

Flint Hills Wildland Fire Update

March 11, 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.

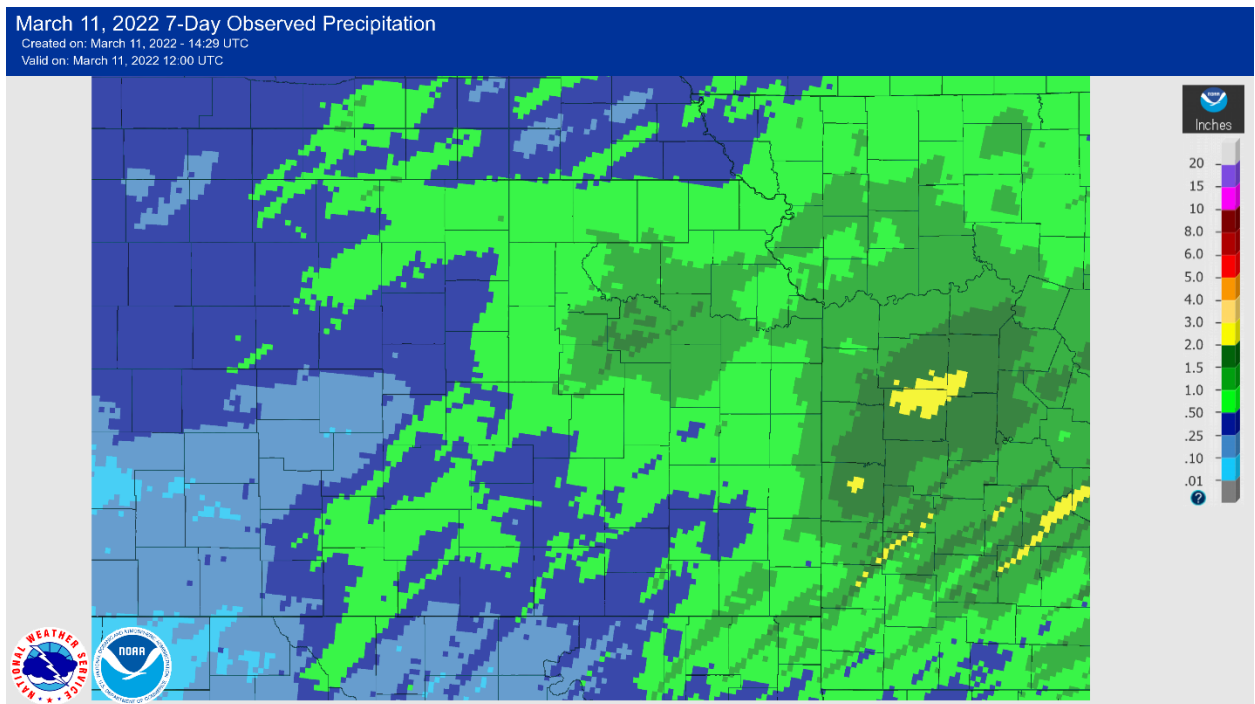


Meteorology

Strong winds were observed on both Friday (March 4) and Saturday (March 5) across the Flint Hills with relative humidity values dropping into the teens on Saturday too leading to Red Flag Warnings and contributing to multiple wildfires across the region. The first storm system of the week brought rain and snow to the Flint Hills on Sunday (March 6). Temperatures were well below average for the remainder of the week with highs struggling in the 30s and 40s for most.

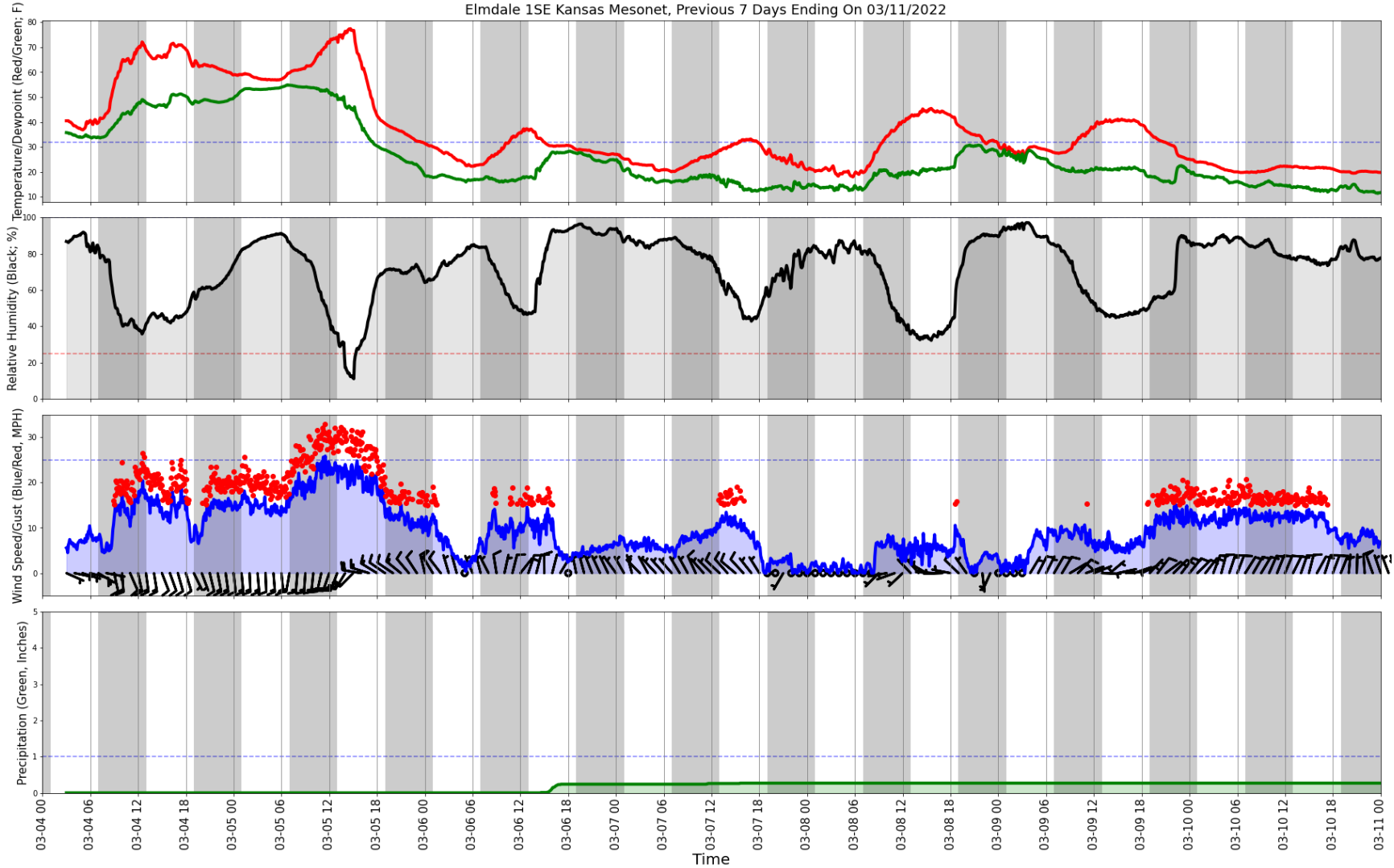
Two more storm systems impacted the Flint Hills from late Wednesday (March 9) through Thursday (March 10) and another impacting the southern Flint Hills by late Thursday. The first system brought snow to the northern Flint Hills and the second brought light snow to the southern Flint Hills. This has left nearly the entire Flint Hills covered in at least some snow as of this Friday morning (March 11). Overall, the region saw liquid precipitation totals ranging from a quarter-inch to upwards of an inch for the week.

Precipitation



NOAA/NWS Observed Total Precipitation for Mar. 4-10, 2022.

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7-day (Mar. 4-10, 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 4 to March 10, 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.

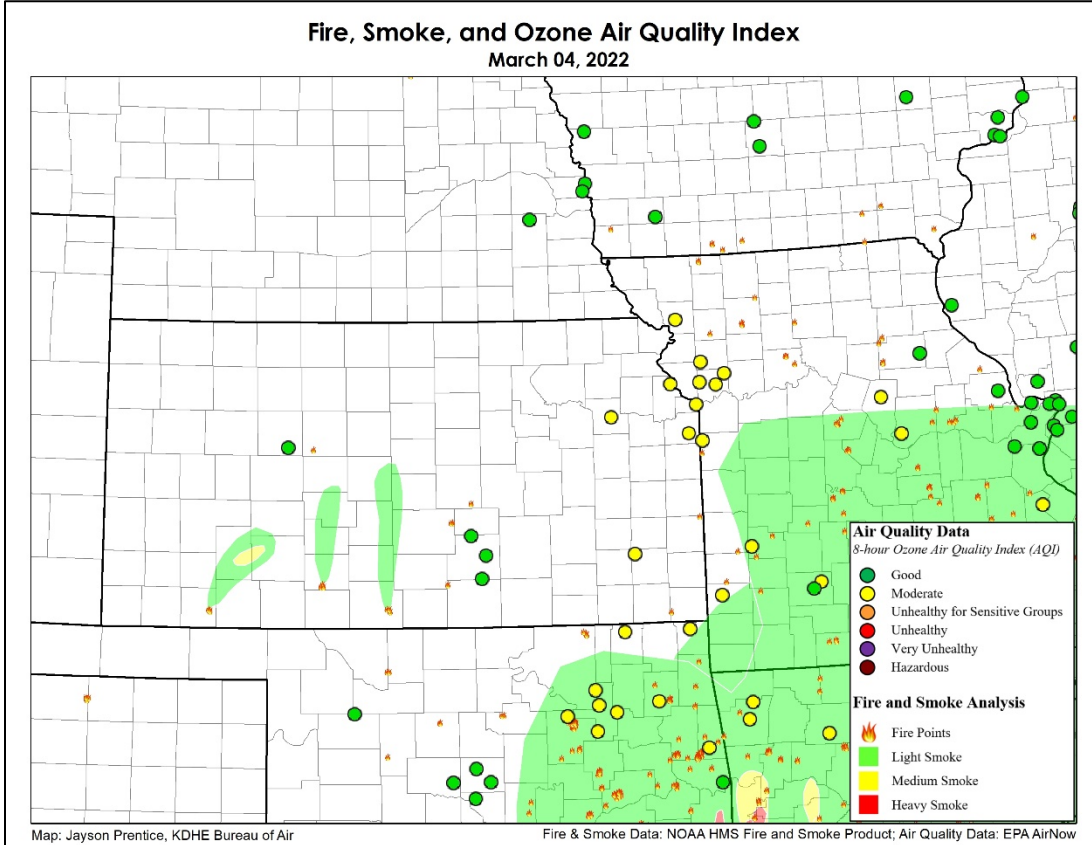
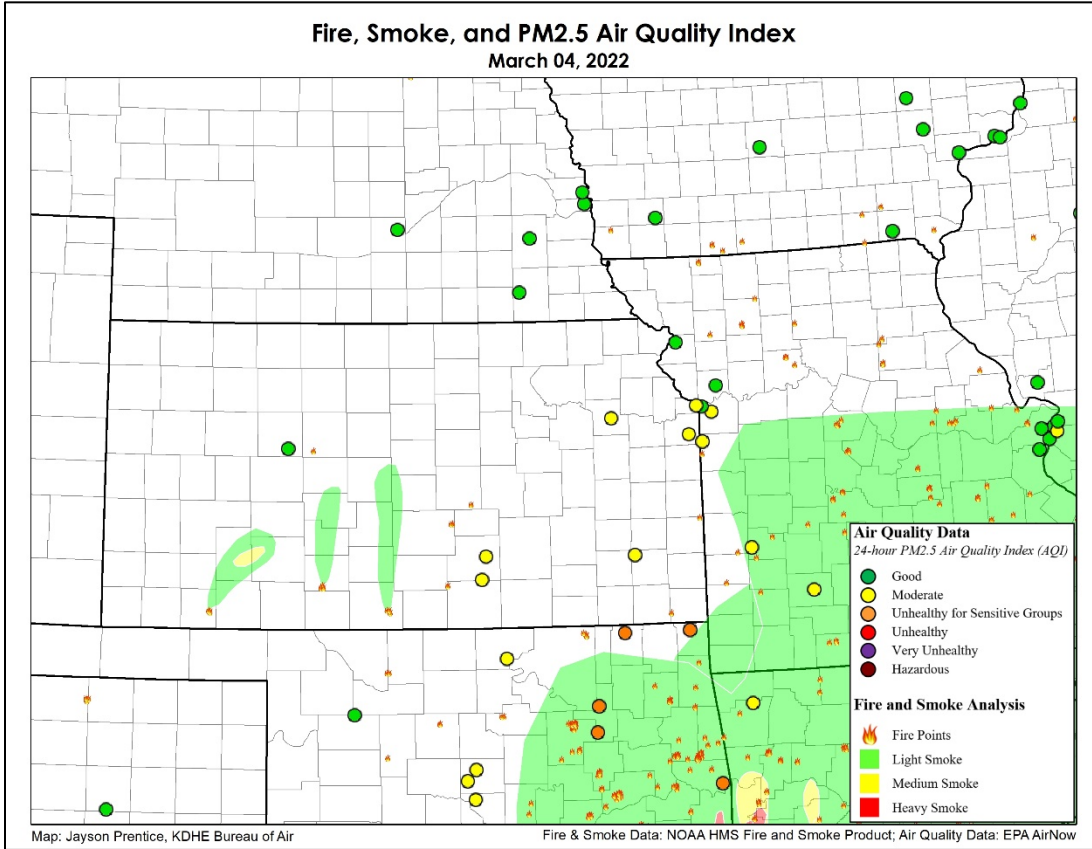
PM_{2.5}: Preliminary data indicates no exceedances of the NAAQS daily 24-hour average maximum of 35 µg/m³.

Strong south winds on Friday (March 4) led to near-zero prescribed fires within the Flint Hills region. Lighter winds to the south and east of the Flint Hills allowed continued burning and smoke from these fires – especially over eastern Oklahoma – contributed to several exceedances of the PM_{2.5} NAAQS. Strong winds and very dry conditions contributed to several wildfires on Saturday (March 5) in/near the Flint Hills.

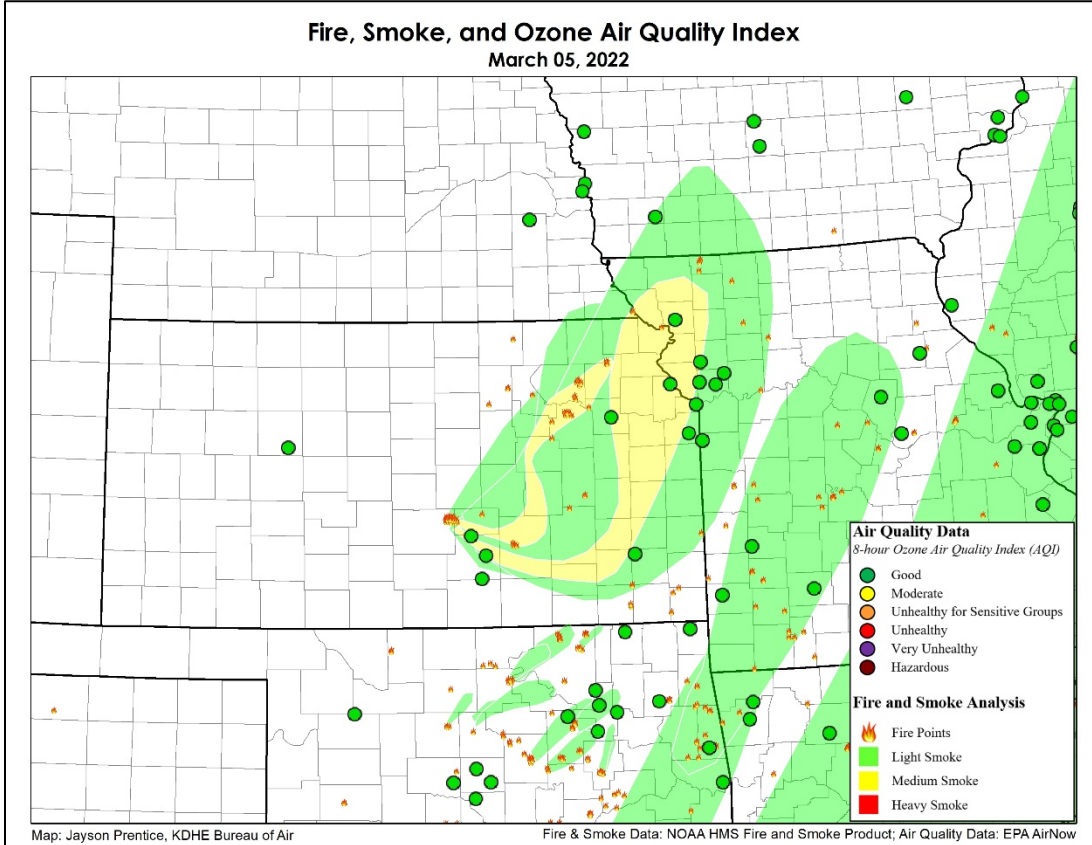
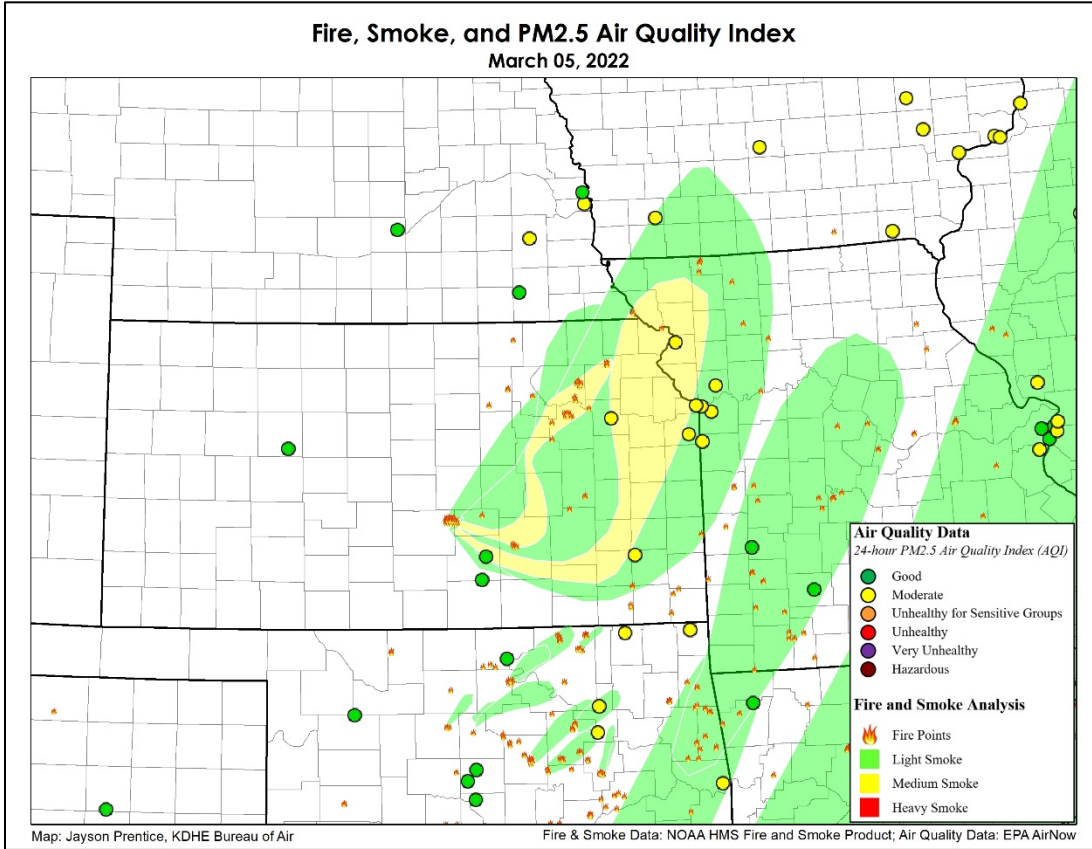
A storm system brought rain and snow to the region on Sunday (March 6) which precluded any fire activity. Numerous fire detections were analyzed on Monday (March 7) across the region, all under snow cover, likely indicating a large amount of pile burns being conducted. Temperatures remained seasonably cold for Tuesday (March 8) and Wednesday (March 9) which led to only isolated fire activity within the Flint Hills. Another storm system on Thursday (March 10) brought snow to the northern Flint Hills and otherwise cold temperatures to the region. Even limited fire activity to the south of the Flint Hills led to Moderate Air Quality Index for several monitors in Oklahoma, likely owing to the weak transport winds and more importantly a strong inversion which trapped smoke near the surface.

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.

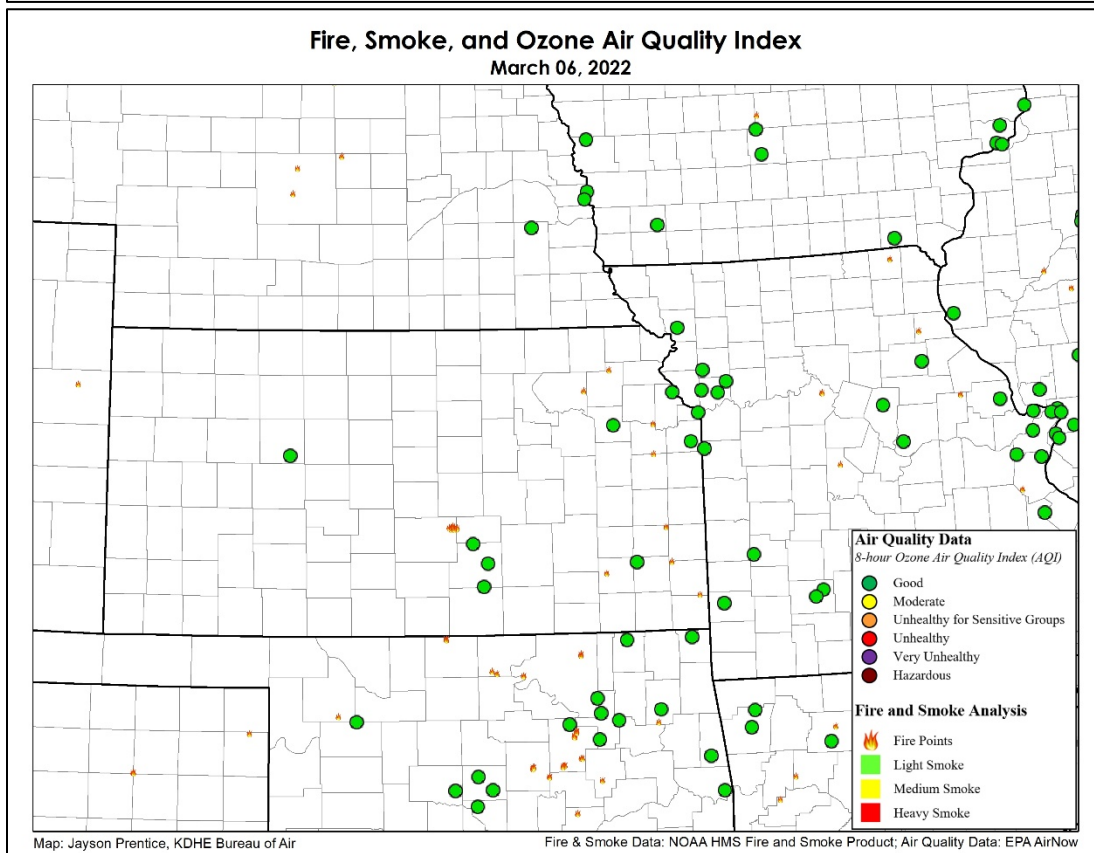
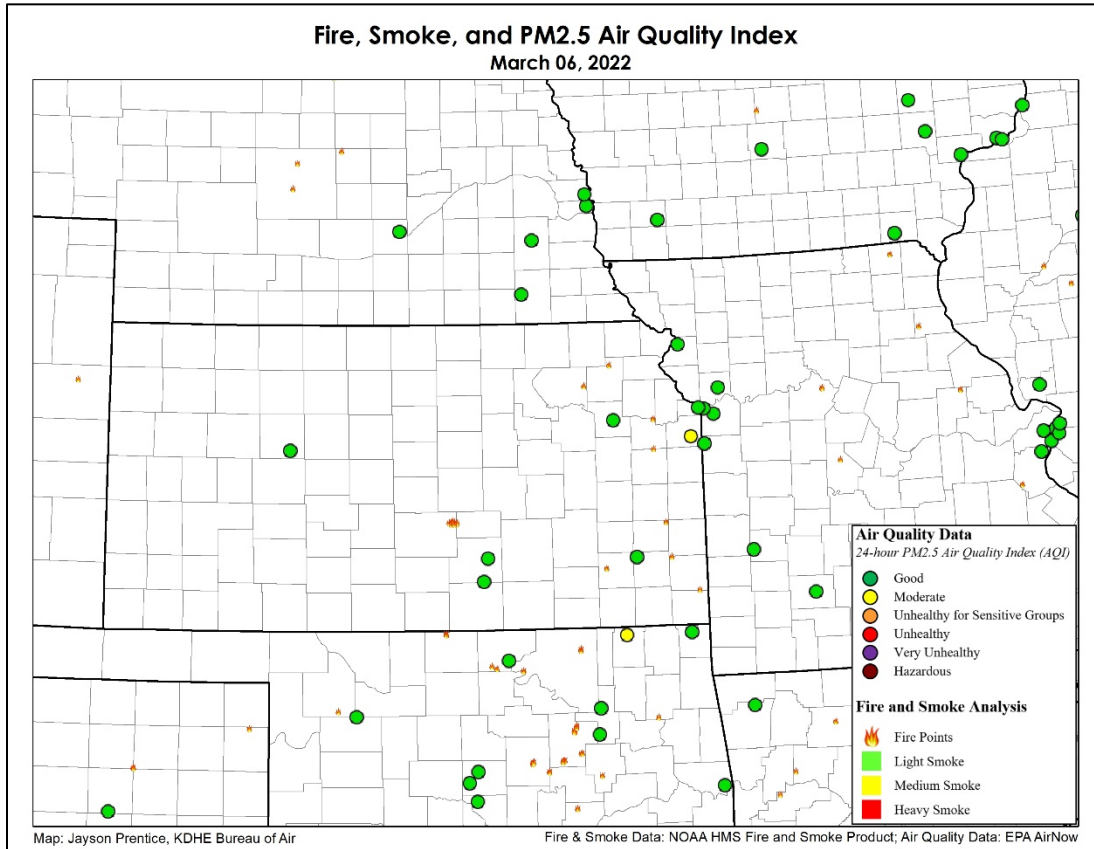
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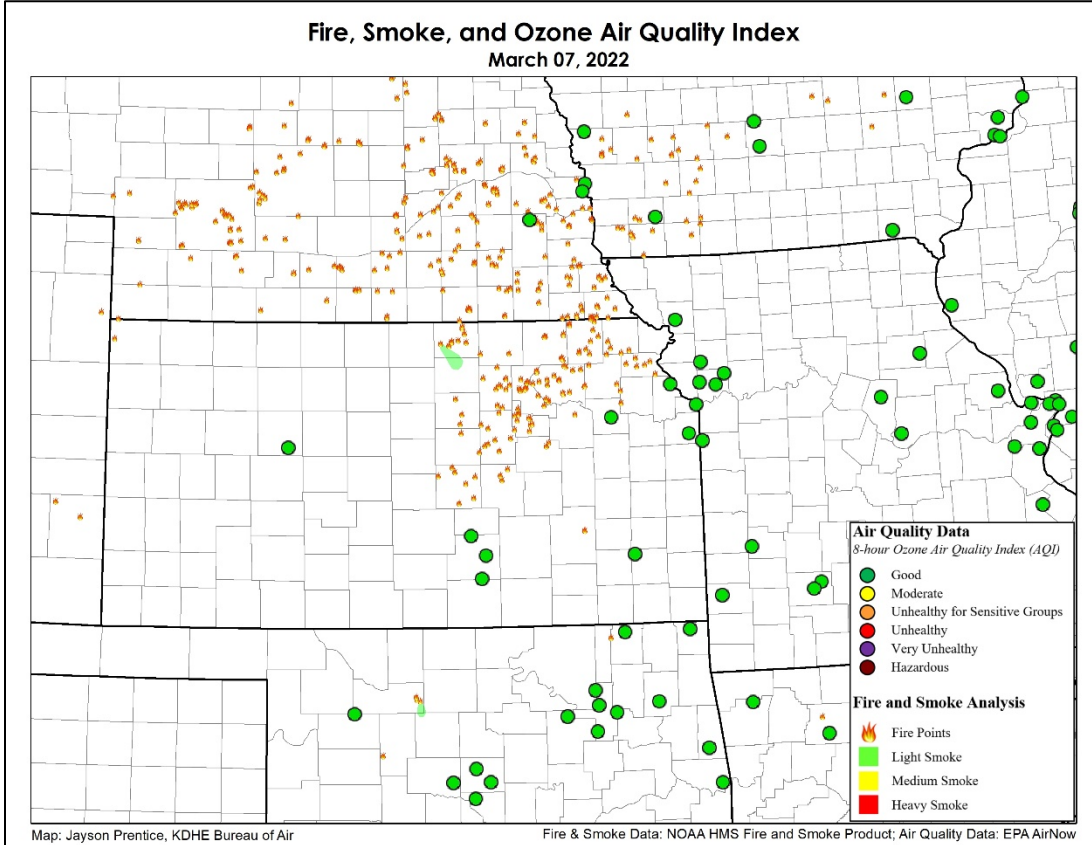
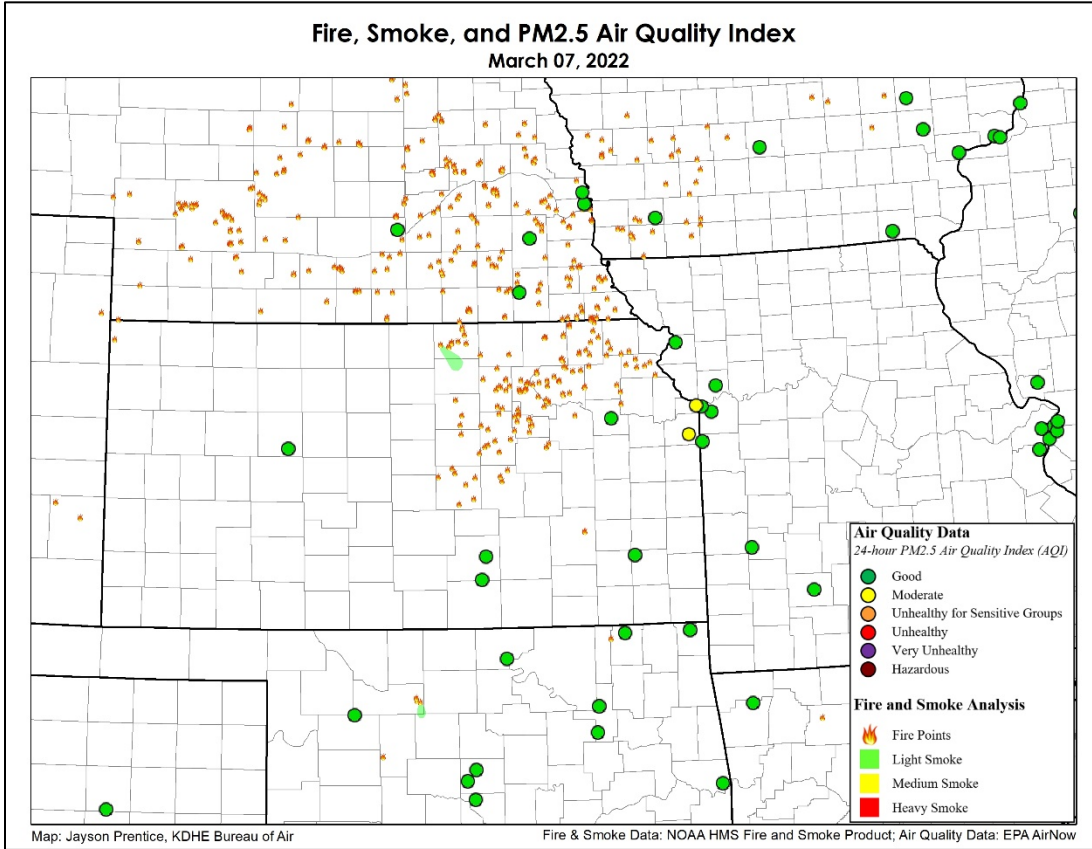
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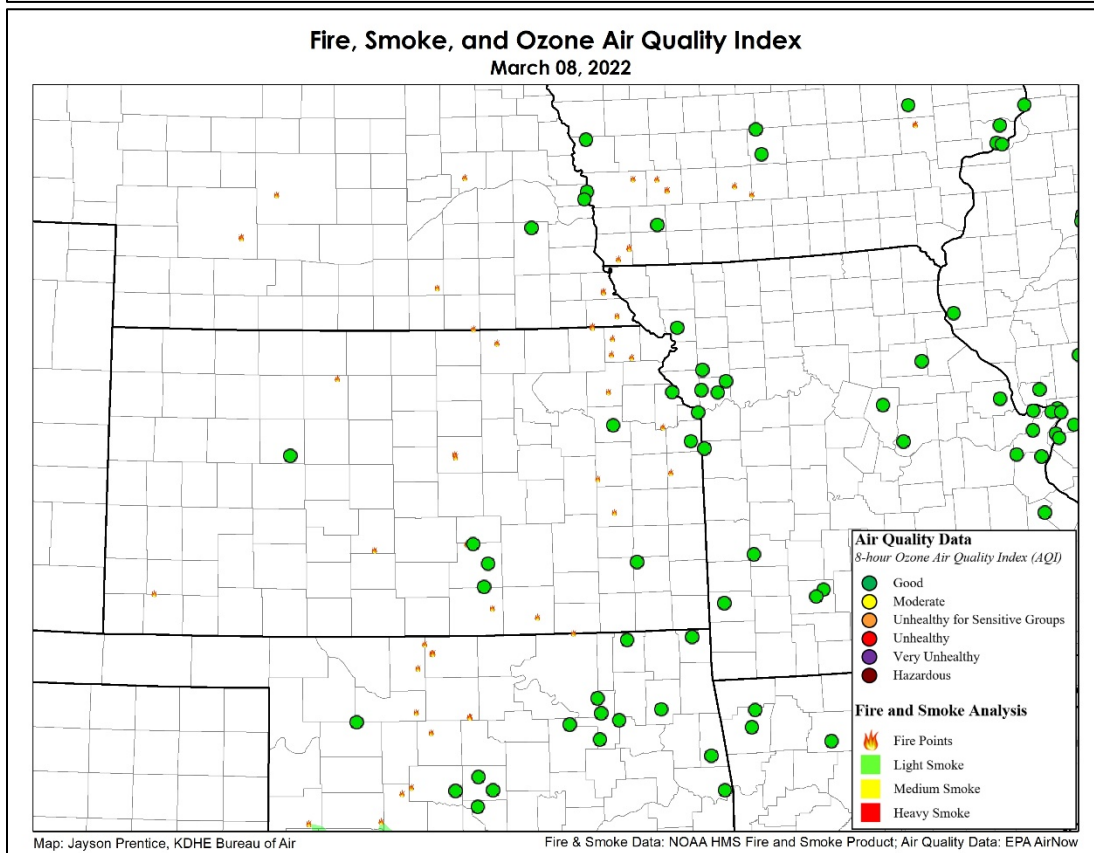
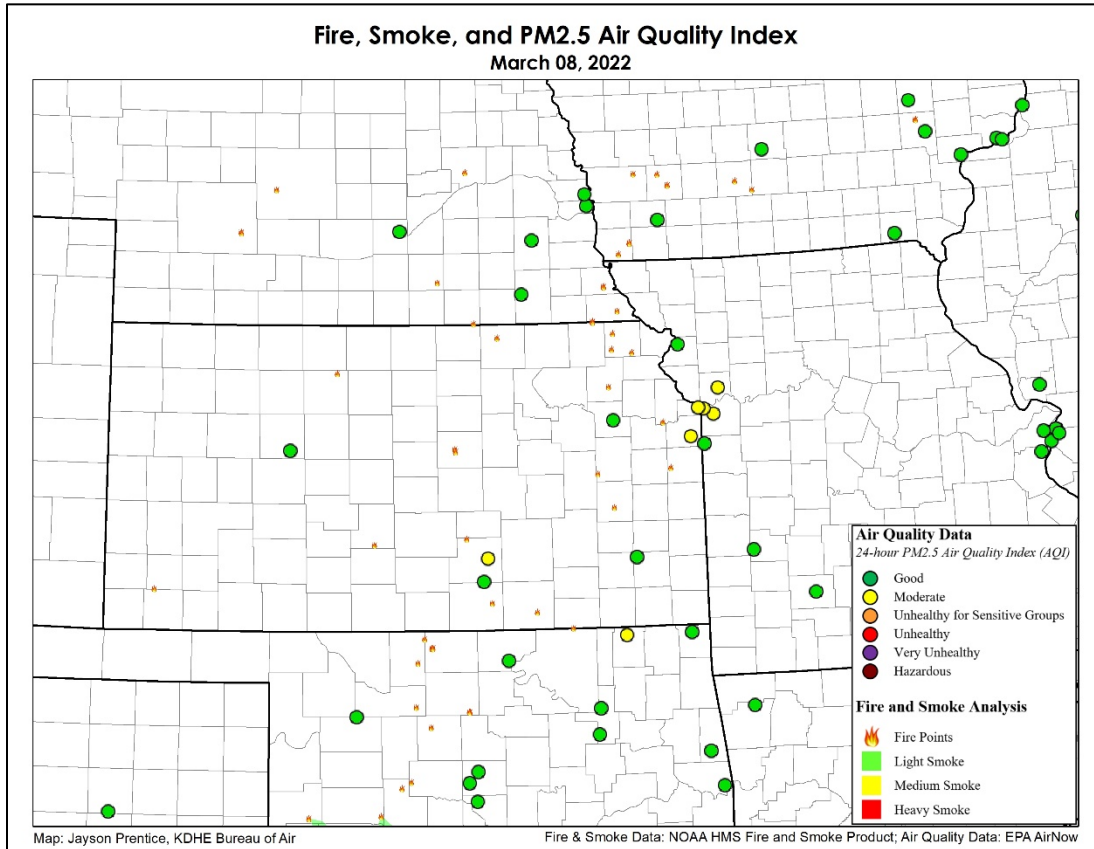
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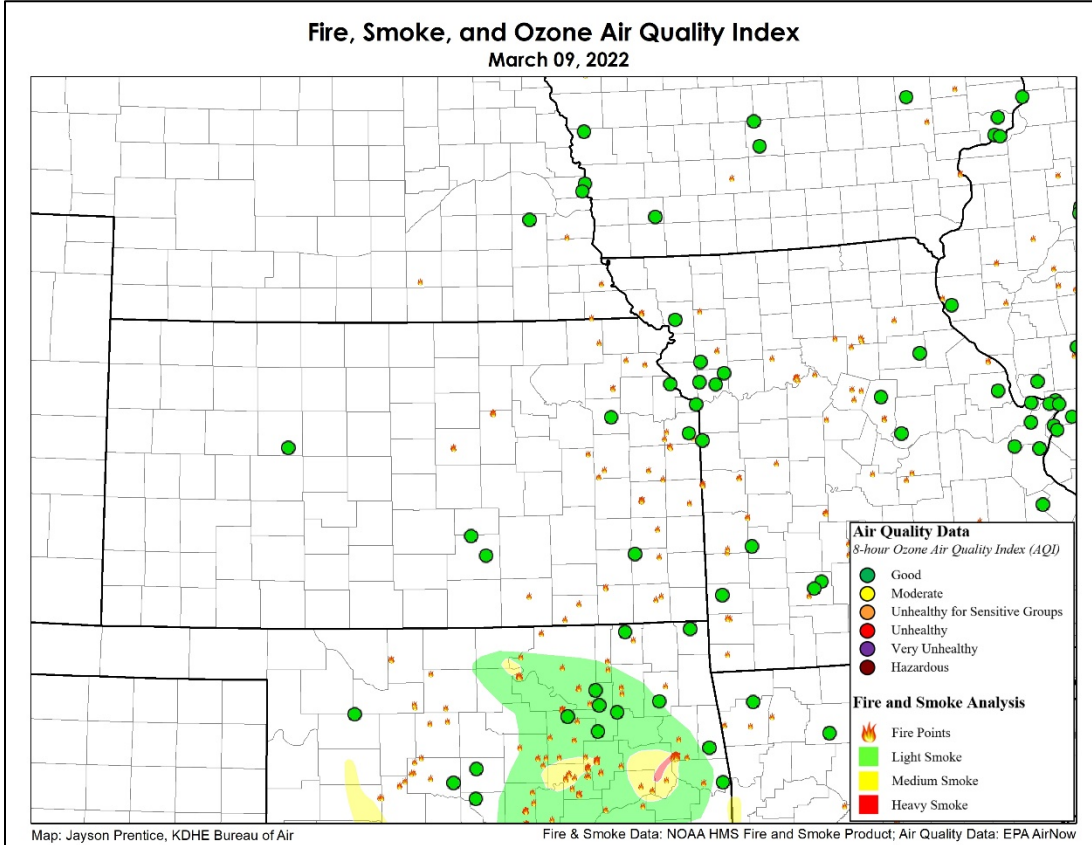
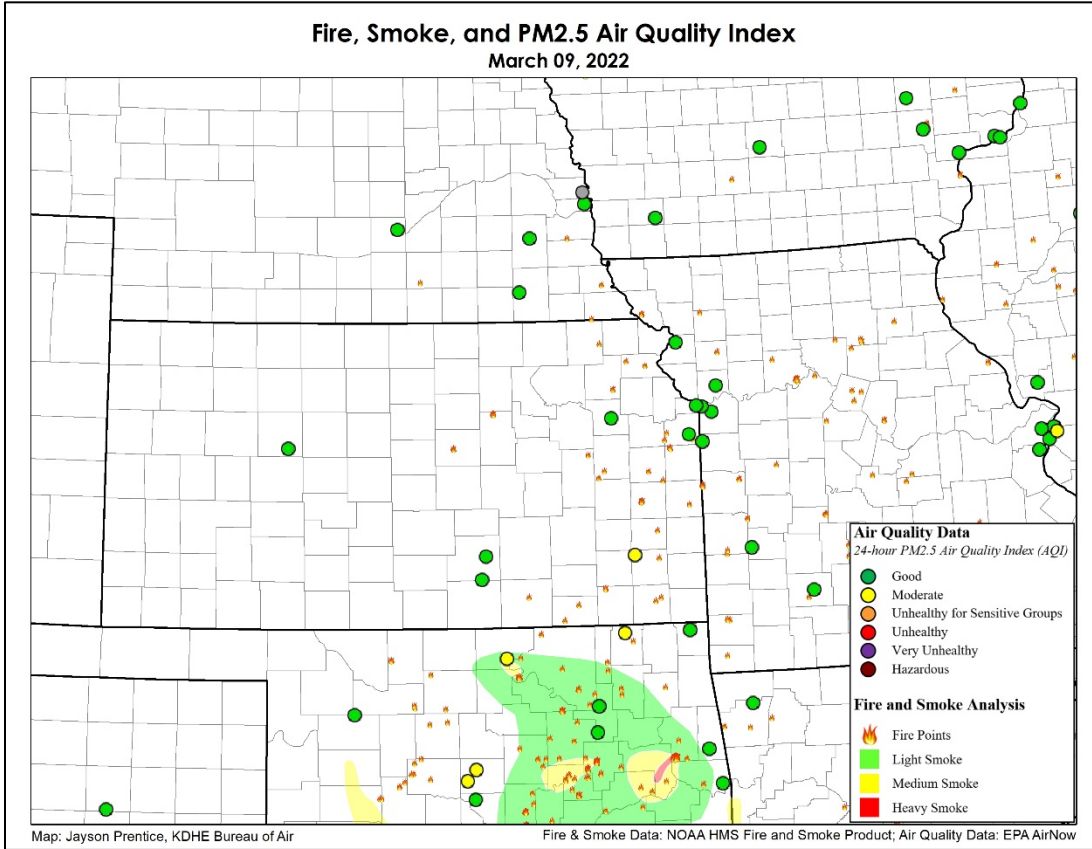
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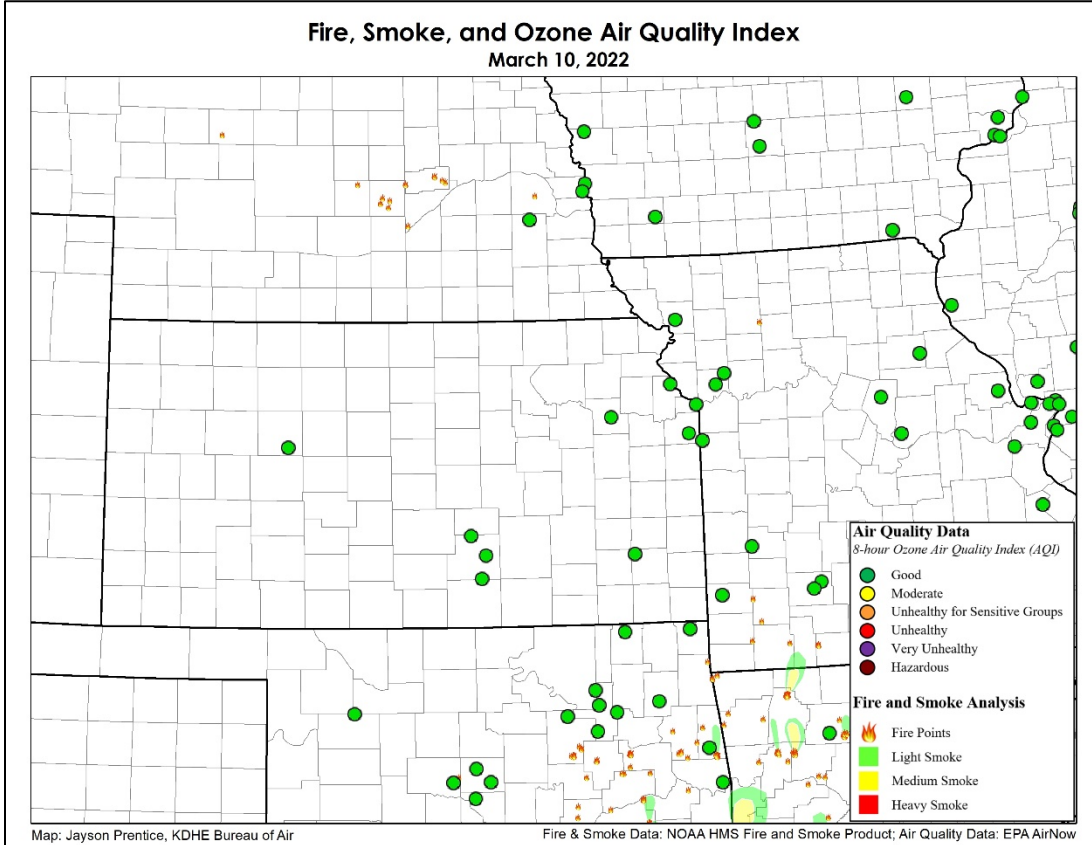
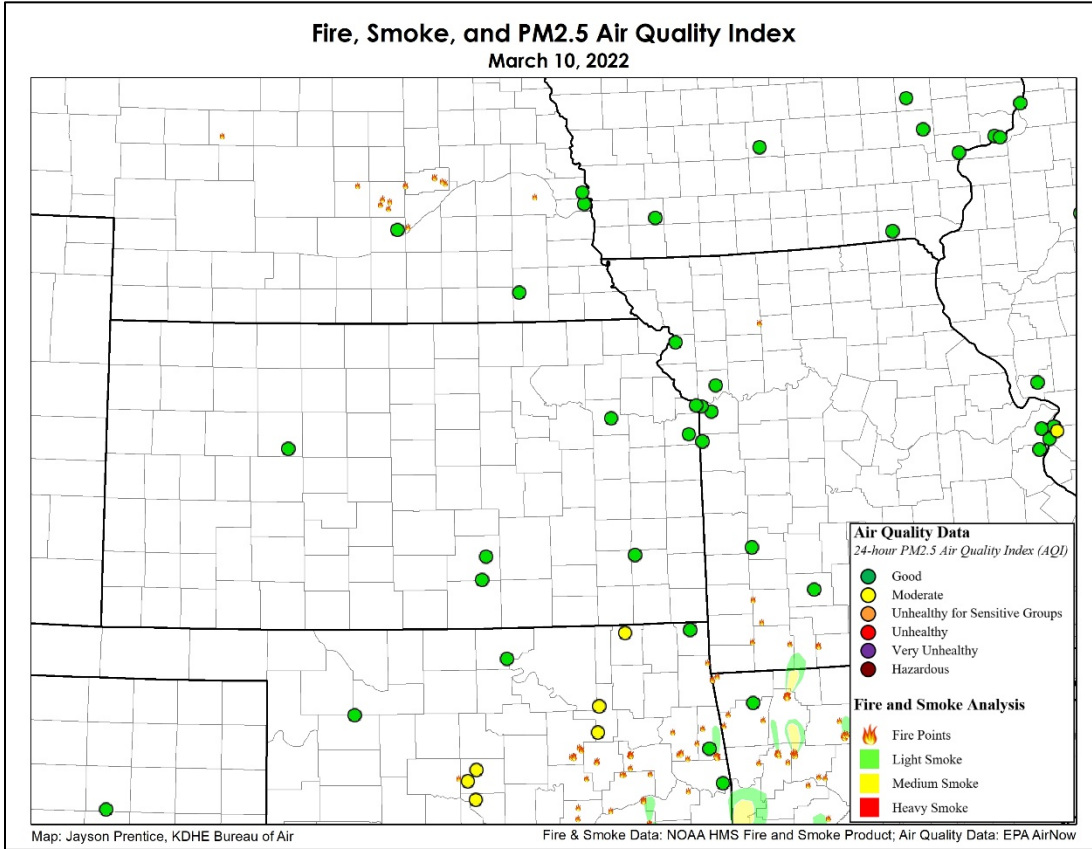
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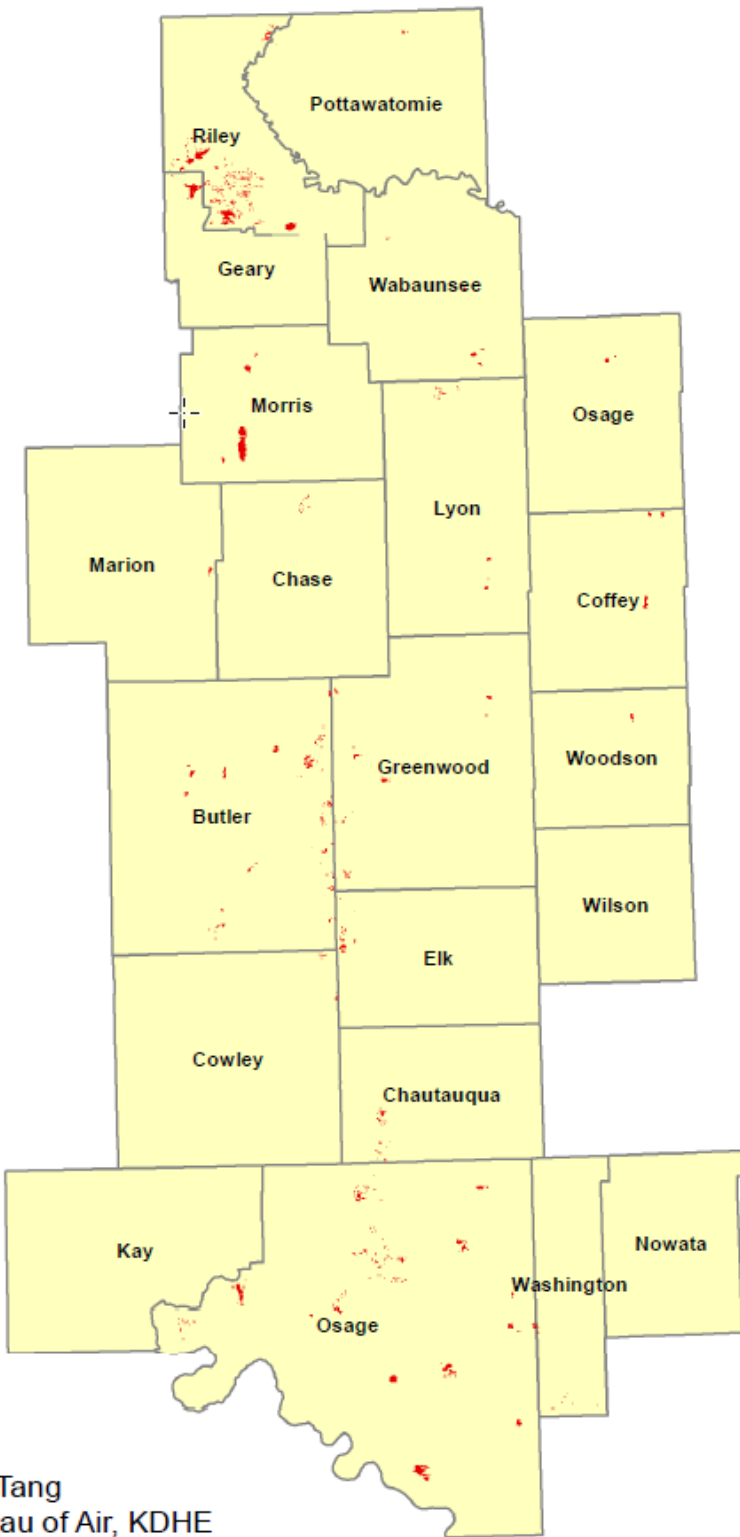


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Flint Hills Acreage Burned (February 14 – March 3, 2022)



Yao Tang
Bureau of Air, KDHE

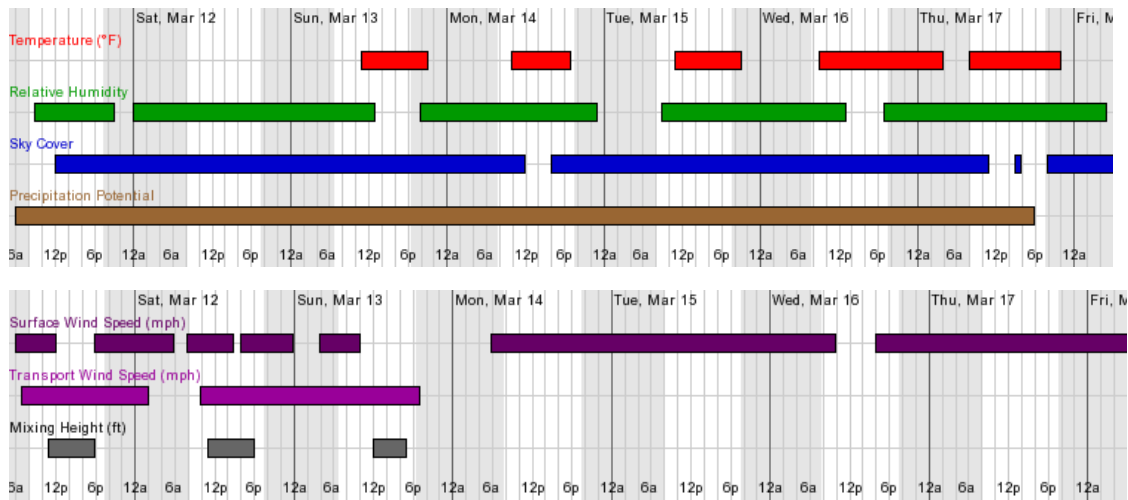
<u>Counties</u>	<u>Acres Burned</u>
Butler	4,185
Chase	232
Chautauqua	741
Coffey	849
Cowley	278
Elk	912
Geary	1,544
Greenwood	1,390
Lyon	710
Marion	263
Morris	3,892
Osage (KS)	247
Pottawatomie	154
Riley	9,035
Wabaunsee	510
Wilson	0
Woodson	216
Nowata (OK)	0
Osage (OK)	9,746
Washington (OK)	232
Kay (OK)	0
Total	35,136
<i>* Denotes county was partly or completely covered by clouds during latest analysis.</i>	



Upcoming Look at Fires and Smoke

Temperatures will remain seasonably cold for Friday (March 11) and Saturday (March 12) as nearly the entire Flint Hills remains under some amount of late season snow cover. These present a weekend opportunity for additional pile burns across the region although winds become a bit gusty on Saturday. Temperatures warm quickly though with highs into the 40s and 50s expected by Sunday (March 13) with strong south winds. At least some opportunity for prescribed fire activity may present itself for Monday (March 14) and Tuesday (March 15) before a potential high fire danger day appears on Wednesday (March 16). The strong winds, low relative humidity, and very warm temperatures on Wednesday come ahead of the next storm system which brings a chance of rainfall to the region by late Thursday (March 17).

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](https://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 11, 2022.

For more information, contact:

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