

Flint Hills Wildland Fire Update

April 18, 2025

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/>



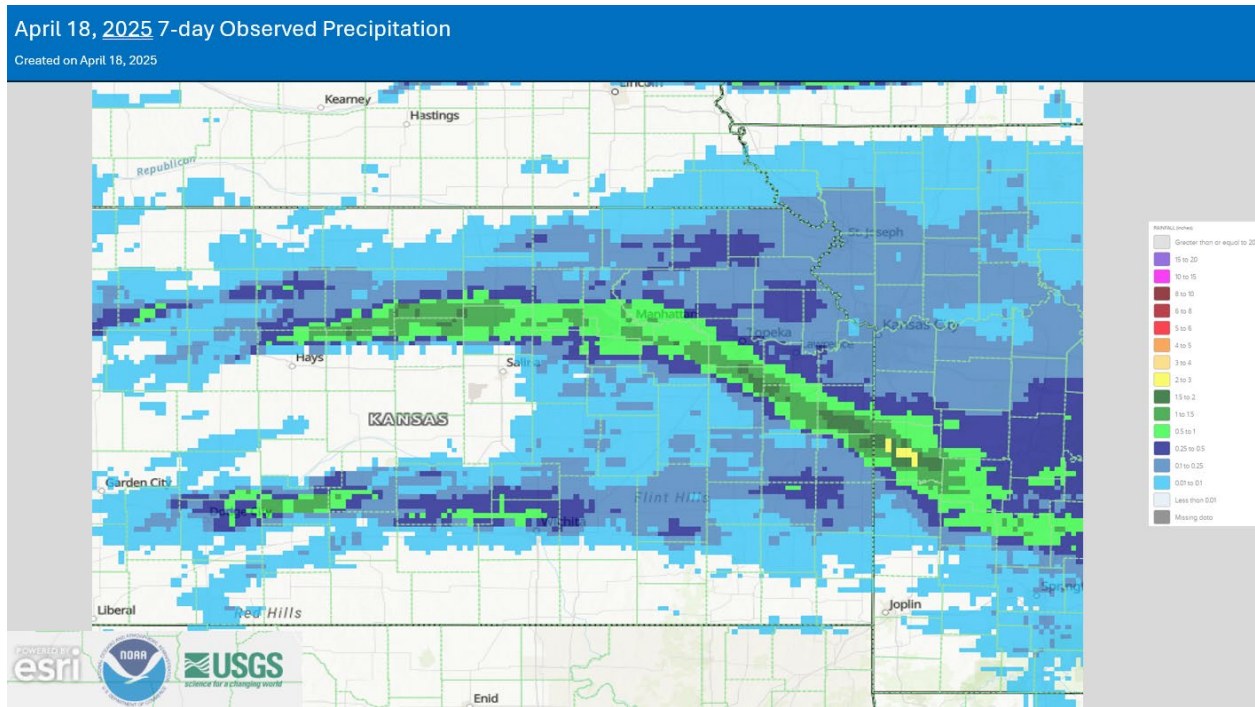
This website was developed as part of the development of the Kansas Flint Hills Smoke Management Plan. Kansas State University hosts the webpage, and it includes important information for ranchers and others who might be interested in the Flint Hills. It provides training, regulations, policies, publications,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

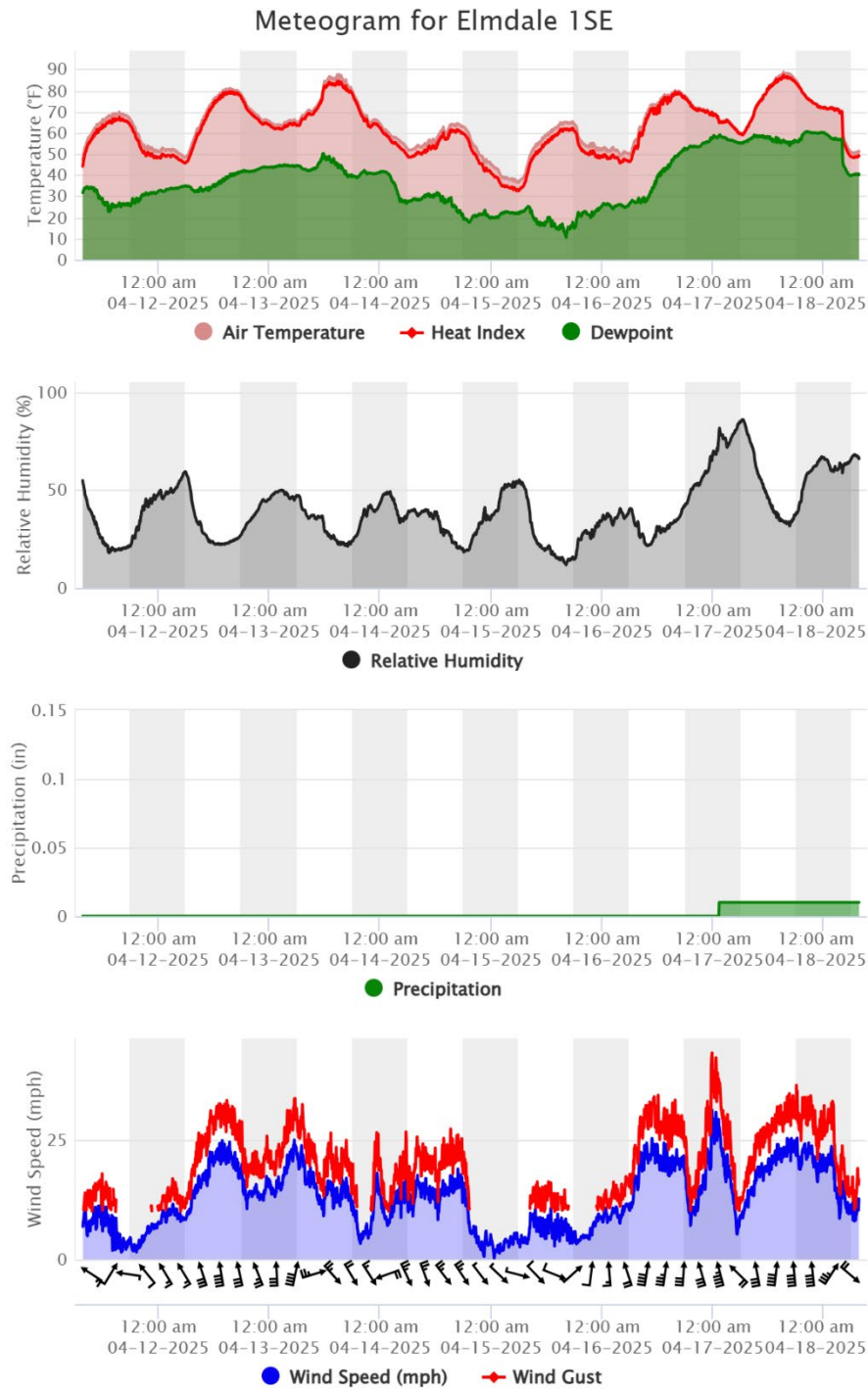
Temperatures in the mid-60s and sunny skies were observed last Friday (April 11) across the region. Light winds from the northwest (5-10 mph) in the morning changed to west-northwest by early evening and continued light. Warming temperatures in the low to mid 70s occurred on Saturday (April 12). Winds were light from the southeast early before increasing from the south-southeast at 15-25 mph with gusts near 40 mph. Mostly sunny skies with strong south winds of 15-25 mph and temperatures in the upper-80s were the rule on Sunday (April 13). A cold front moved through by early afternoon and switched winds to the west-southwest, then northwest by late afternoon. Partly cloudy skies dominated on Monday (April 14) with temperatures much cooler in the mid-60s with strong gusty northwest winds (15-25 mph). Tuesday (April 15) saw decreasing winds from the northwest throughout the day (5-15 mph) and temperatures reaching the mid-60s. Wednesday (April 16) early morning winds were from the south at 5-10 mph before increasing to 15-25 mph and gusty by late morning. Temperatures were mainly in the mid-70s. Slightly warmer temperatures under early cloudy skies from scattered overnight thunderstorms returned on Thursday (April 17) with highs in the lower-80s. Winds were strong from the south-southeast at 15-25 mph and gusts near 40 mph. Most areas of eastern Kansas received light precipitation (<.25 inch) over the last week. A narrow strip of heavier precipitation (.50 to 1.5 inch) from thunderstorms ran from Hays through Topeka and southeast to Osawatomie.

Precipitation



NOAA/NWS Observed Total Precip. for April 11-April 18, 2025.

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7-day (April 11-April 18, 2025) 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 11 – April 17, 2025, there was one air quality exceedance that was potentially influenced by prescribed fire within the Flint Hills.

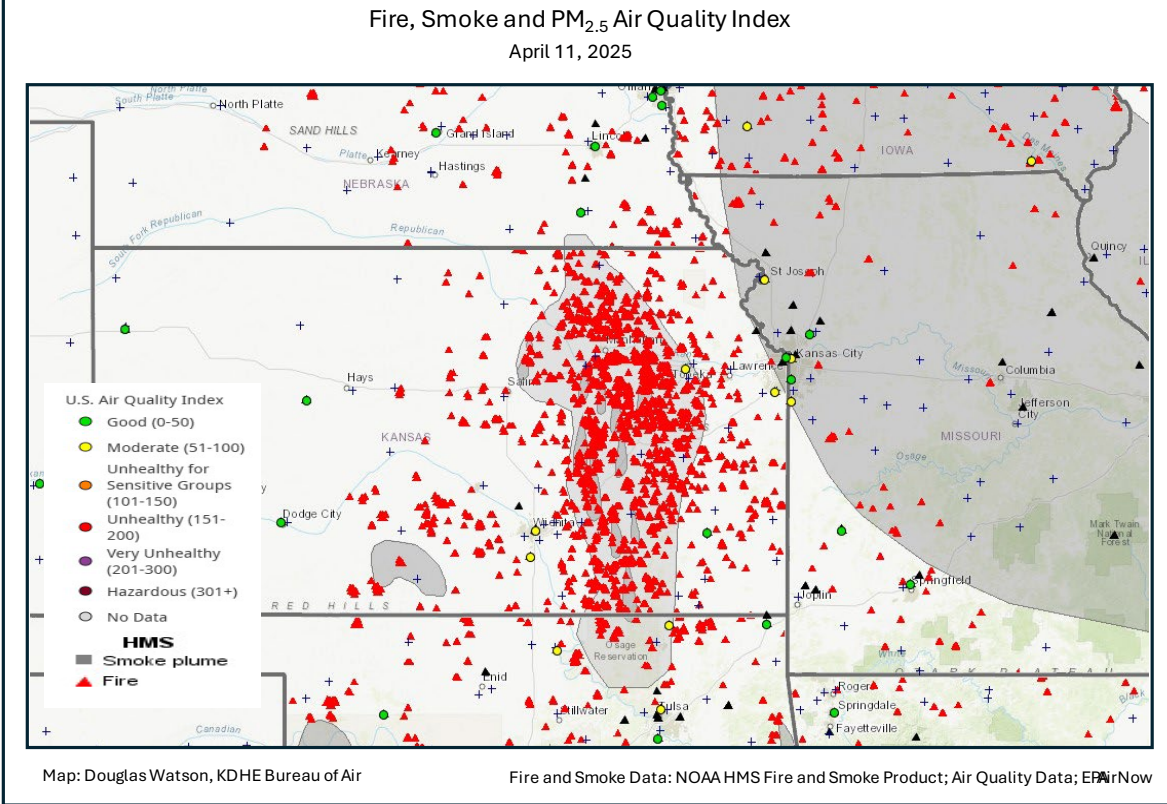
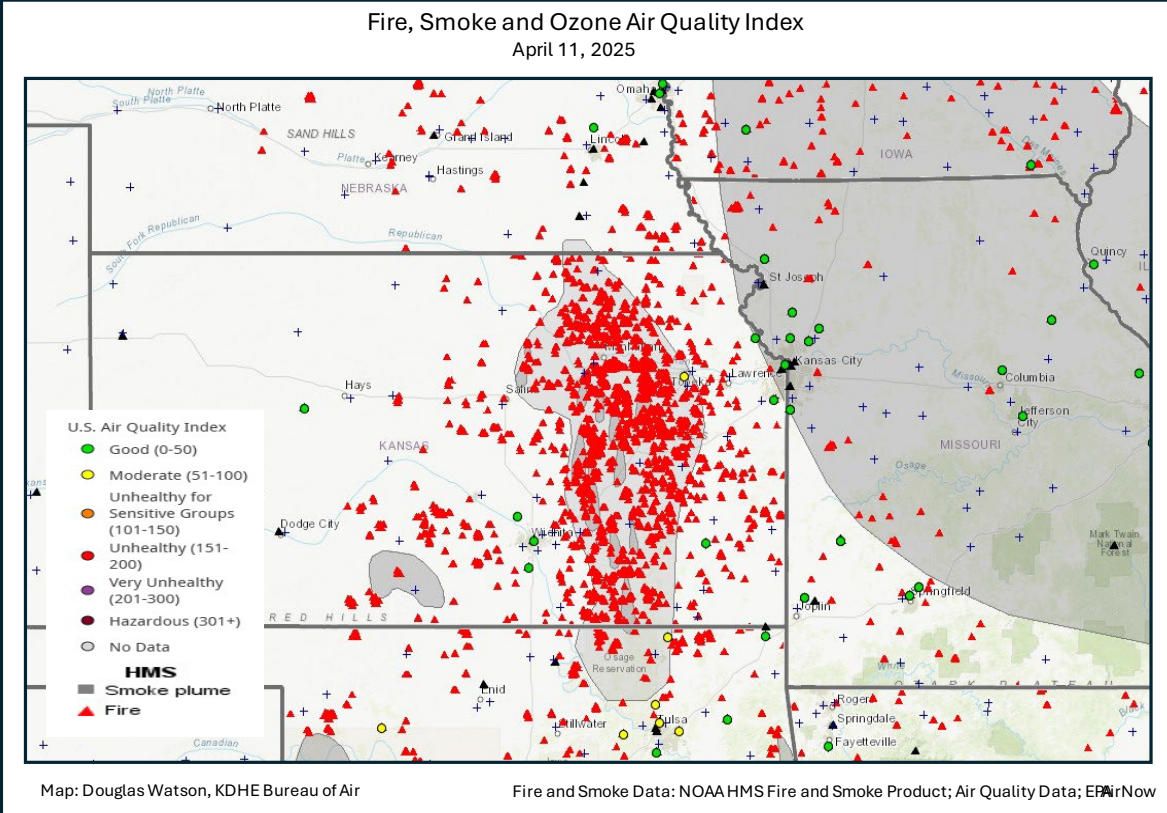
Ozone: Preliminary data indicates no exceedances of the NAAQS daily 8-hour average maximum of 70 ppb.

PM_{2.5}: Preliminary data indicates one exceedances of the NAAQS daily 24-hour average maximum of 35 µg/m³. This occurred at the KNI monitor in Topeka on April 16, 2025 with a value of 44.7 µg/m³

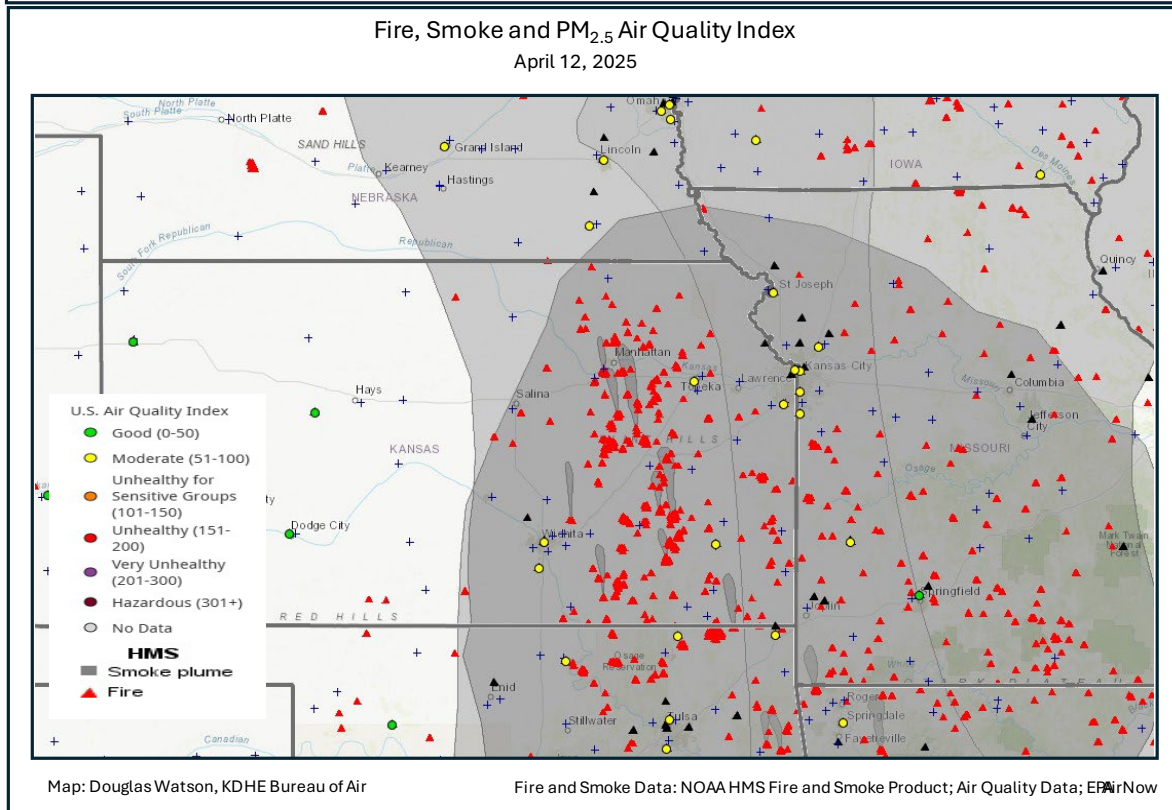
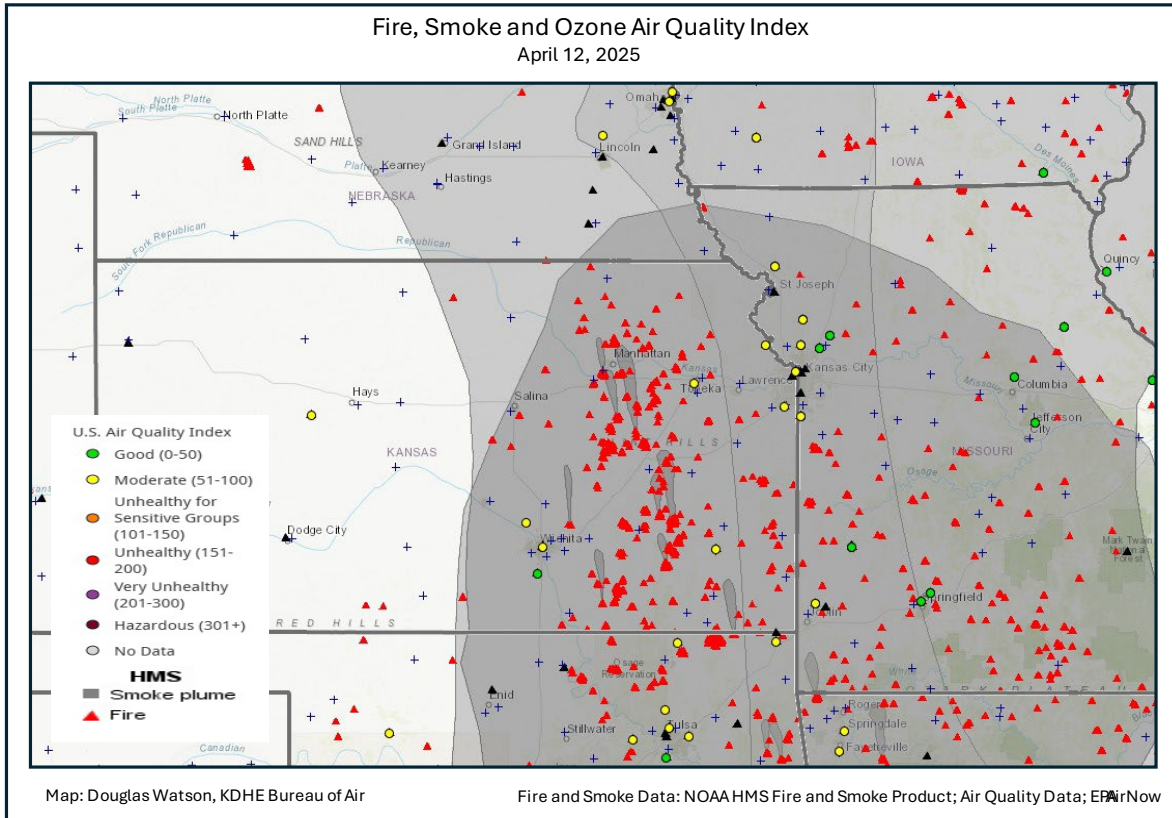
Prescribed fires activity was very heavy on Friday (April 11) across the Flint Hills with other fires scattered over the rest of the area and smoke plumes were mainly observed over the Flint Hills and parts of Missouri into Iowa with light northwest winds. Prescribed fire activity was lighter on Saturday (April 12). Large areas of smoke stretched from northern Oklahoma and Arkansas northward into Iowa and Nebraska. Elevated AQI values in both PM_{2.5} and Ozone were observed. Stronger southerly winds led to a decrease in prescribed fire activity across the area on Sunday (April 13), large smoke plumes were observed over eastern Missouri and Iowa. On Monday (April 14), prescribed fire activity continued light. On Tuesday (April 15), prescribed fires increased significantly across the area, including the Flint Hills. Ozone and PM AQI values were elevated as smoke plumes were observed over all the area. Prescribed fire activity was again observed on Wednesday (April 16) but was lighter in the Flint Hills. Smoke was observed over most of eastern Kansas, eastern Nebraska, western Missouri and Iowa. AQI values remained elevated. With some overnight rainfall and stronger southerly winds, prescribed fire activity was lighter across all states in the Midwest on Thursday (April 17). Smoke was only visible over far northeast Arkansas and southeast Missouri. Moderate PM_{2.5} AQI values continued in the area.

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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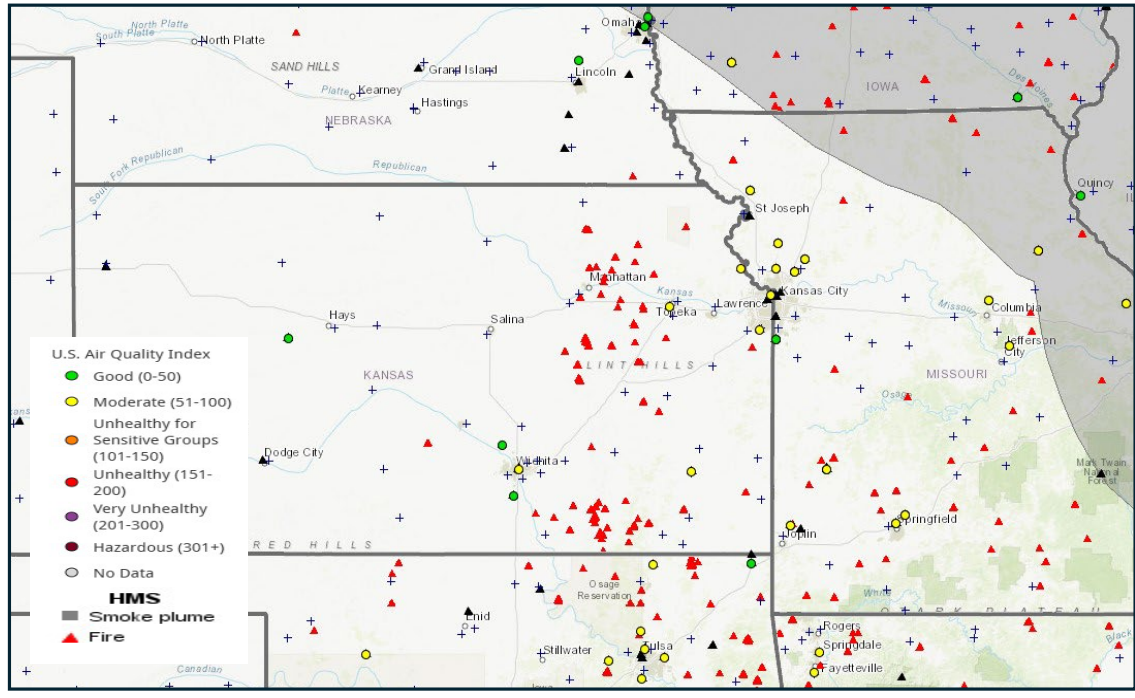
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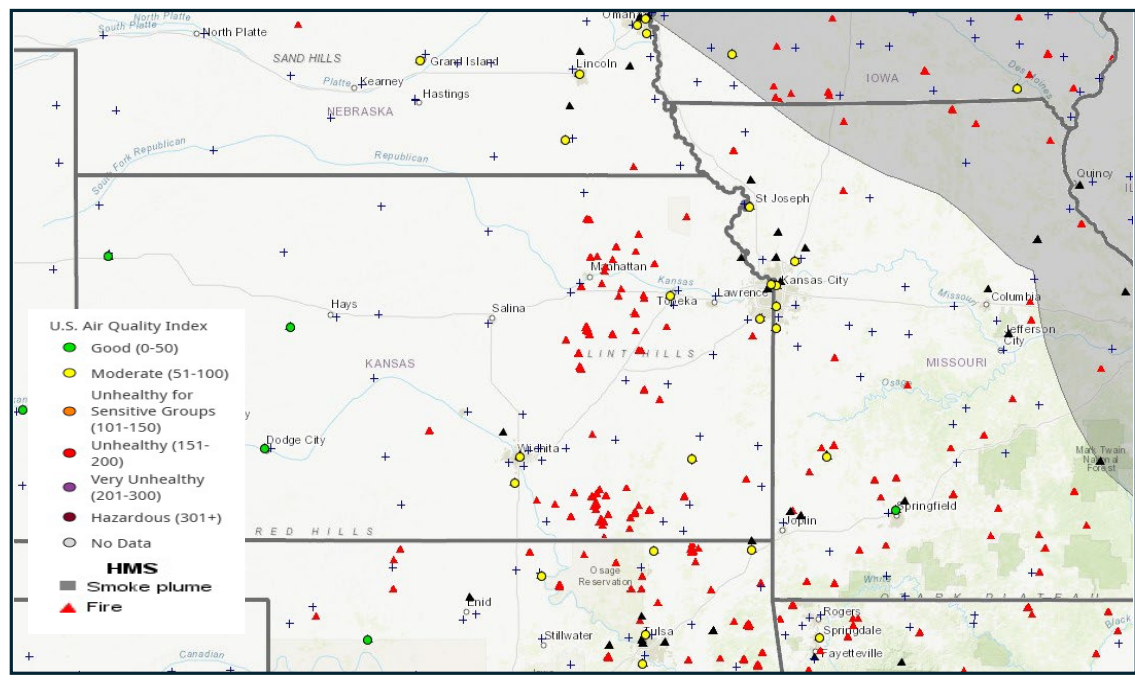
Fire, Smoke and Ozone Air Quality Index April 13, 2025



Map: Douglas Watson, KDHE Bureau of Air

Fire and Smoke Data: NOAA HMS Fire and Smoke Product; Air Quality Data: EPA Air Now

Fire, Smoke and PM_{2.5} Air Quality Index April 13, 2025



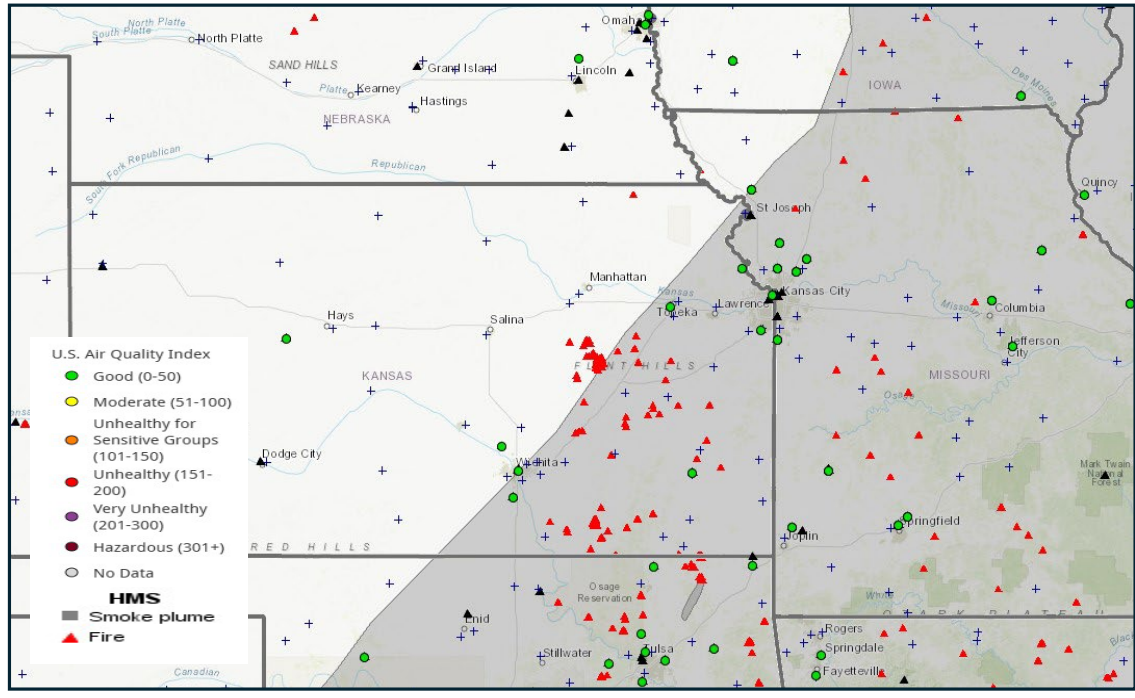
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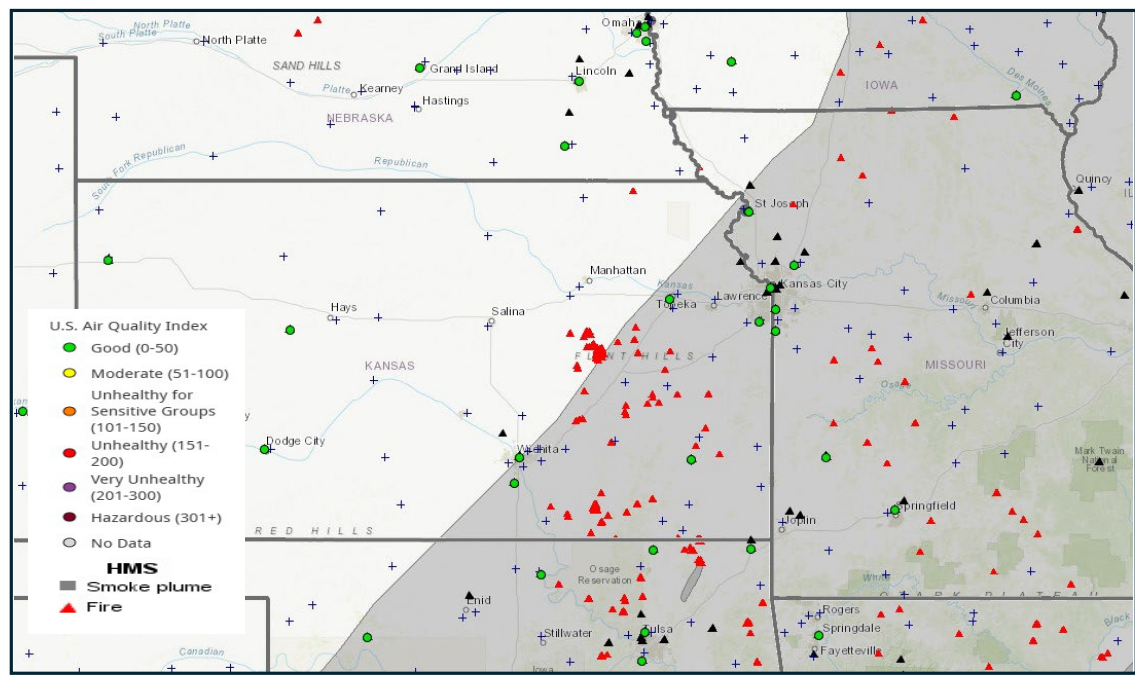
Fire, Smoke and Ozone Air Quality Index April 14, 2025



Map: Douglas Watson, KDHE Bureau of Air

Fire and Smoke Data: NOAA HMS Fire and Smoke Product; Air Quality Data: EPA Air Now

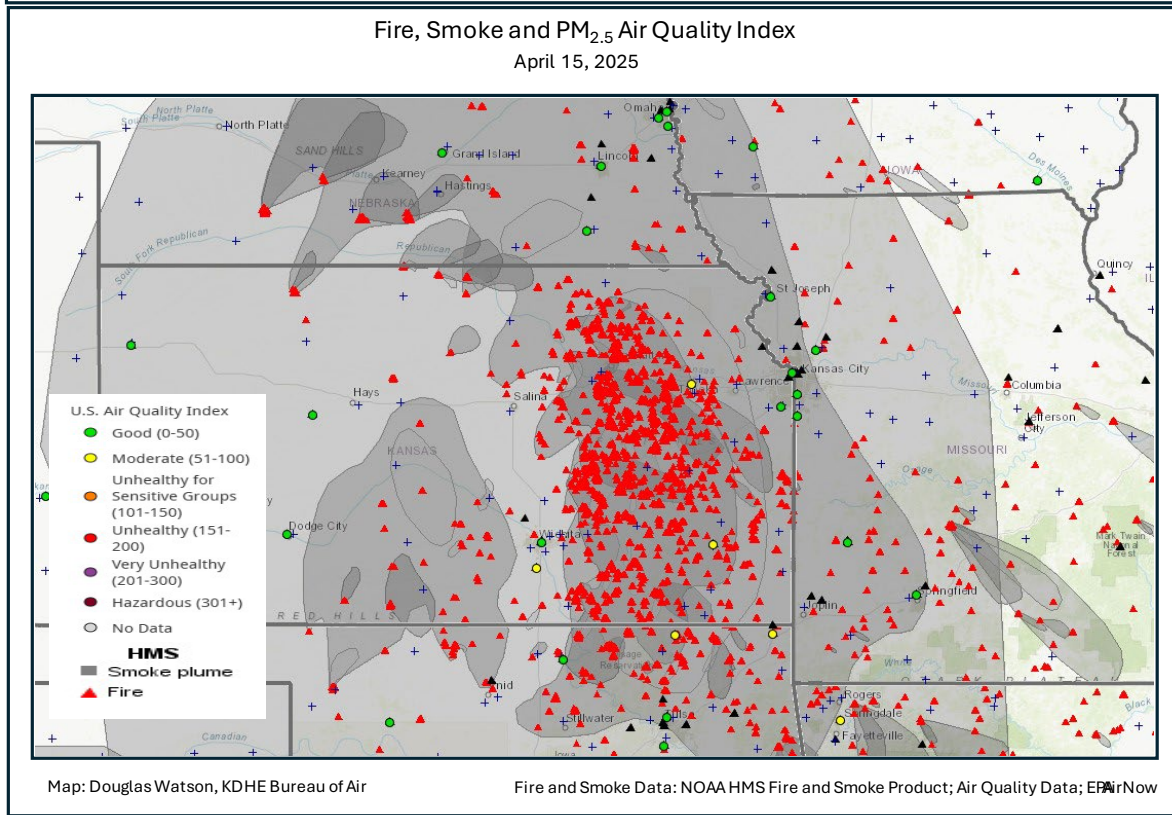
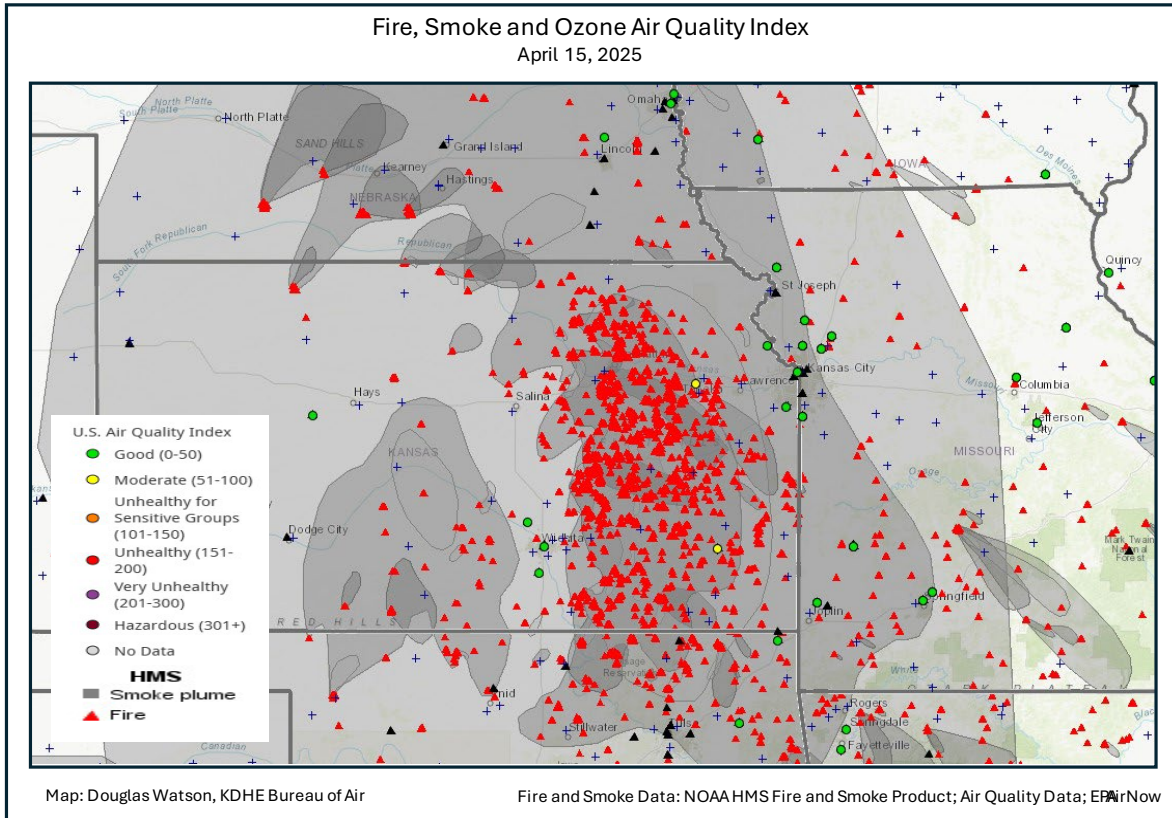
Fire, Smoke and PM_{2.5} Air Quality Index April 14, 2025



Map: Douglas Watson, KDHE Bureau of Air

Fire and Smoke Data: NOAA HMS Fire and Smoke Product; Air Quality Data: EPA Air Now

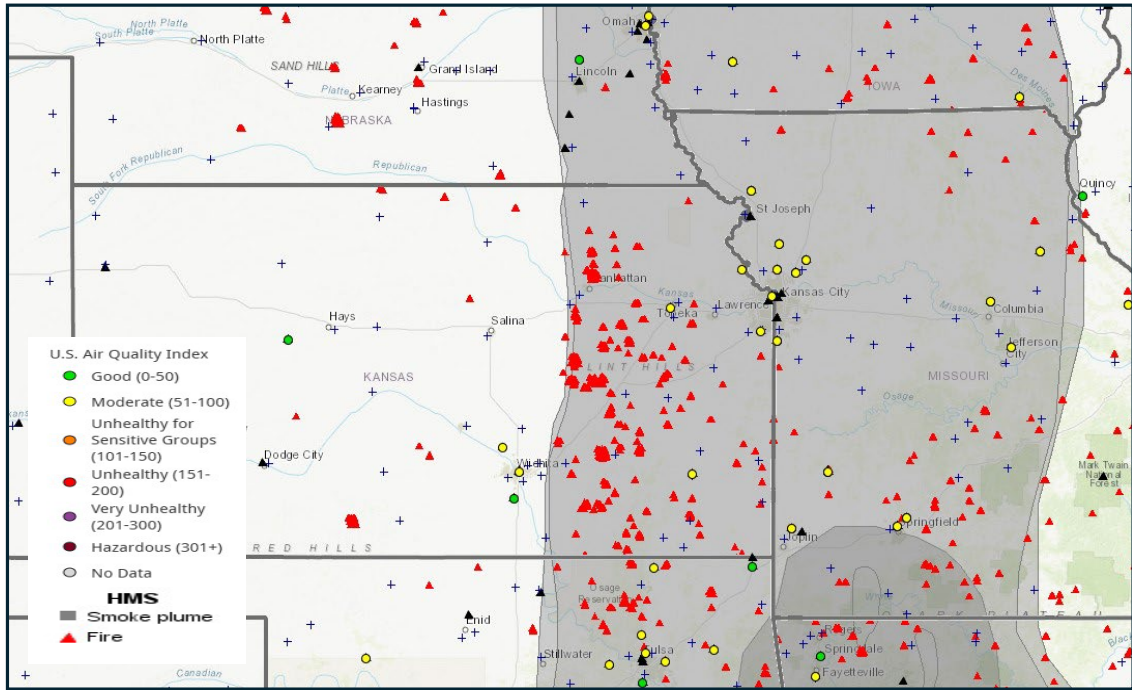
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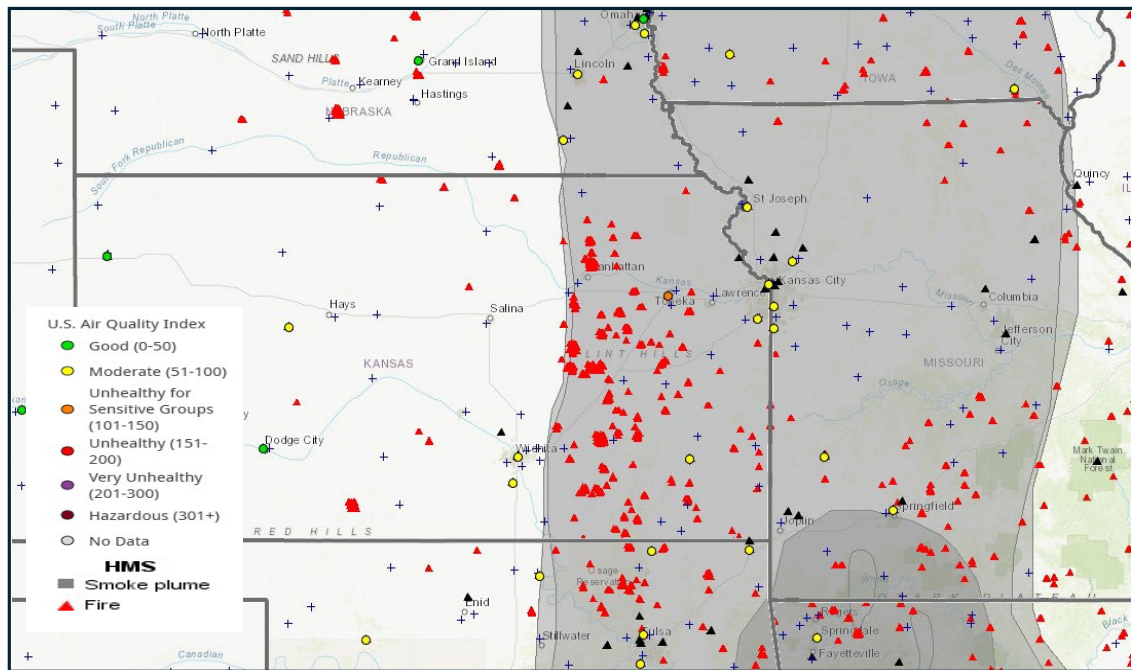
Fire, Smoke and Ozone Air Quality Index April 16, 2025



Map: Douglas Watson, KDHE Bureau of Air

Fire and Smoke Data: NOAA HMS Fire and Smoke Product; Air Quality Data: EPA Air Now

Fire, Smoke and PM_{2.5} Air Quality Index April 16, 2025



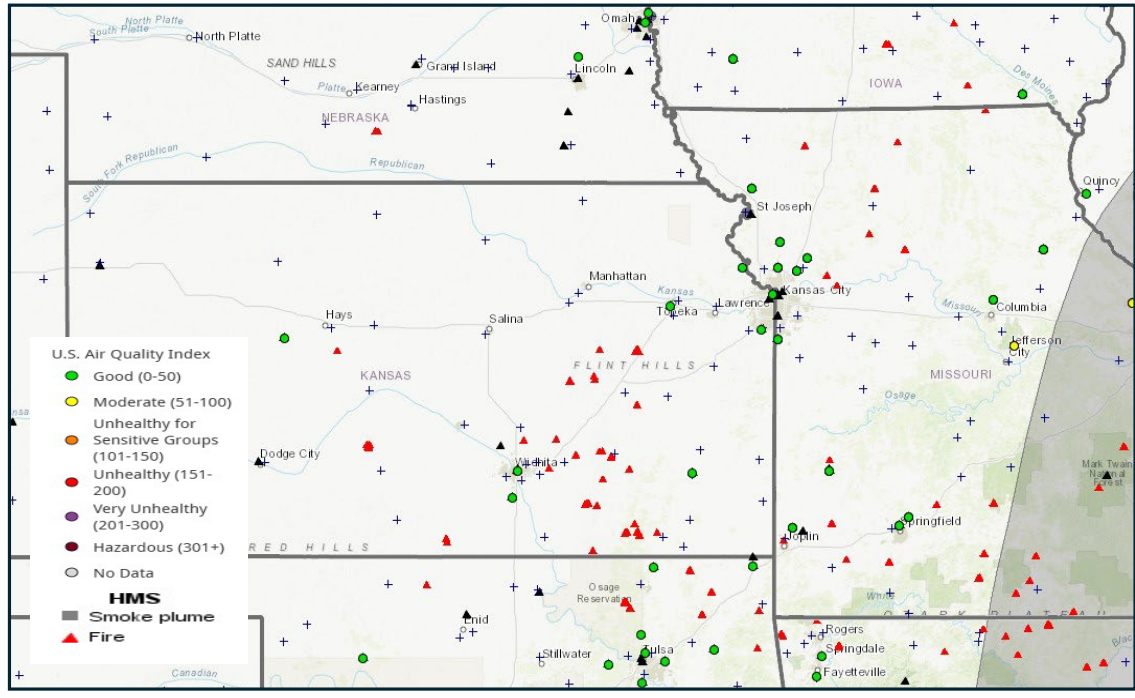
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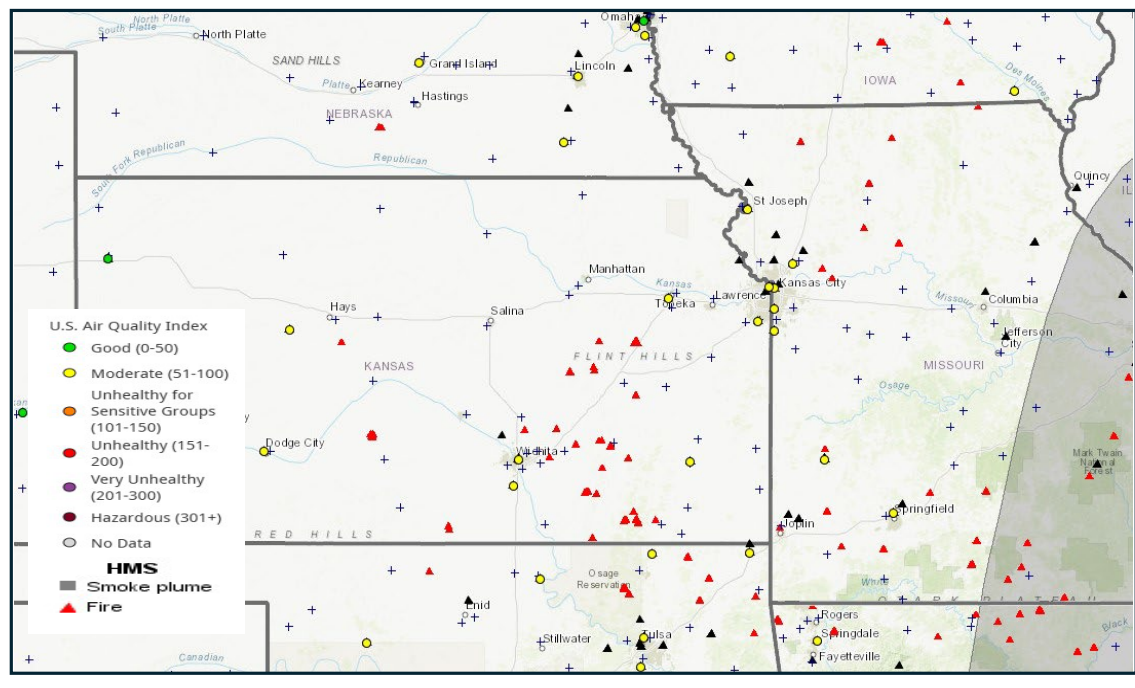
Fire, Smoke and Ozone Air Quality Index April 17, 2025



Map: Douglas Watson, KDHE Bureau of Air

Fire and Smoke Data: NOAA HMS Fire and Smoke Product; Air Quality Data: EPA Air Now

Fire, Smoke and PM_{2.5} Air Quality Index April 17, 2025

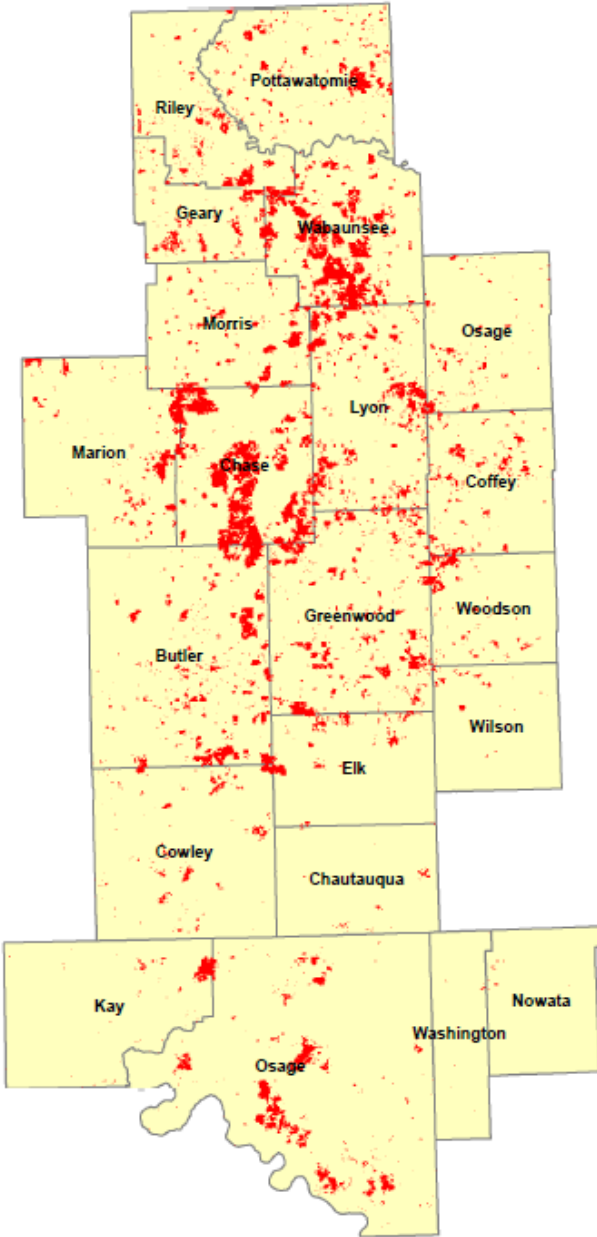


Map: Douglas Watson, KDHE Bureau of Air

Fire and Smoke Data: NOAA HMS Fire and Smoke Product; Air Quality Data: EPA Air Now



Flint Hills Acreage Burned (March 5 – April 7, 2025)



<u>Counties</u>	<u>Acres Burned</u>	
Butler	66,457	*
Chase	117,223	
Chautauqua	2,116	*
Coffey	21,529	
Cowley	16,325	*
Elk	13,375	*
Geary	20,031	
Greenwood	64,743	
Lyon	60,217	
Marion	26,672	
Morris	26,178	
Osage (KS)	11,429	
Pottawatomie	30,981	
Riley	26,672	
Wabaunsee	101,207	
Wilson	3,444	*
Woodson	13,390	
Nowata (OK)	649	*
Osage (OK)	56,526	*
Washington (OK)	278	*
Kay (OK)	8,371	
Total	687,813	
* Denotes county was partly or completely covered by clouds during latest analysis.		



Upcoming Look at Fires and Smoke

Mostly cloudy skies will be the rule on Friday across the Flint Hills with scattered rain showers. Winds will remain out of the north at 10-15 mph (gust to 20 mph) for most of the day. These conditions may limit prescribed fire activity today.

Winds will shift to the northeast at 10-20 mph with gust to 25 mph through the day Saturday. Highs will be cool in the lower 50s with chances of precipitation throughout the day. Prescribed fire activity should be limited.

Showers and possible thunderstorms and cool temperatures will continue Sunday with afternoon highs in the mid-50s. Winds will be out of the northeast early, then northwest at 15 mph. These conditions should continue to limit fire activity.

Monday will see warmer temperatures in the low-70s with light westerly winds around 10 mph becoming southwest by afternoon. Depending on rainfall amounts over the weekend and how quickly drying occurs, an increase in prescribed fire activity might be expected to occur.

Temperatures will be in the mid-70s on Tuesday and upper 60s on Wednesday. Winds will be moderate on Tuesday from the south. Prescribed fire activity could again be possible on Tuesday. Chances of precipitation, including thunderstorms, increase on Wednesday and Thursday which may inhibit fire activity.

Ideal Weather Conditions for Prescribed Burning

******This Graphic is Currently Unavailable from the NWS******

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 more information, contact:

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