

Flint Hills Wildland Fire Update

April 29, 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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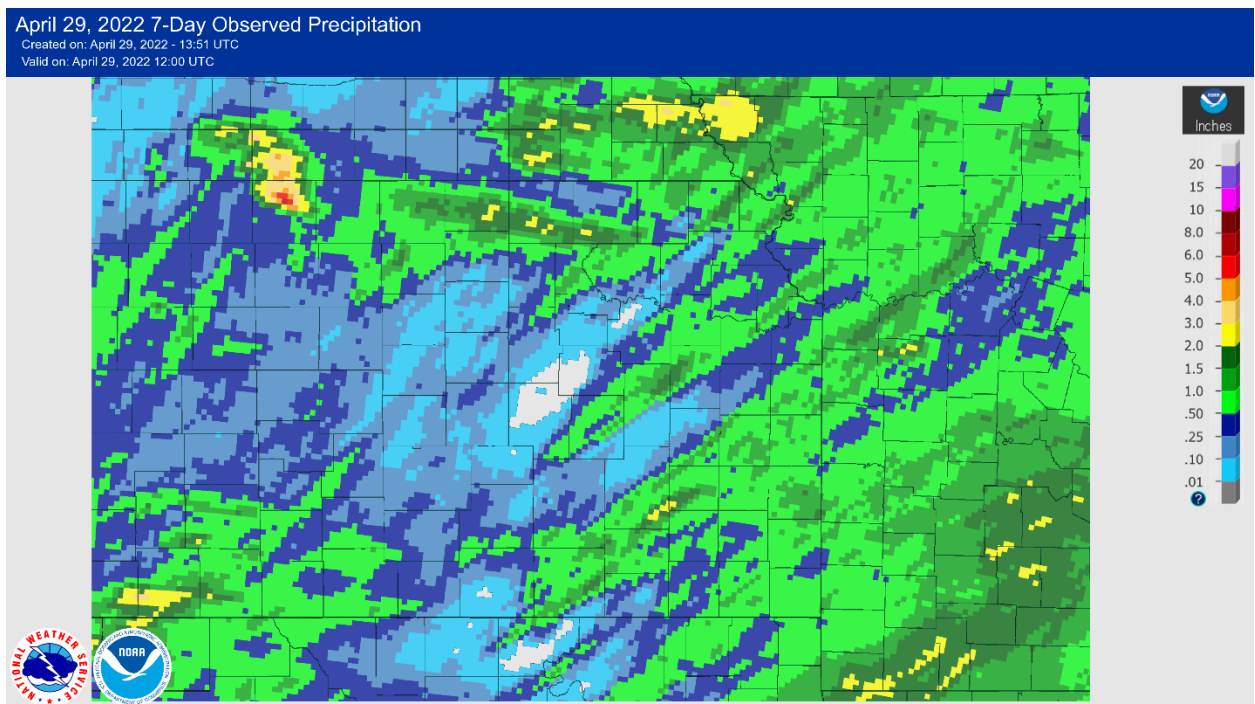
This website was developed as part of the development of the Kansas Flint Hills Smoke Management Plan. Kansas State University hosts the webpage and it includes important information for ranchers and others who might be interested in the Flint Hills. It provides training, regulations, policies, publications, 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

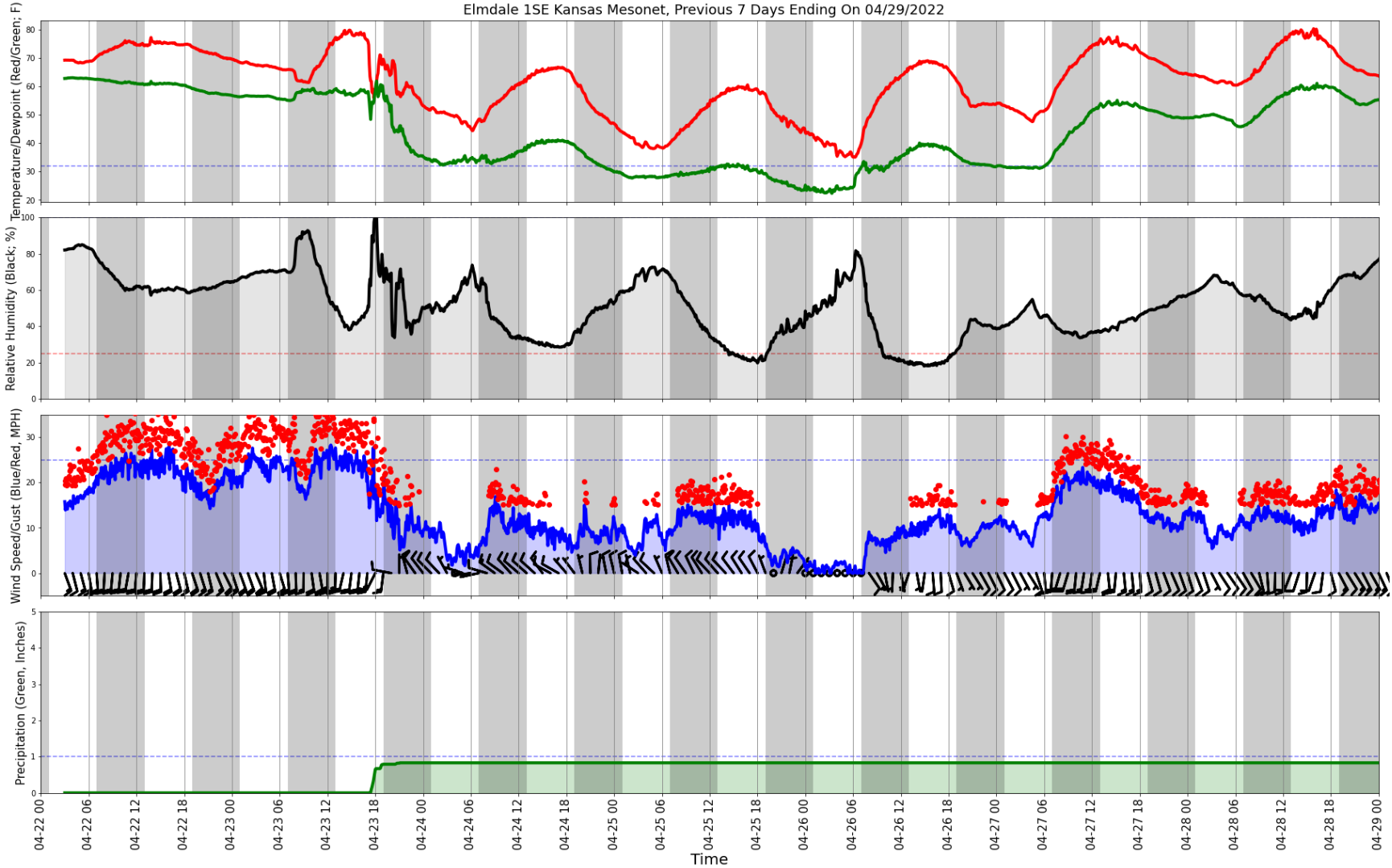
Warm and windy conditions for Friday (April 22) and Saturday (April 23) with fire weather concerns for much of the region. A cold front moved through the region Saturday and brought scattered showers and thunderstorms to the region. This front also brought a change to northwest winds and cooler temperatures for Sunday (April 24). Light to moderate northerly winds continued Monday (April 25) with cooler than average temperatures. Temperatures began to rebound on Tuesday (April 26) with a return of southerly winds. The southerly winds became breezy to windy for Wednesday (April 27) and Thursday (April 28) as temperatures continued to climb into the 70s and 80s. Additional light precipitation occurring on Thursday for parts of the northern Flint Hills. Weekly precipitation amounts across the Flint Hills varied from zero or a few hundredths of an inch to upwards of an inch with thunderstorms.

Precipitation



NOAA/NWS Observed Total Precipitation for Apr. 22-29, 2022.

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7-day (Apr. 22-29, 2022) Observed Weather from Kansas Mesonet station near Elmdale, Kansas
[\(https://mesonet.k-state.edu/\)](https://mesonet.k-state.edu/)



Fire, Smoke, and Air Quality

For the period of April 22-28, 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.

Windy conditions and high to extreme fire danger were prevalent across the region on Friday (April 22) and Saturday (April 23) which blanketed the Flint Hills with burn bans and Red Flag Warnings. Wildfires and smoke from wildfires, including fires in Nebraska, Colorado, and New Mexico, were mapped on each day with heavy smoke impacting some locations in the region.

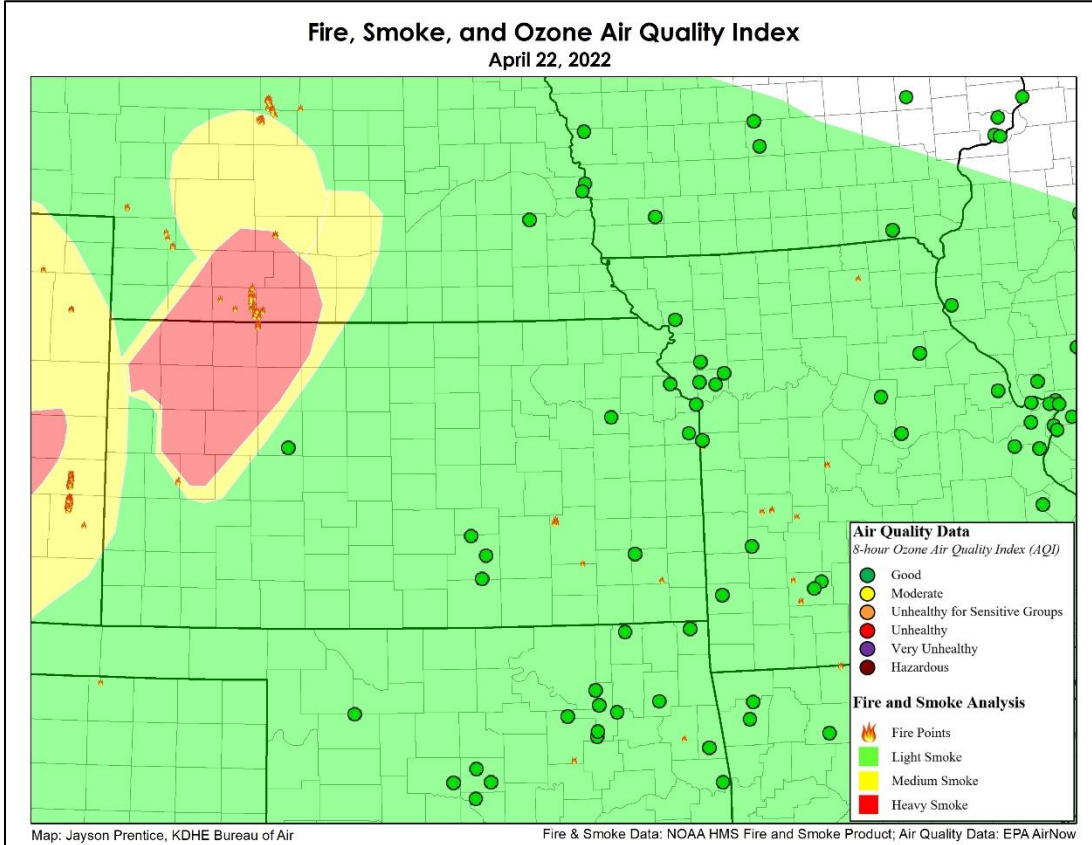
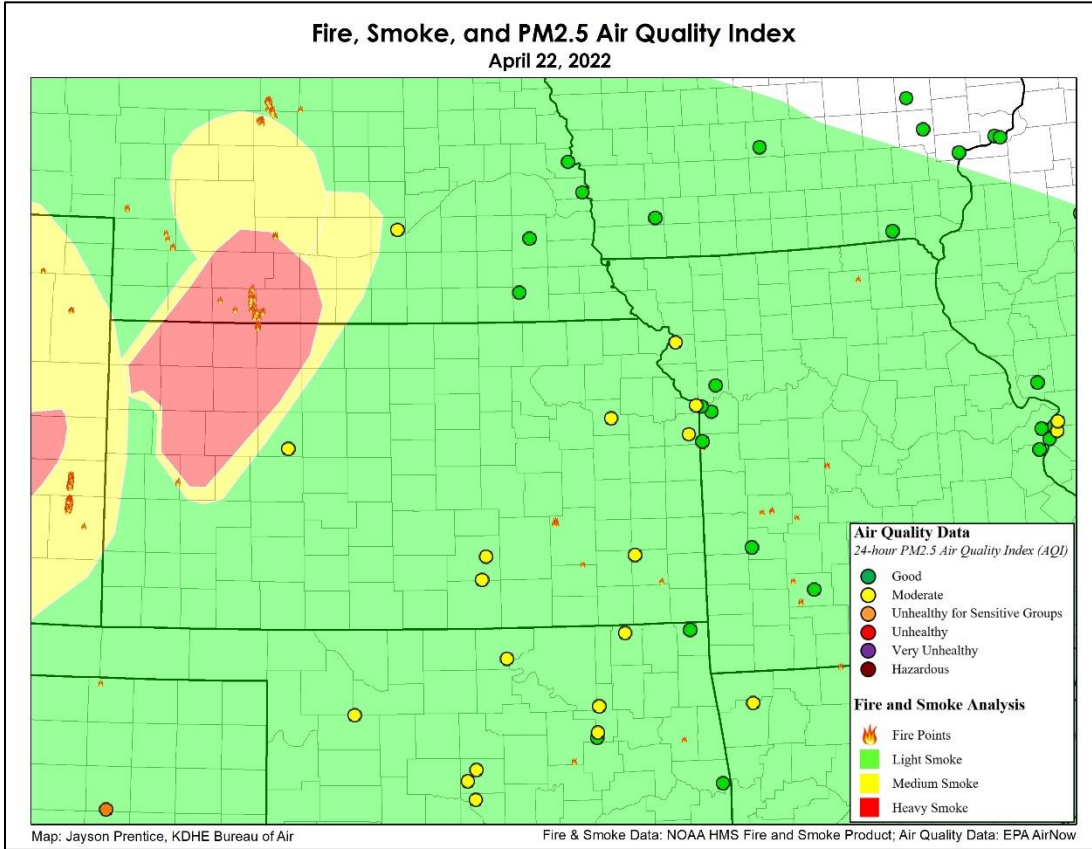
Winds became northwesterly on Sunday (April 24) and decreased to a more reasonable 10-20 mph which allowed for prescribed burning to be conducted. Similar conditions with a northwest wind continued Monday (April 25) with a fair number of fires being analyzed across the Flint Hills. Smoke settled into the southern Flint Hills each night, and especially by Tuesday (April 26) morning in southeast Kansas and northeast Oklahoma. But good mixing and clear skies allowed smoke to quickly disperse after sunrise with only Moderate Air Quality Index (AQI) overall.

Winds become southerly on Tuesday with even warmer temperatures and lower relative humidity; Numerous prescribed burns were conducted across the region, but a few wildfires were also reported later in the day with near-critical fire weather conditions. Air quality impacts occurring throughout the Flint Hills on Tuesday into Tuesday night with smoke spreading northward providing short-term impacts on parts of eastern Nebraska by Wednesday (April 27) morning.

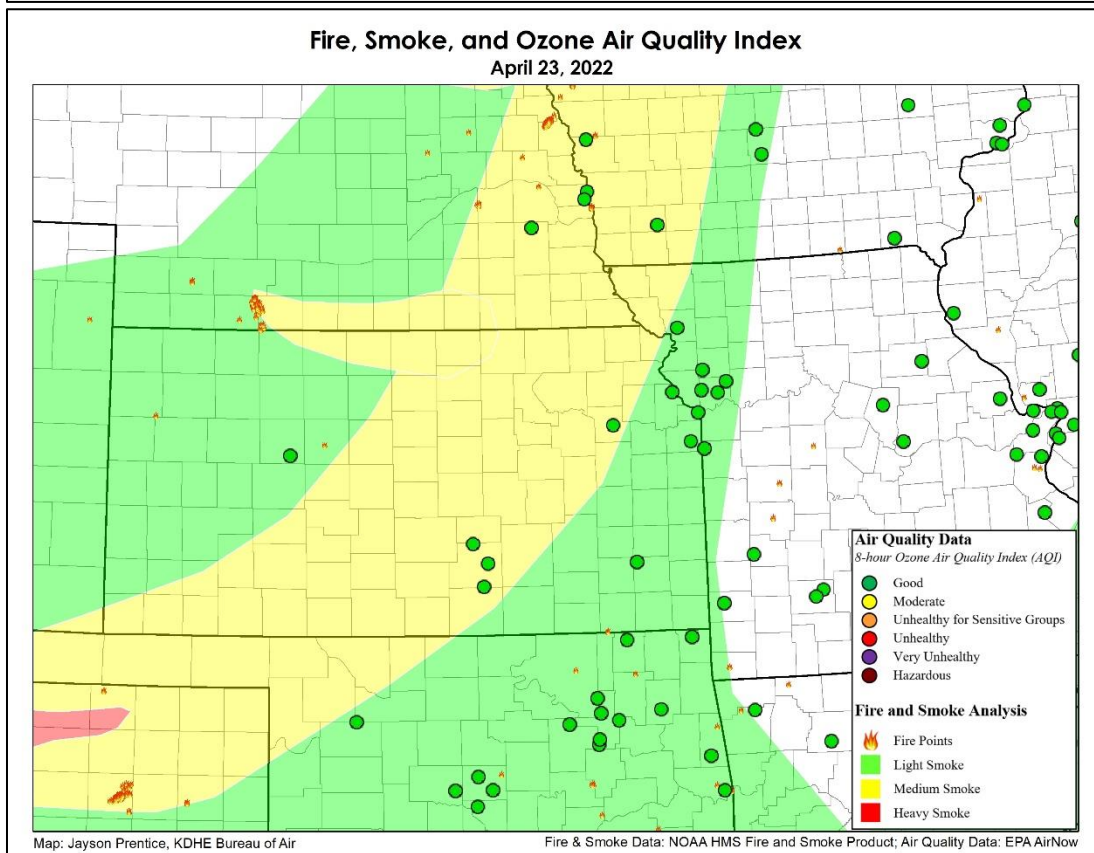
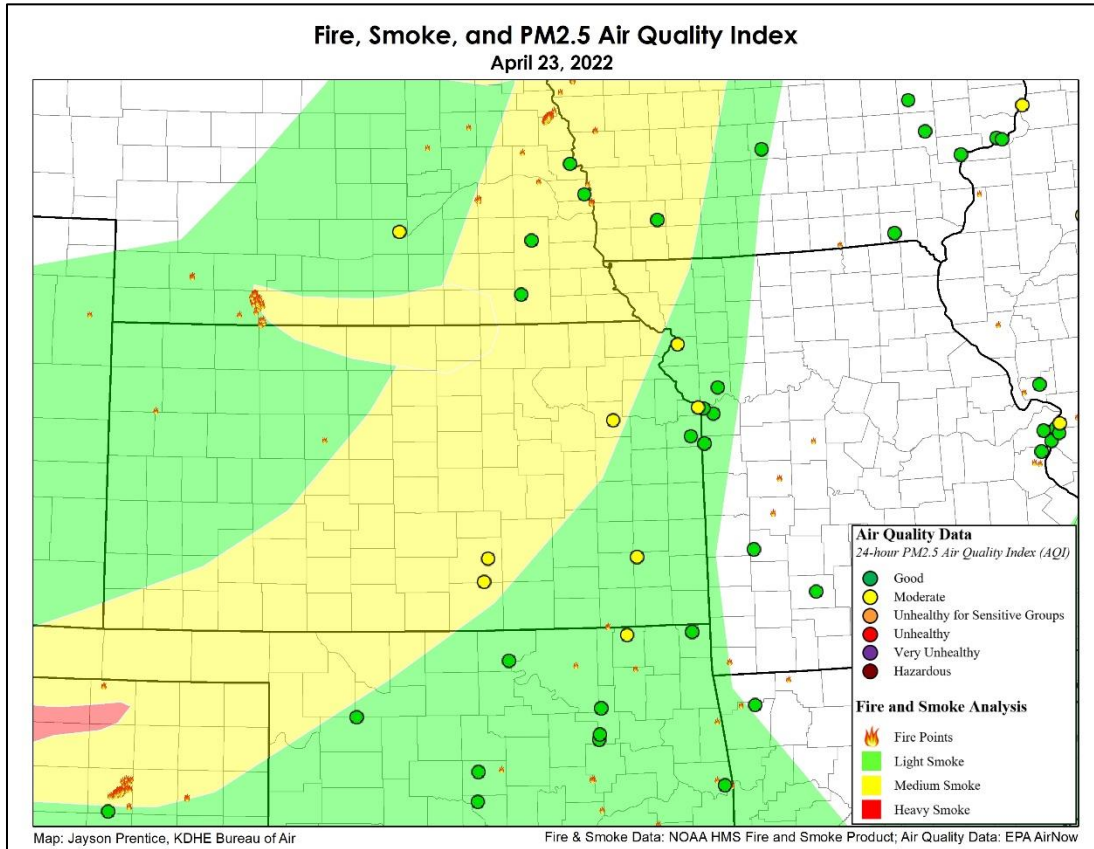
Breezy to windy south winds on Wednesday and Thursday (April 28) alongside occasional cloud cover and precipitation chances eliminated prescribed fire opportunities for most across the region.

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.

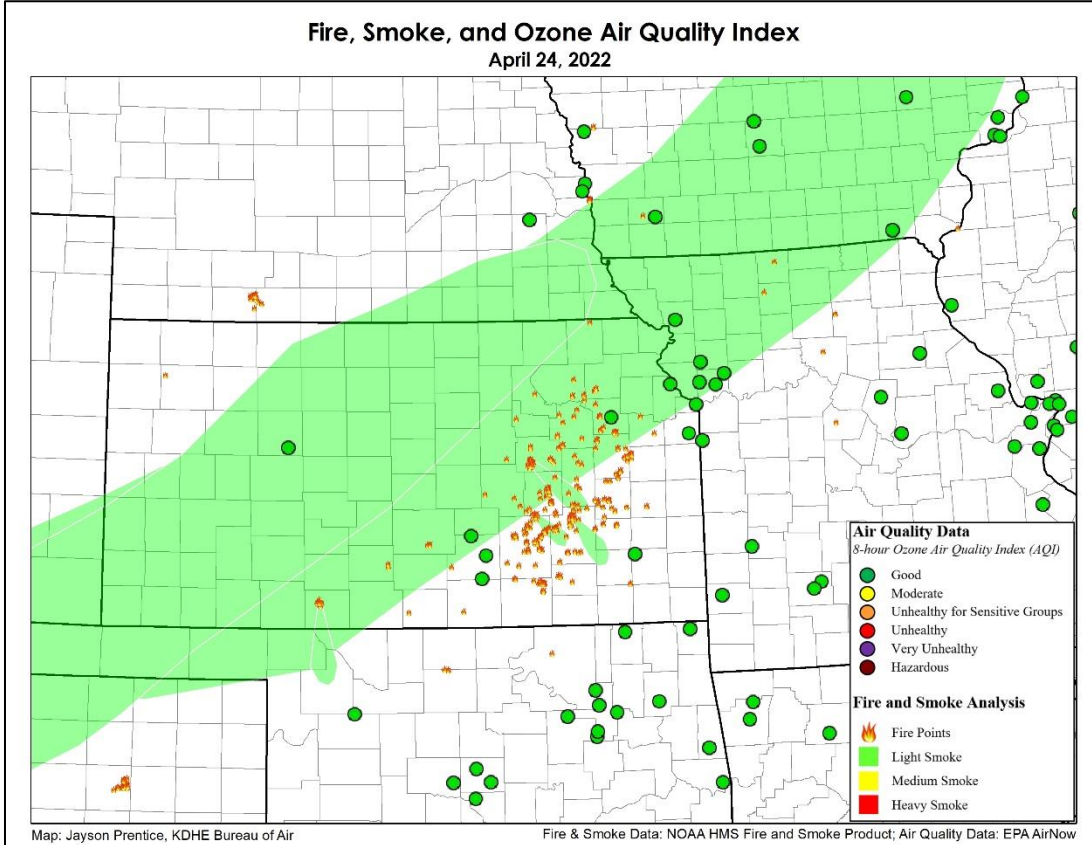
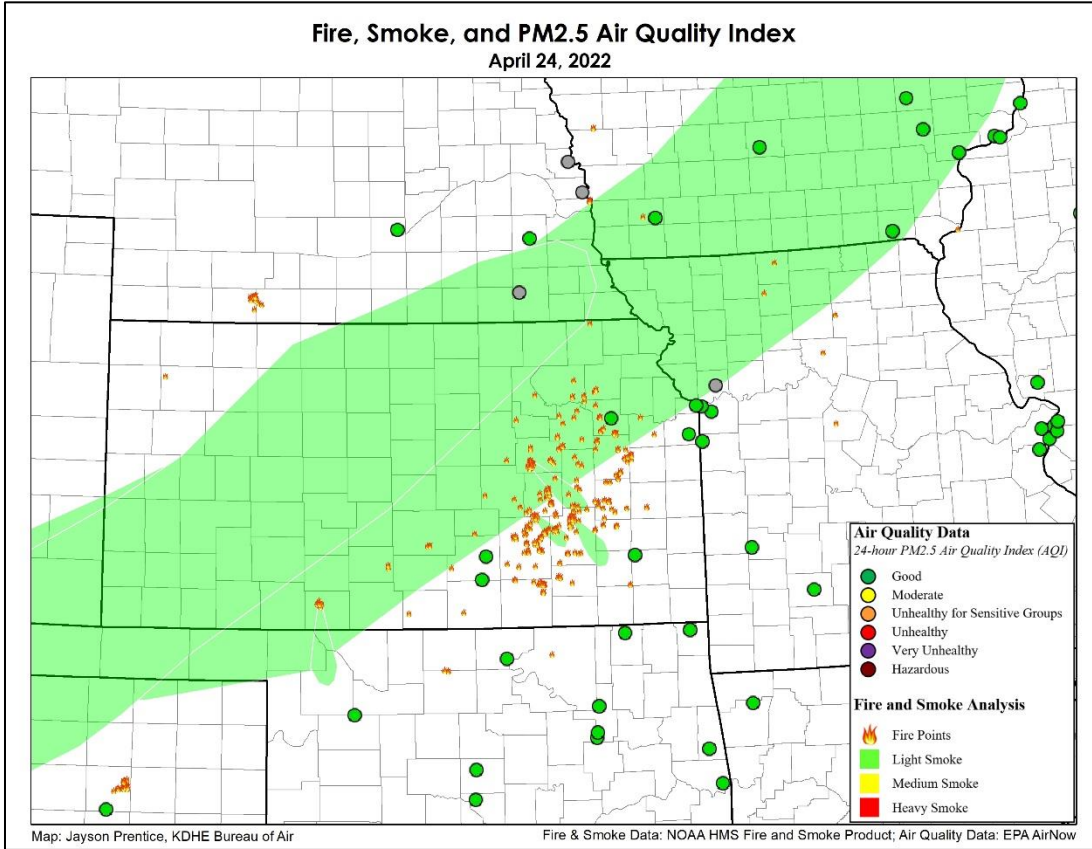
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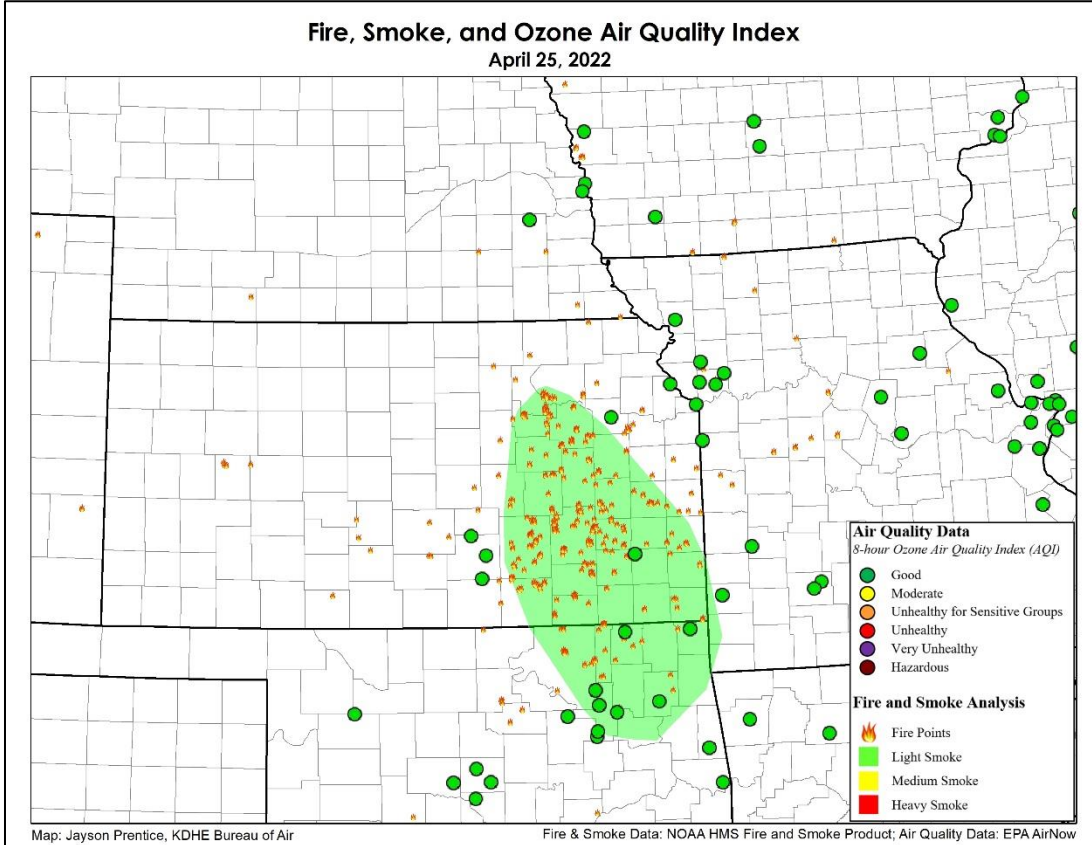
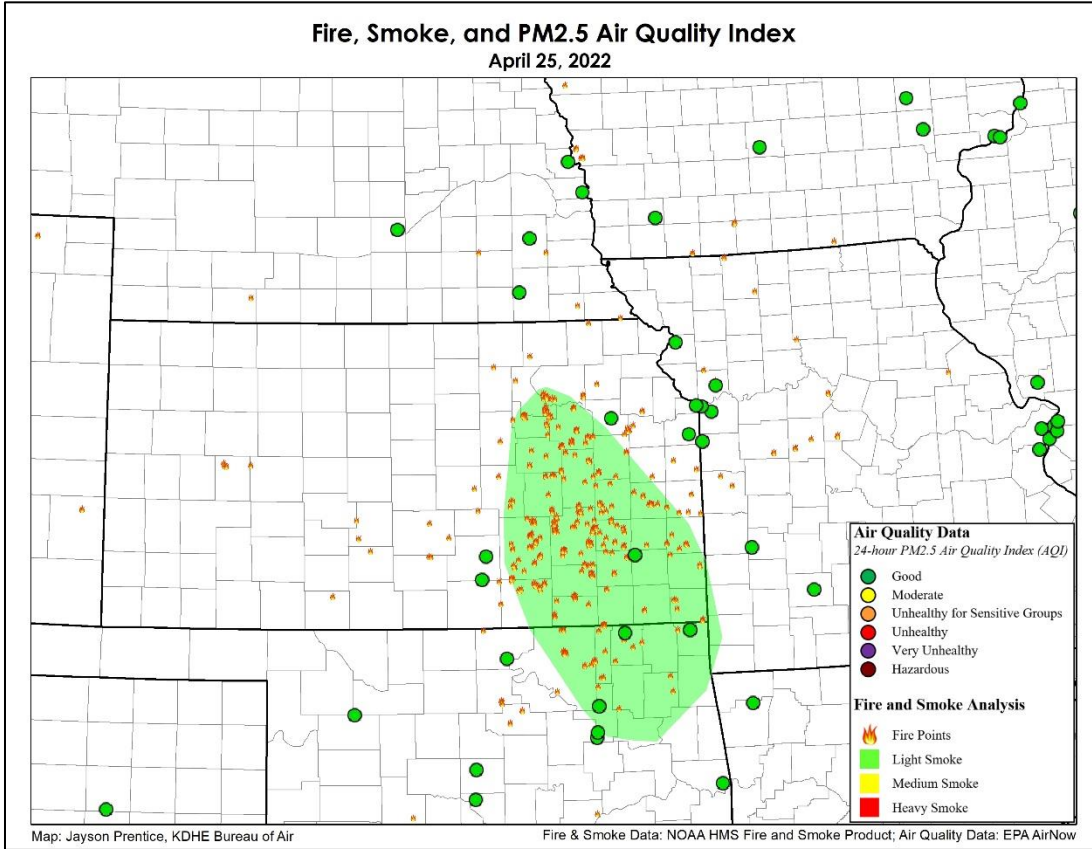
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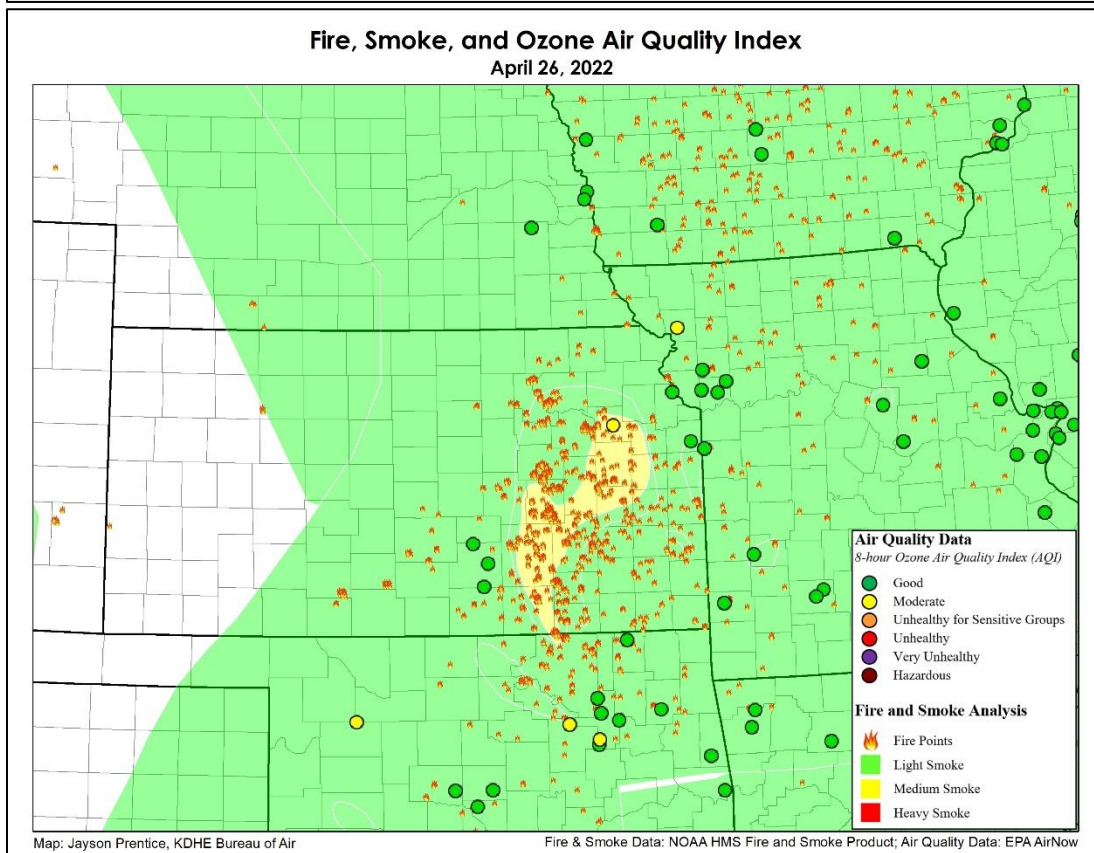
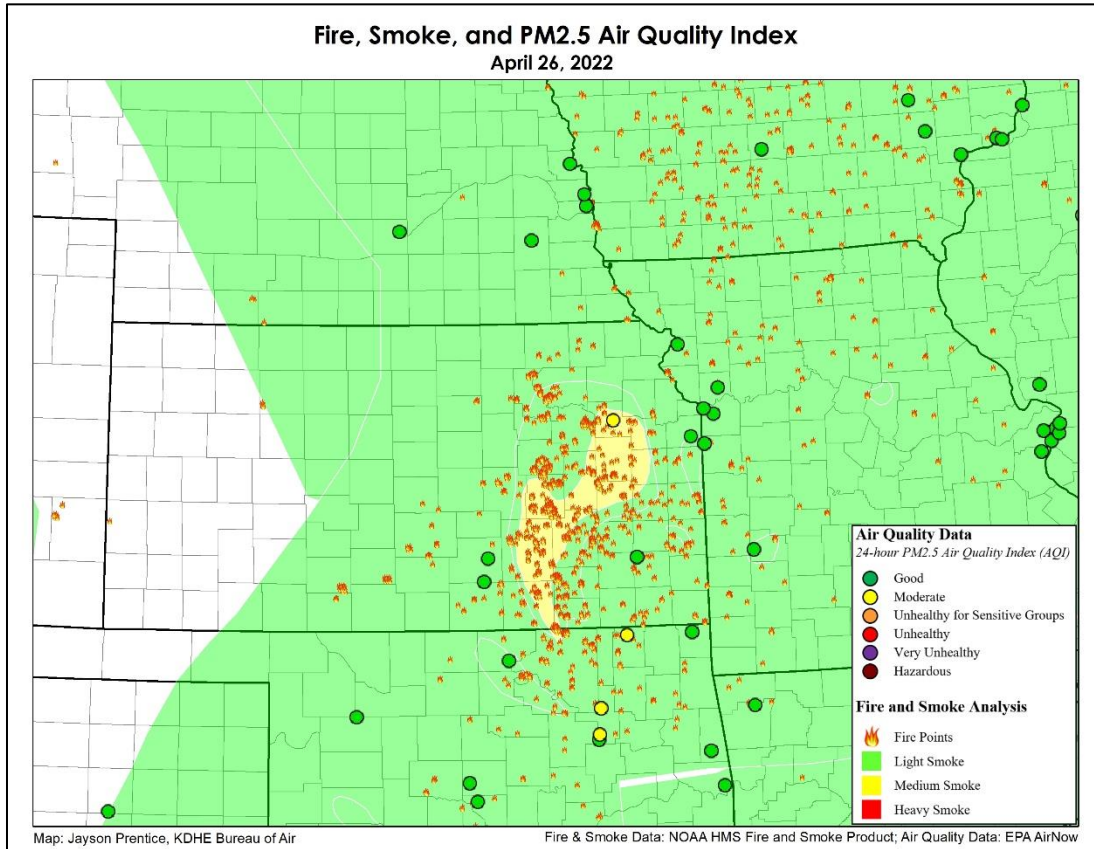
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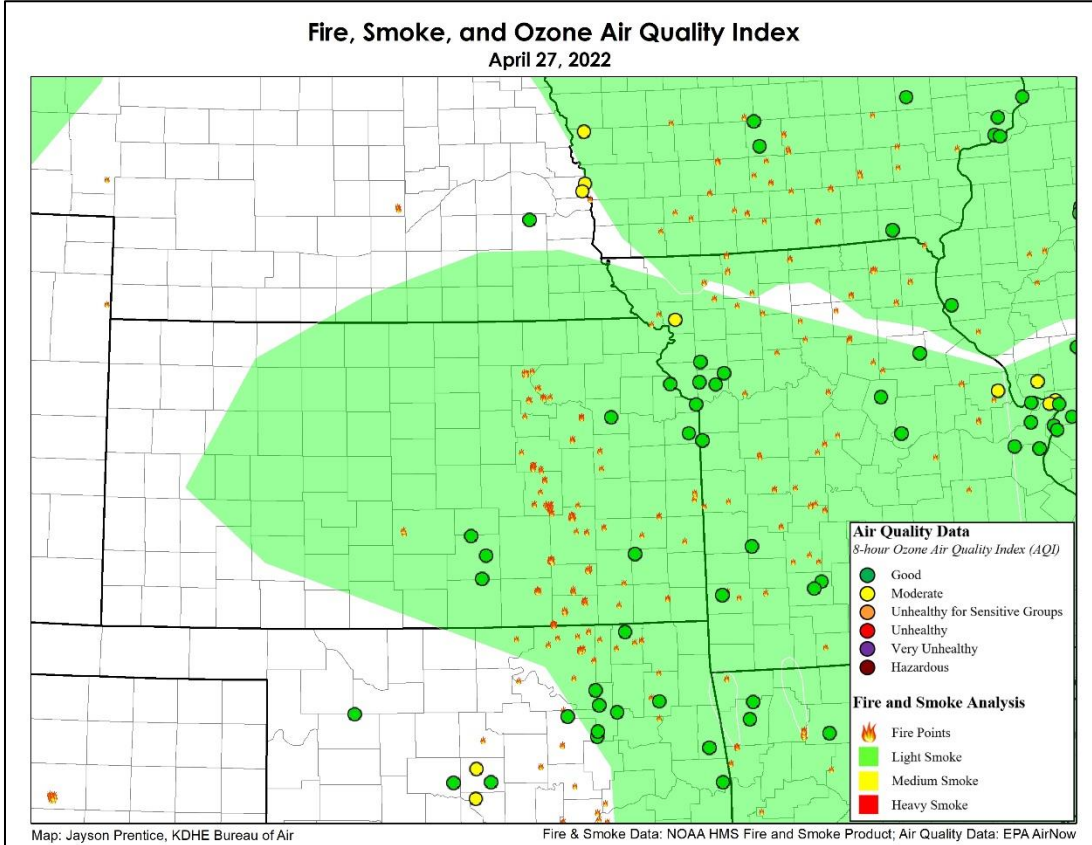
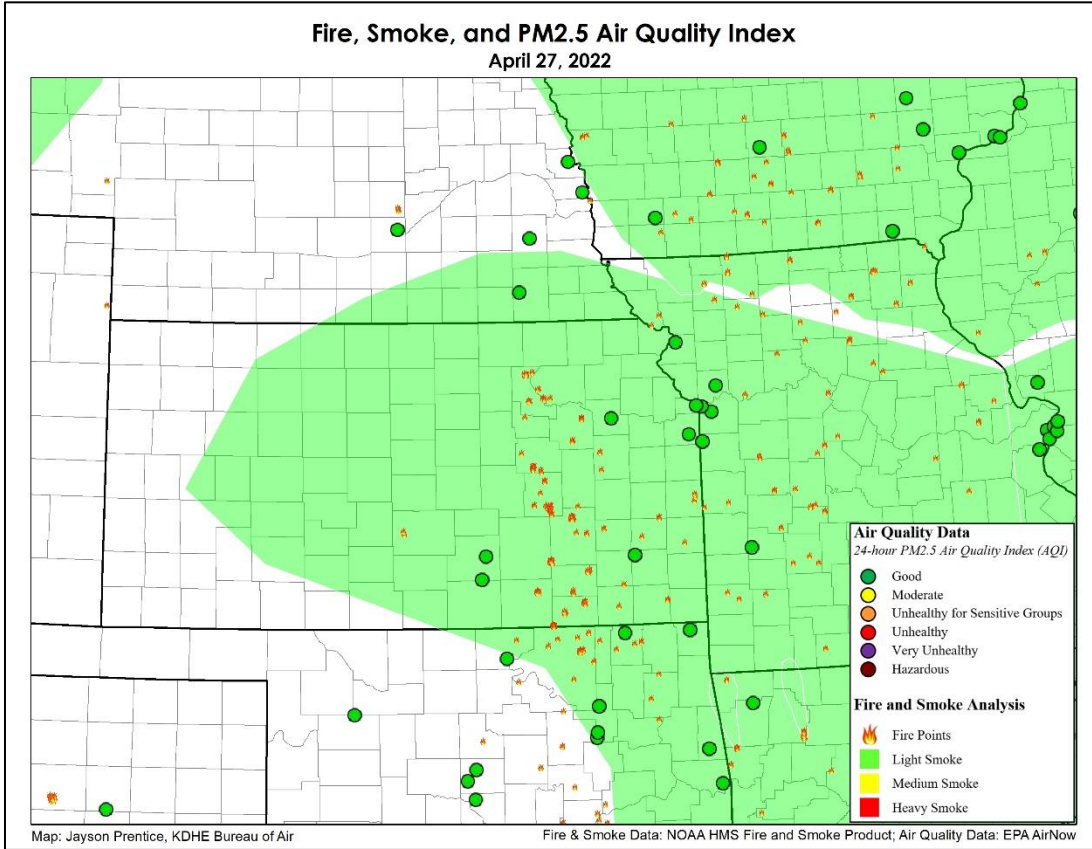
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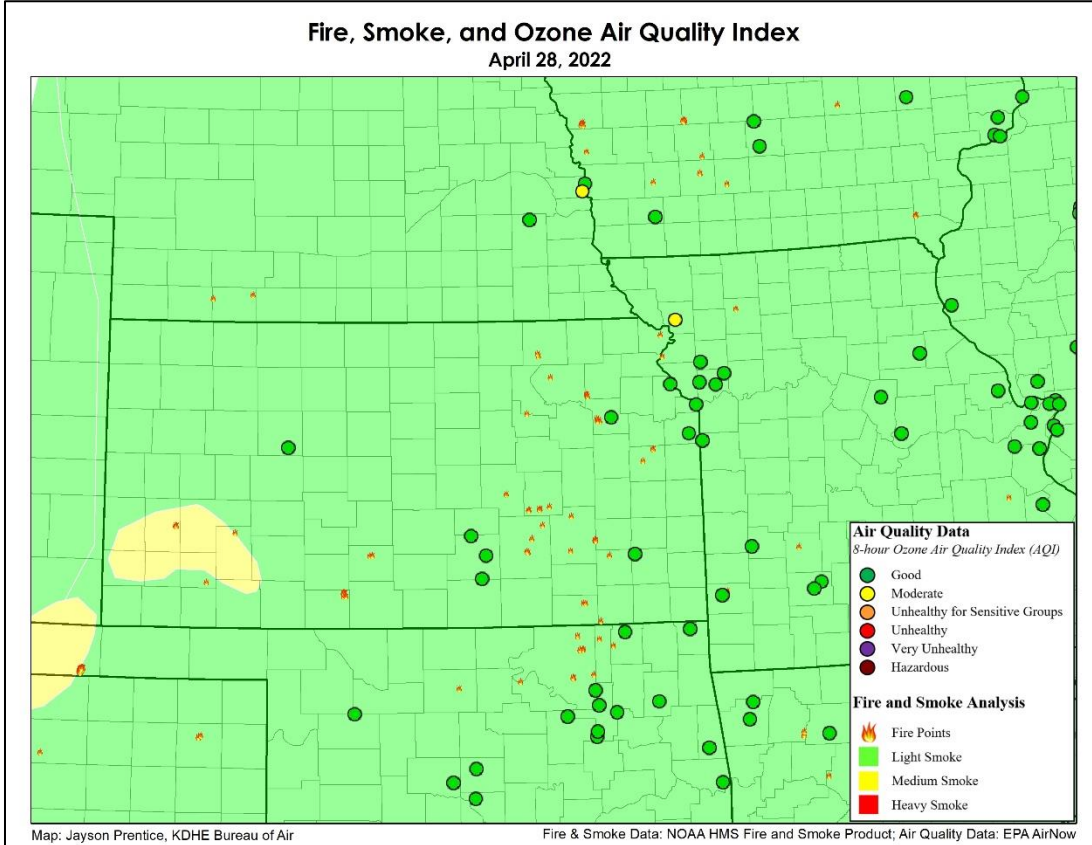
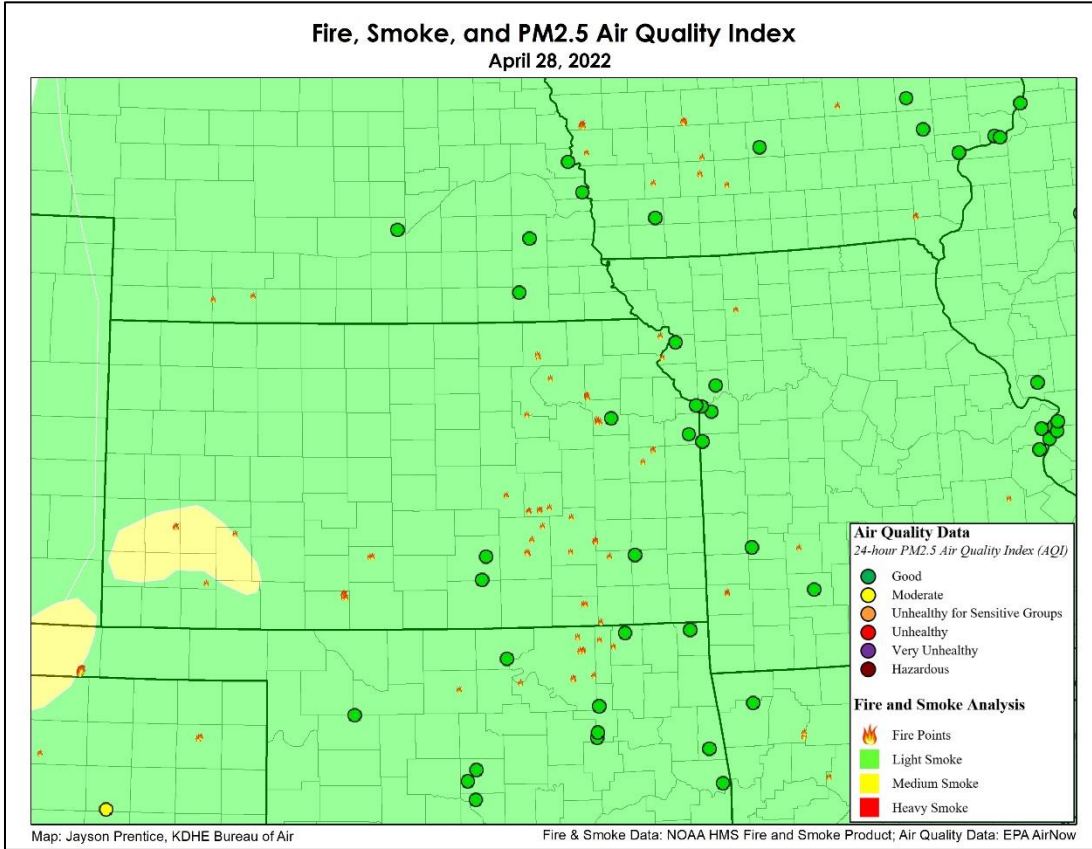
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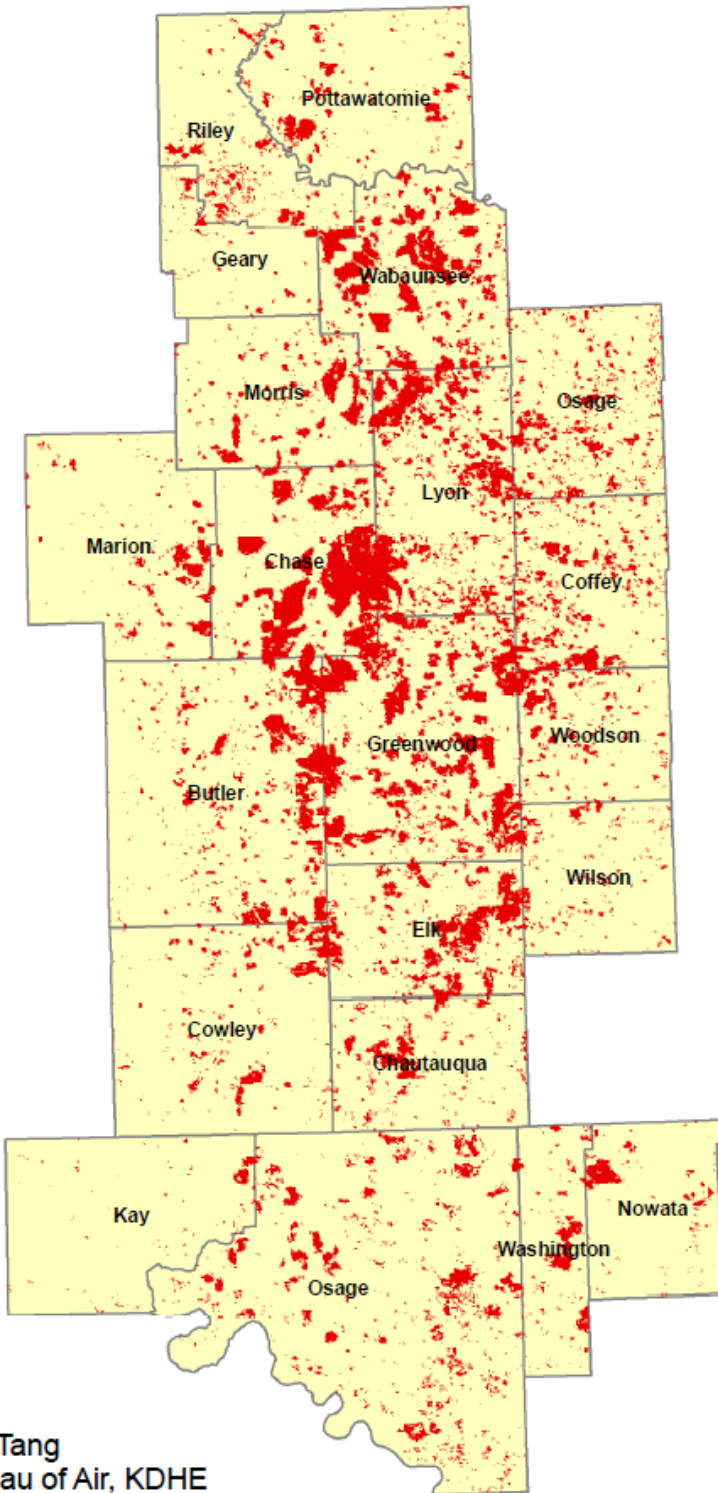


Flint Hills Wildland Fire Update





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



Yao Tang
Bureau of Air, KDHE

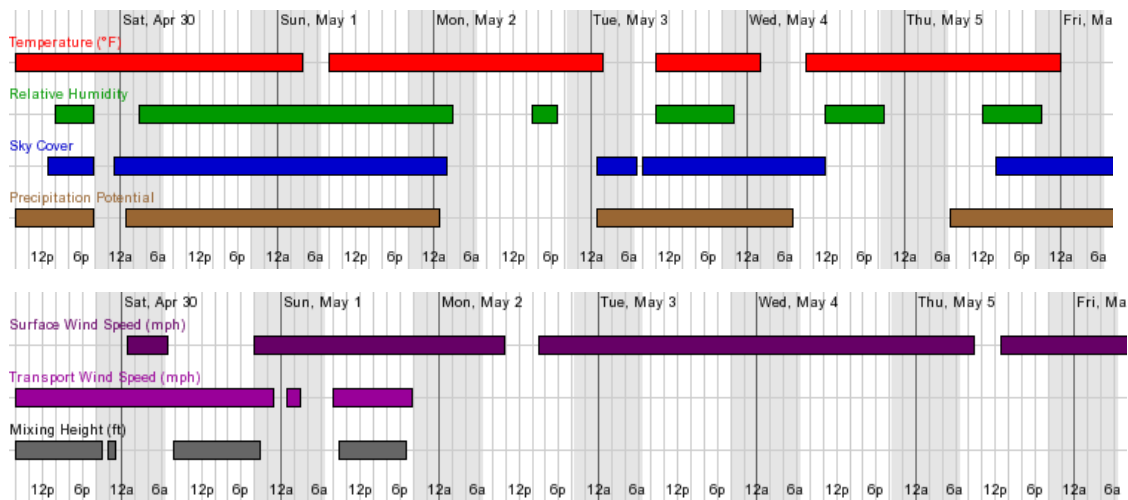
<u>Counties</u>	<u>Acres Burned</u>
Butler	107,709
Chase	156,081
Chautauqua	37,839
Coffey	61,669
Cowley	40,356
Elk	83,446
Geary	9,683
Greenwood	194,429
Lyon	139,524
Marion	31,074
Morris	48,758
Osage (KS)	56,588
Pottawatomie	36,727
Riley	33,653
Wabaunsee	121,424
Wilson	19,074
Woodson	34,472
Nowata (OK)	17,900
Osage (OK)	108,605
Washington (OK)	23,553
Kay (OK)	8,124
Total	1,370,688
<i>* Denotes county was partly or completely covered by clouds during latest analysis.</i>	



Upcoming Look at Fires and Smoke

Breezy to windy conditions are expected today (Friday, April 29) and Saturday (April 30) across the Flint Hills with a chance of (severe) thunderstorms this evening/tonight too. Sunday (May 1) will feature more favorable conditions for prescribed fire with lighter winds and reasonable humidity. A good chance for rain moves into the region for Monday (May 2) with a break in weather on Tuesday (May 3) before another chance of rain arrives on Wednesday (May 4). Thursday (May 5) appears to stay dry with lingering rain chances ending by sunrise. Overall, the weather pattern for the next week is a wet one and green-up has been well established throughout the Flint Hills; This is likely marking the end of prescribed burning opportunities for most.

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 29, 2022.

For more information, contact:

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