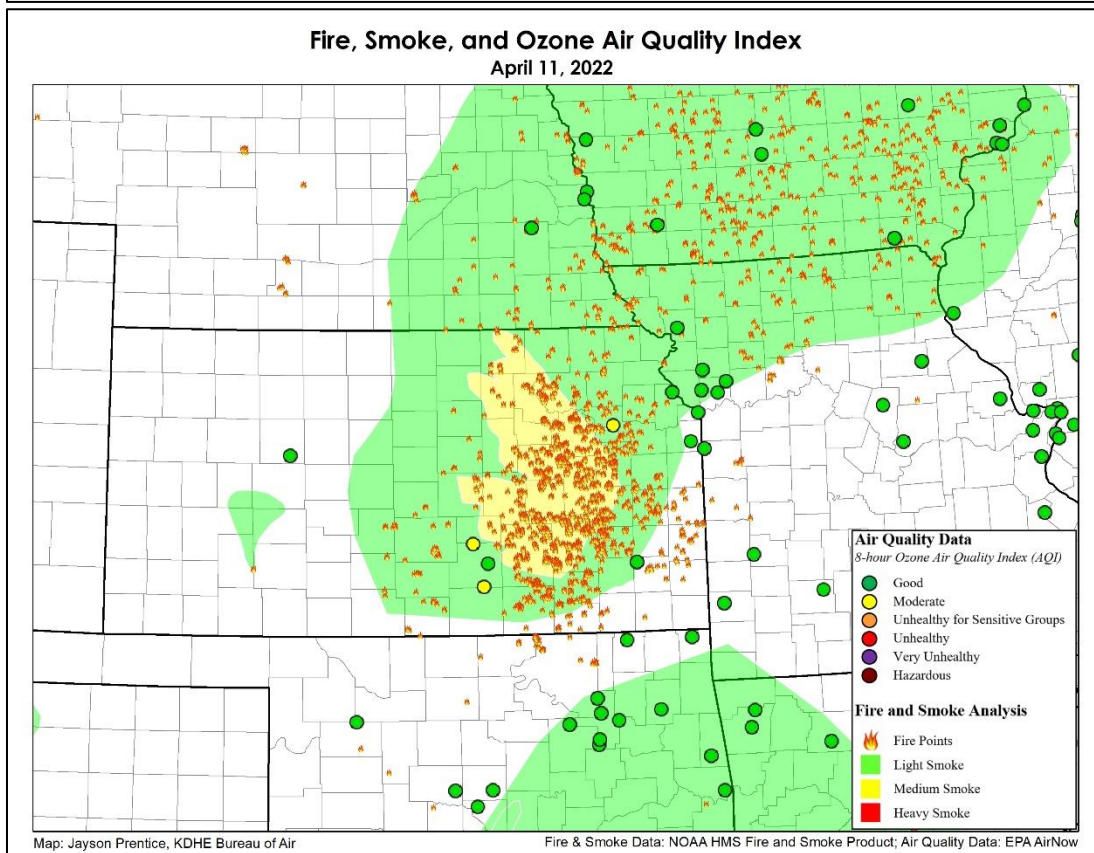
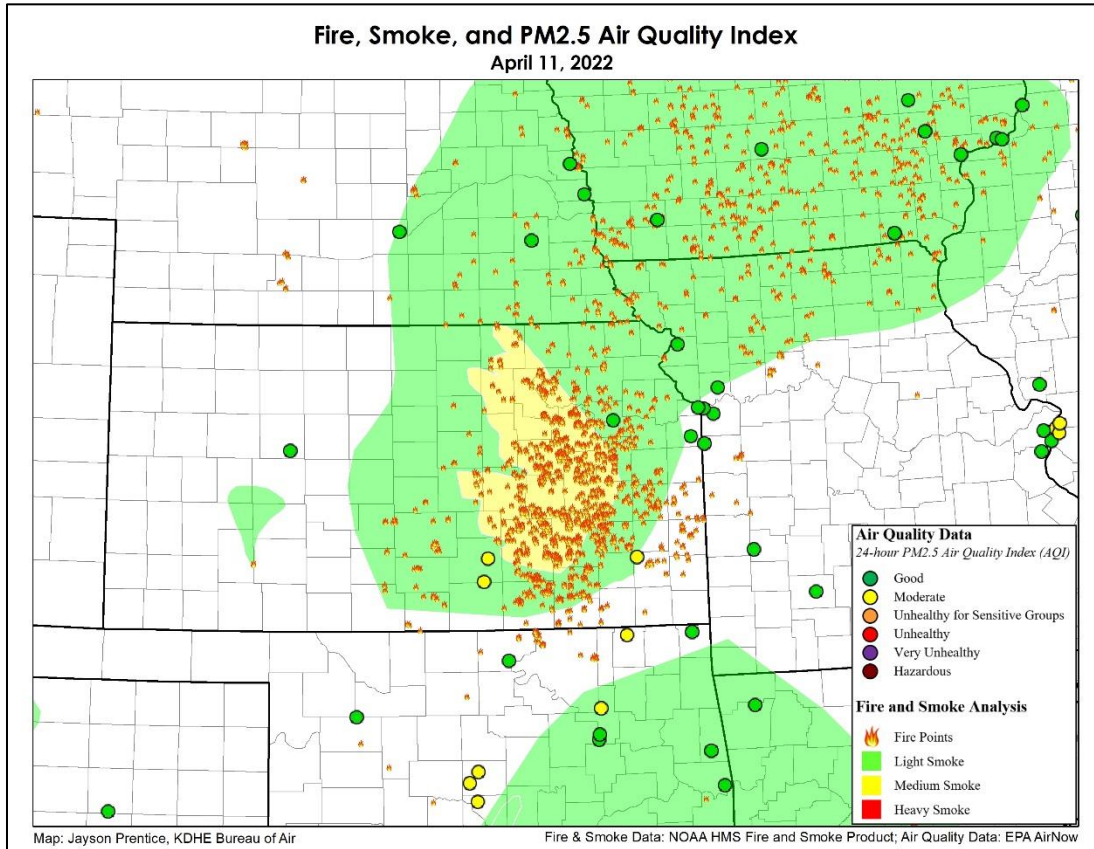
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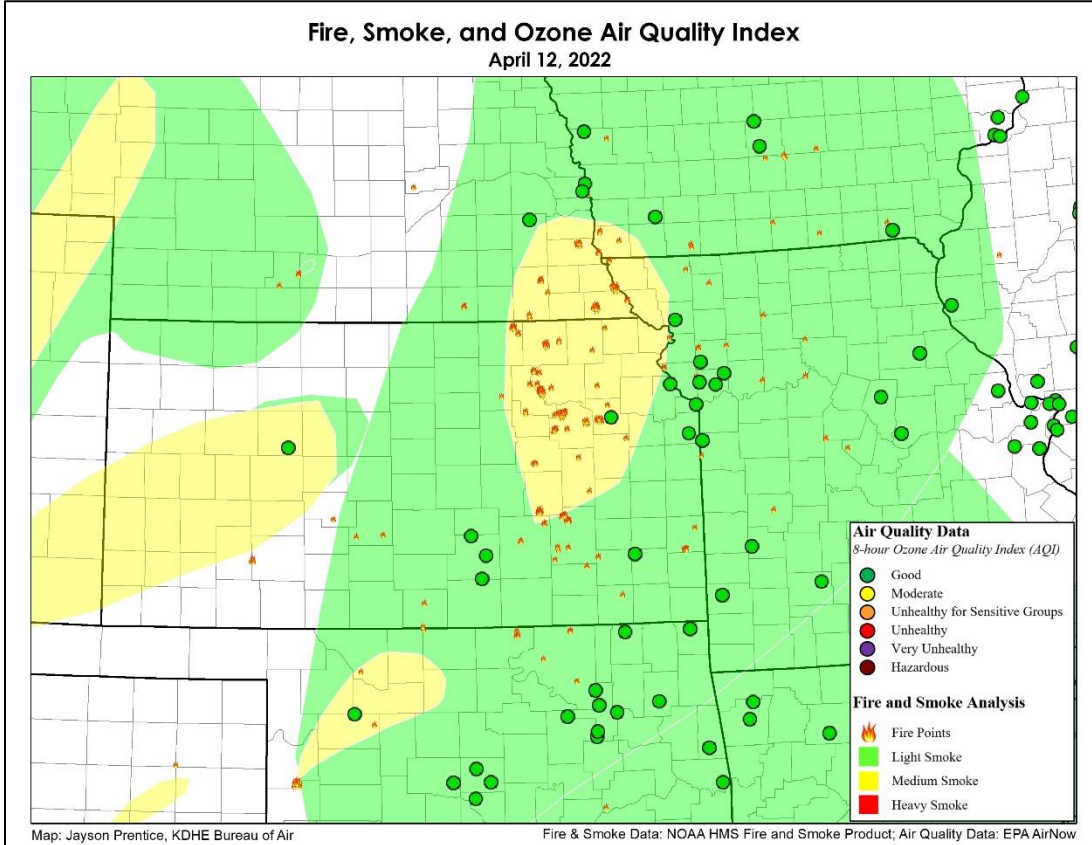
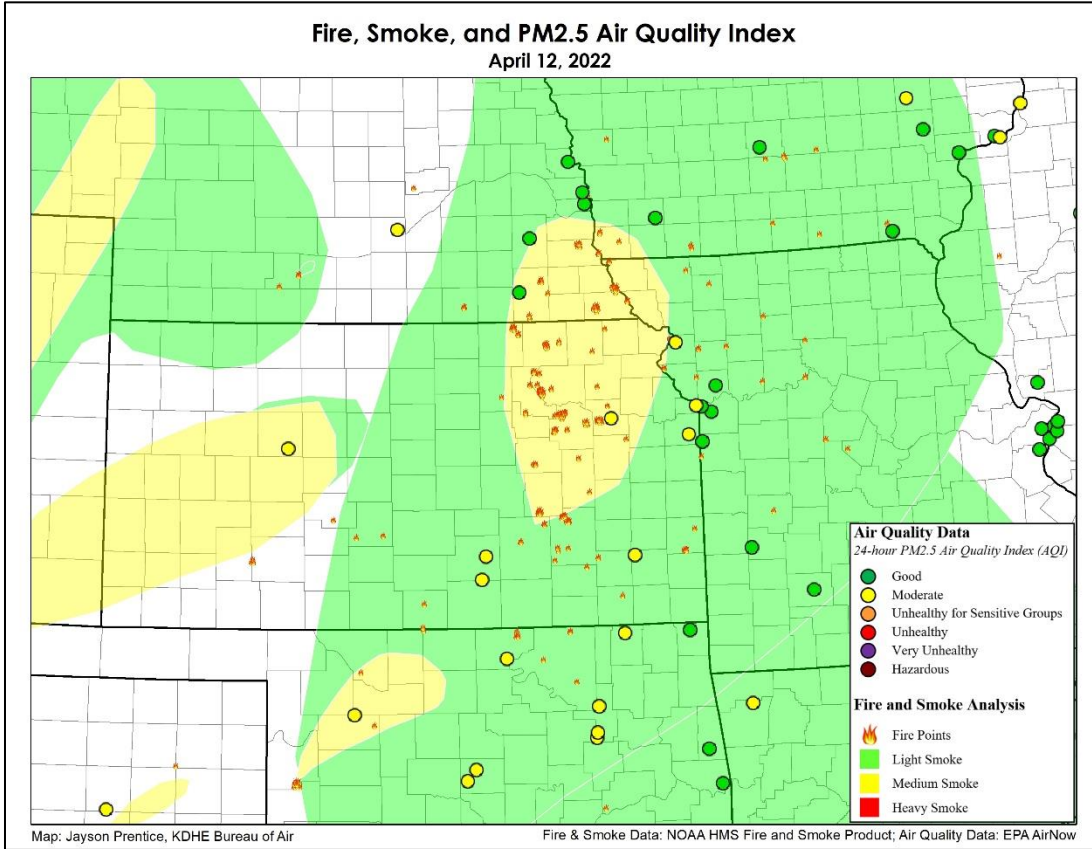
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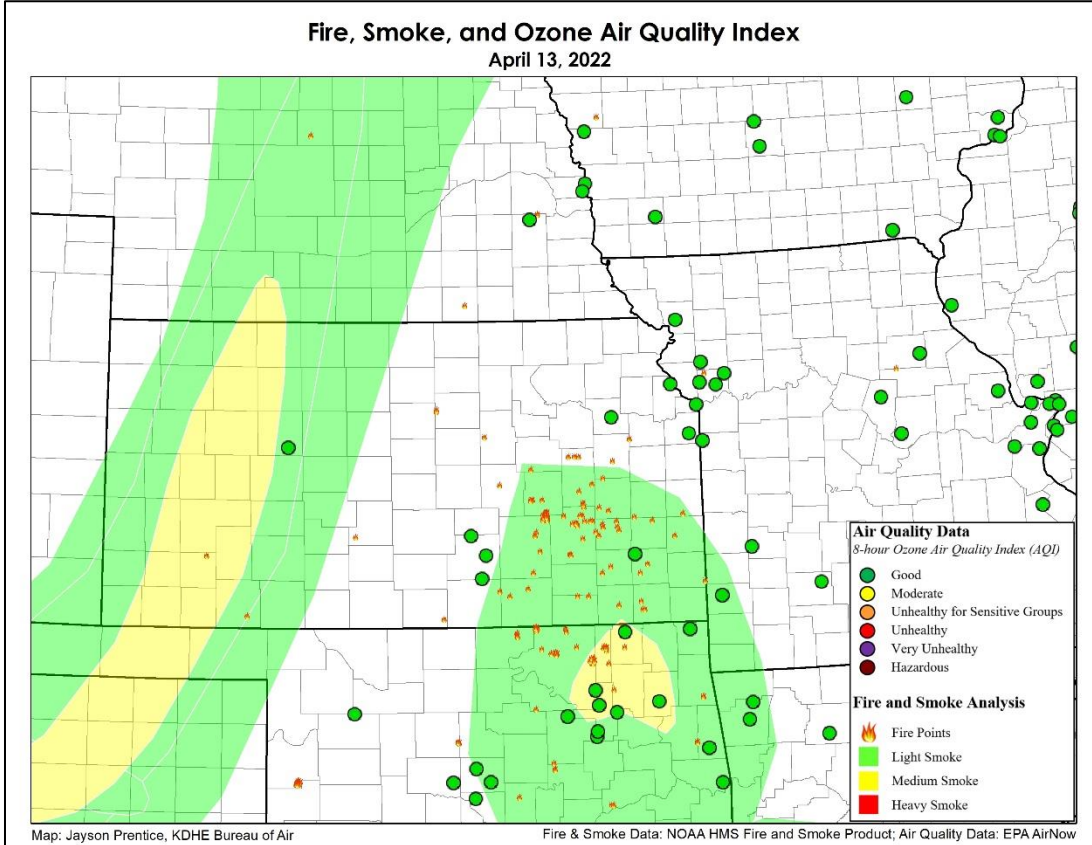
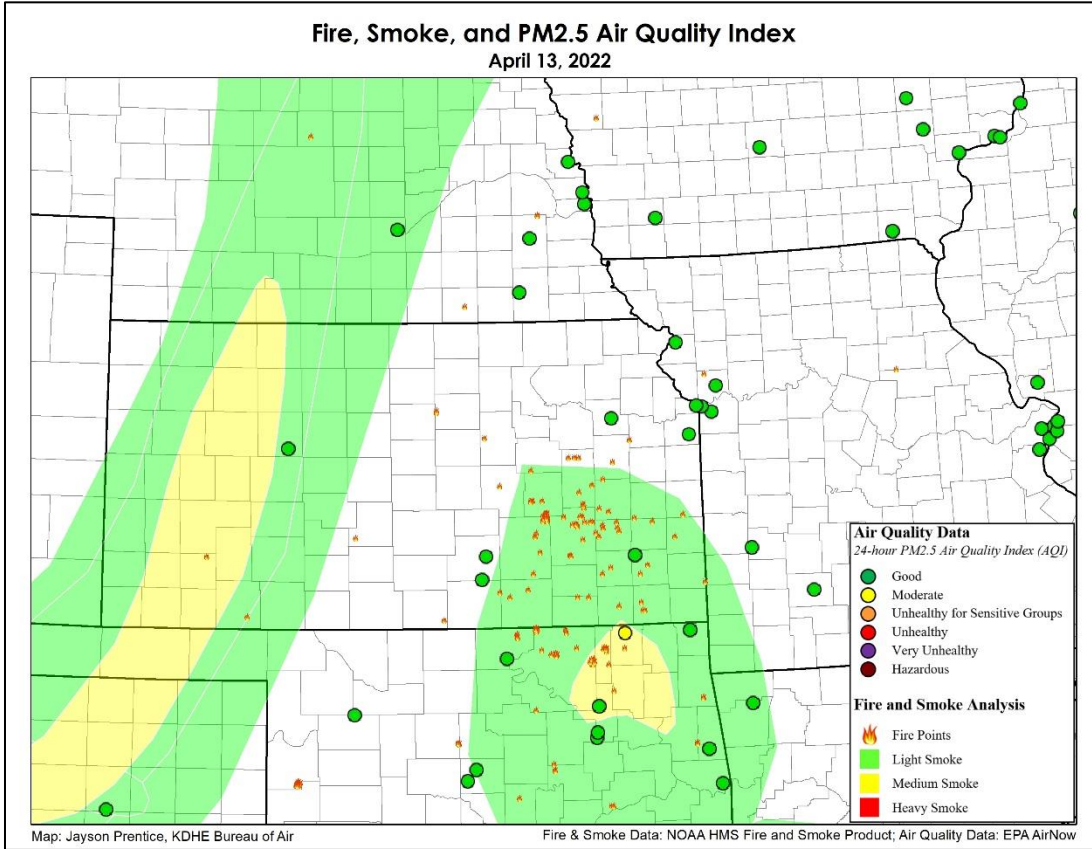
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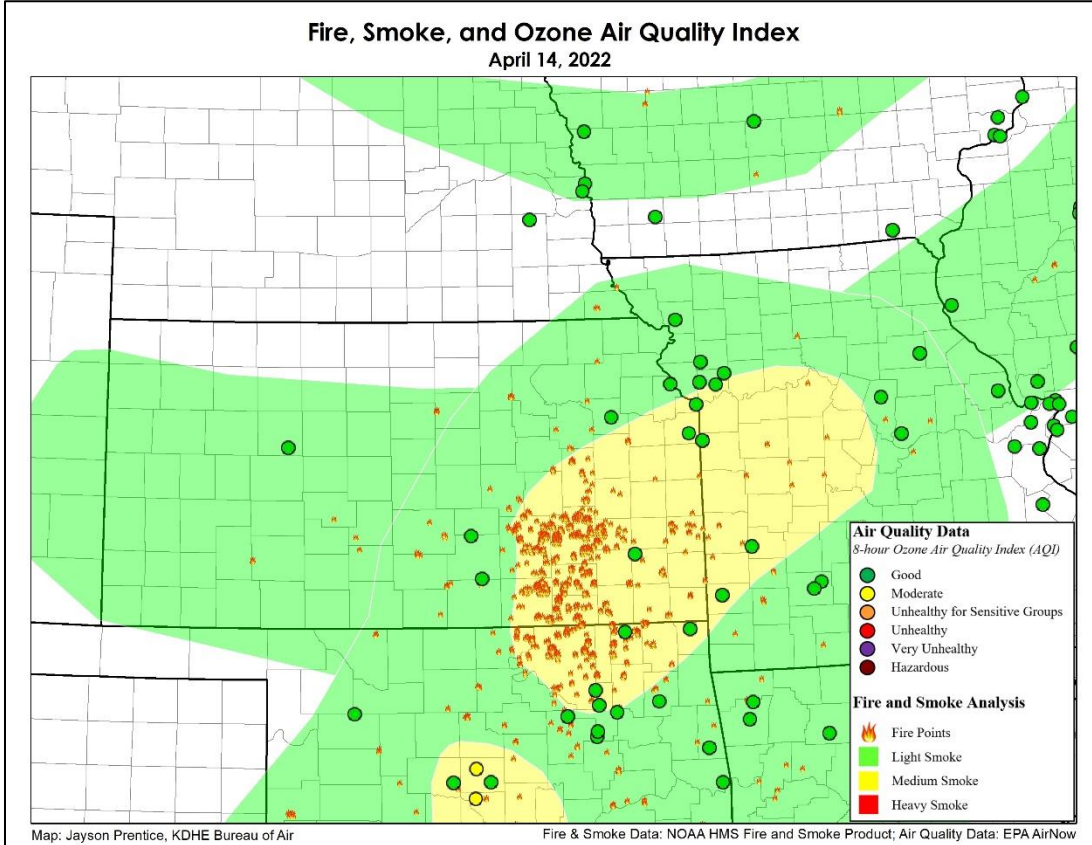
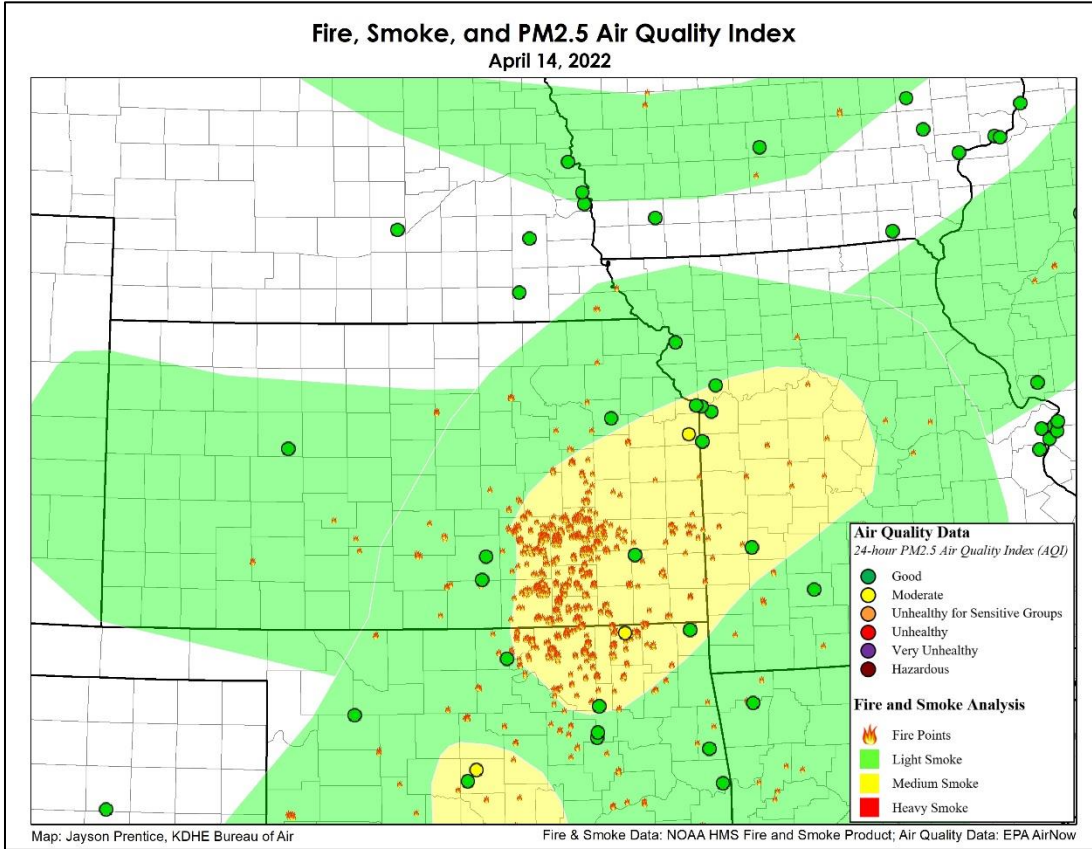
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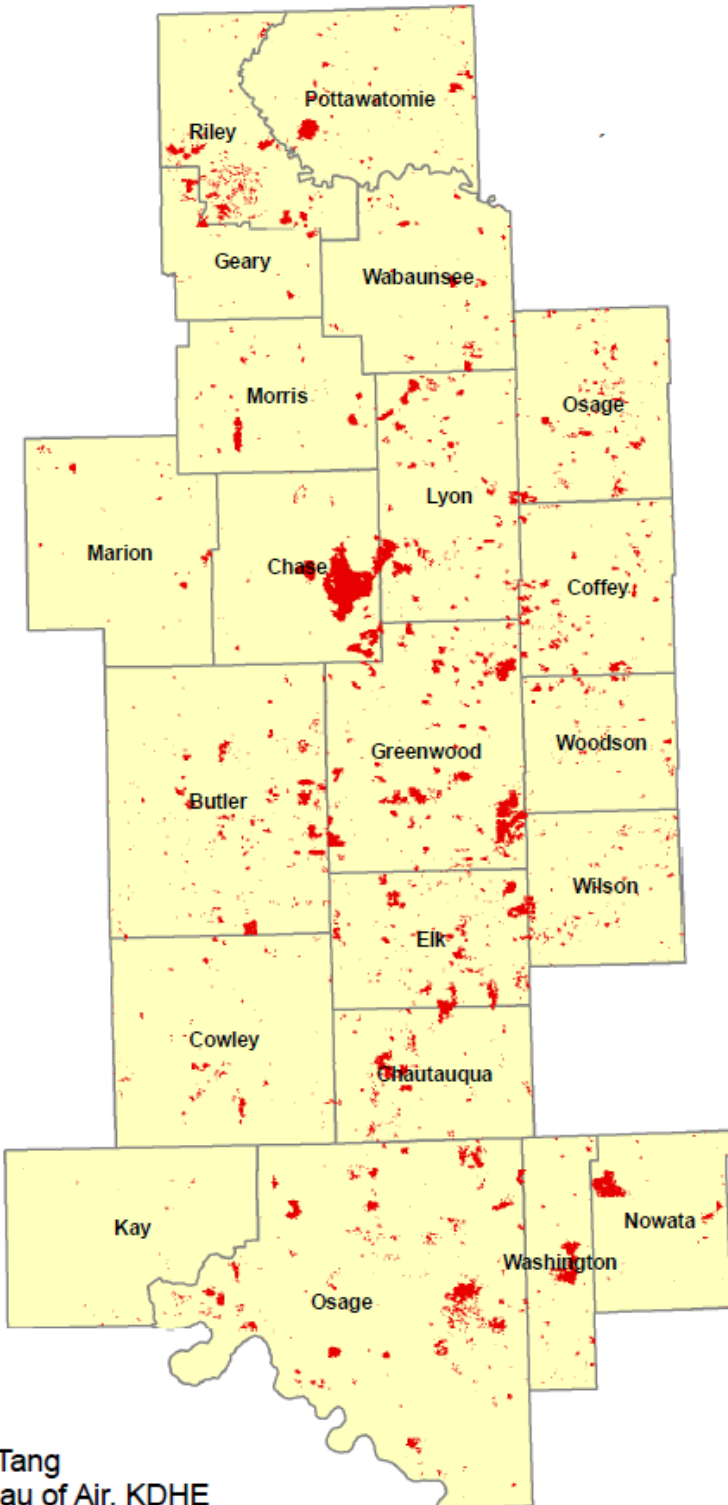


Flint Hills Wildland Fire Update





Flint Hills Acreage Burned (Feb. 14 – Apr. 2, 2022)



Yao Tang
Bureau of Air, KDHE

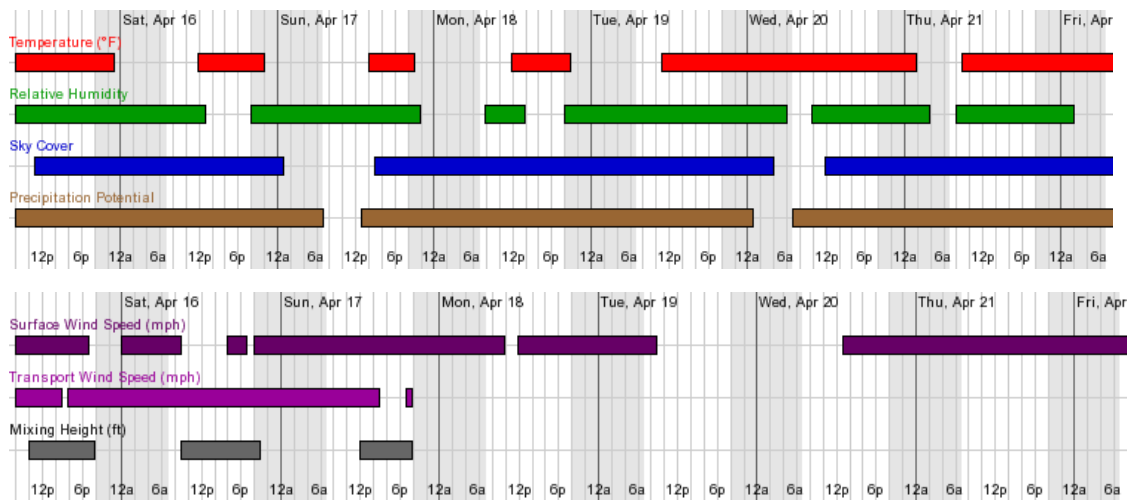
<u>Counties</u>	<u>Acres Burned</u>
Butler	26,244
Chase	46,024
Chautauqua	16,464
Coffey	16,170
Cowley	7,985
Elk	28,186
Geary	5,513
Greenwood	53,731
Lyon	28,649
Marion	3,892
Morris	7,707
Osage (KS)	16,047
Pottawatomie	12,294
Riley	20,773
Wabaunsee	9,344
Wilson	8,742
Woodson	6,826
Nowata (OK)	10,811
Osage (OK)	51,368
Washington (OK)	11,398
Kay (OK)	757
Total	388,905
<i>* Denotes county was partly or completely covered by clouds during latest analysis.</i>	



Upcoming Look at Fires and Smoke

An area of low pressure moves across the region today (Friday, April 15) bringing gusty winds by this evening and otherwise variable wind directions. Breezy northeast winds and a lack of moisture may lead to elevated fire danger on Saturday (April 16). Light precipitation is possible early on Sunday (April 17) before high pressure moves in and brings lighter winds and seasonable temperatures for Sunday and Monday (April 18). Another storm system approaches the region on Tuesday (April 19) bringing increased wind speeds, warmer temperatures, and another chance of precipitation. Breezy conditions are expected to continue Wednesday (April 20) but lighter winds are expected behind this storm system for Thursday (April 21) with improved moisture across the region.

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 15, 2022.

For more information, contact:

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