

# Flint Hills Wildland Fire Update

March 17, 2023

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/>

• • •

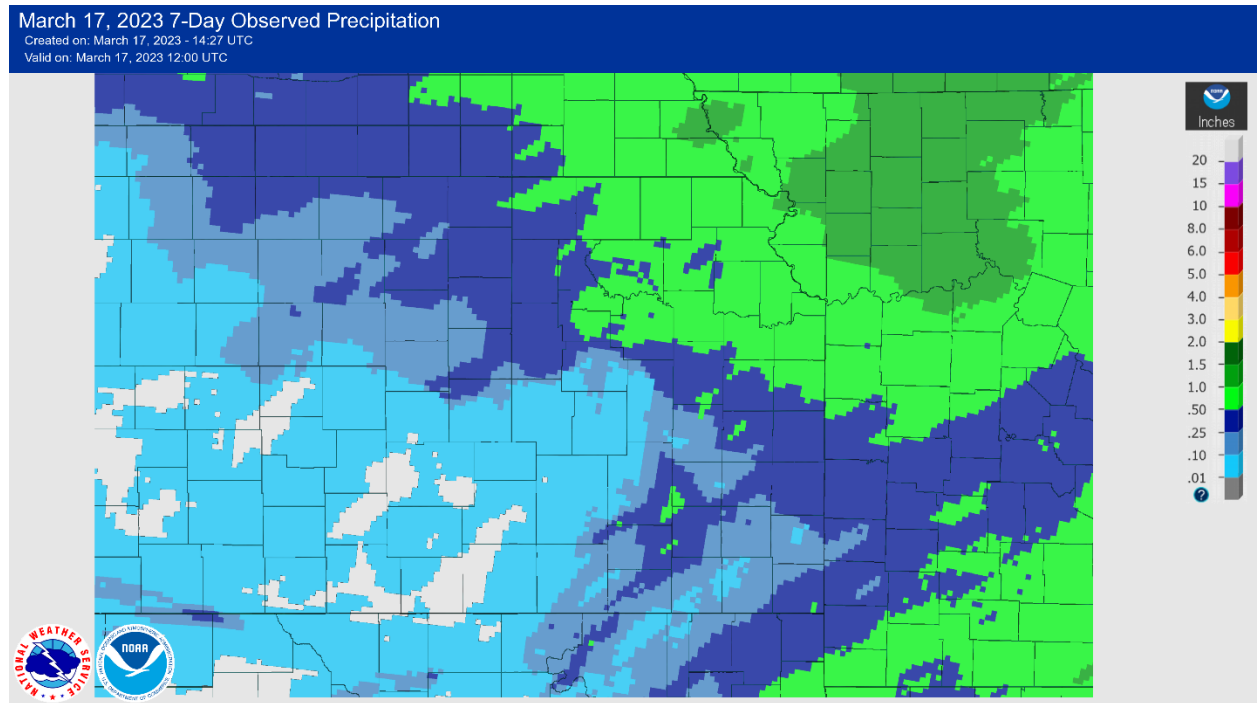
This website was developed as part of the development of the Kansas Flint Hills Smoke Management Plan. Kansas State University hosts the webpage and it includes important information for ranchers and others who might be interested in the Flint Hills. It provides training, regulations, policies, publications,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

Cooler than normal temperatures were observed last Friday through Monday as highs struggled in the 40s for most of the Flint Hills. Winds were relatively light for this period with a round of rainfall also occurring during the day on Saturday bringing a few hundredths to the southern Flint Hills and over a quarter inch in the northern Flint Hills. Temperatures began to warm on Tuesday as south winds increased. Near to above normal temperatures were observed on Wednesday and early Thursday with strong south winds. A strong cold front moved across the Flint Hills on Thursday which quickly dropped temperatures and switched the breezy to windy conditions to the northwest. Additional precipitation fell across the Flint Hills with a few hundredths to near a half inch; Some of which fell as snow across the region.

## Precipitation

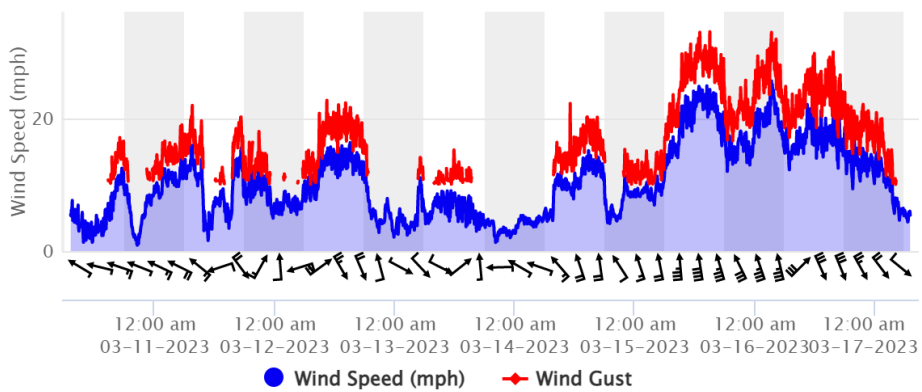
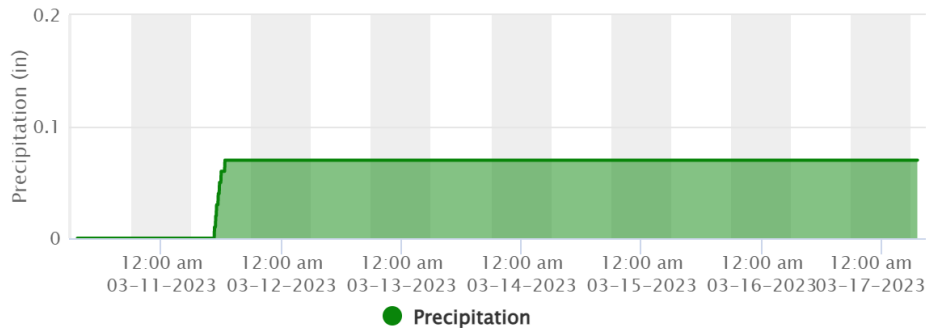
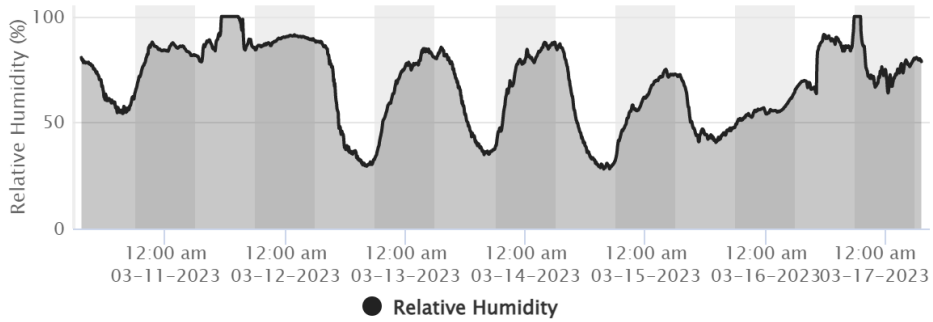
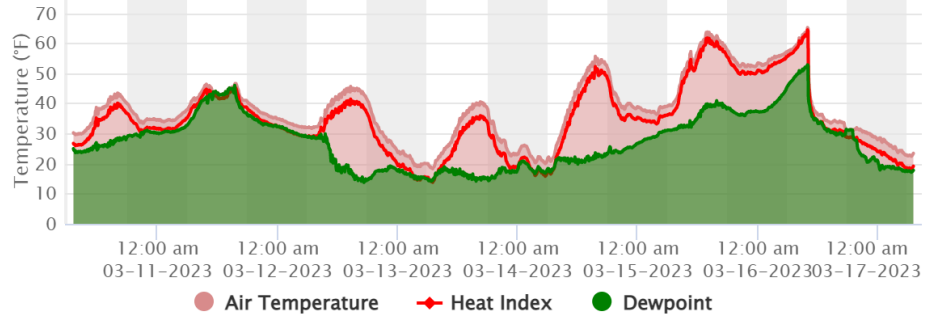


NOAA/NWS Observed Total Precipitation for March 10-17, 2023.

# Flint Hills Wildland Fire Update



## Meteogram for Elmdale 1SE



7-day (March 10-17, 2023) Observed Weather from the Kansas Mesonet station near Elmdale, Kansas (<https://mesonet.k-state.edu/>)



## Fire, Smoke, and Air Quality

For the period of March 10-16, 2023 there were no air quality exceedances 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.

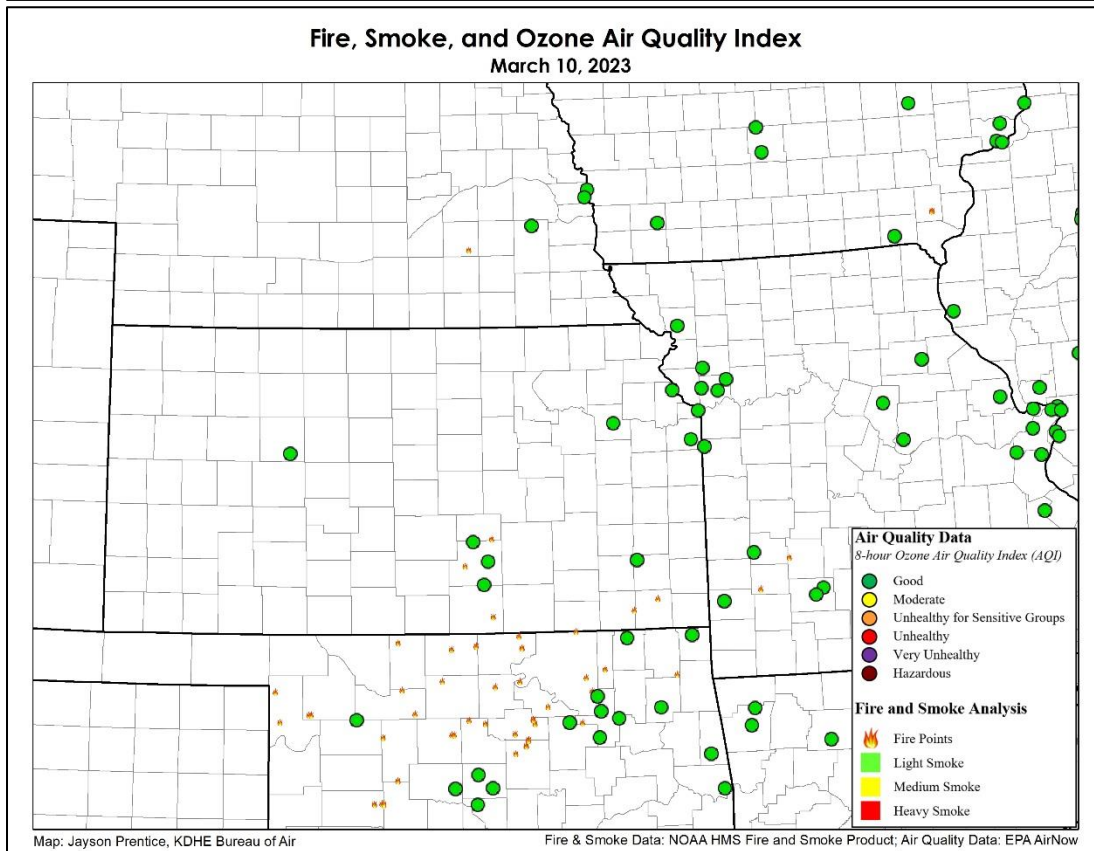
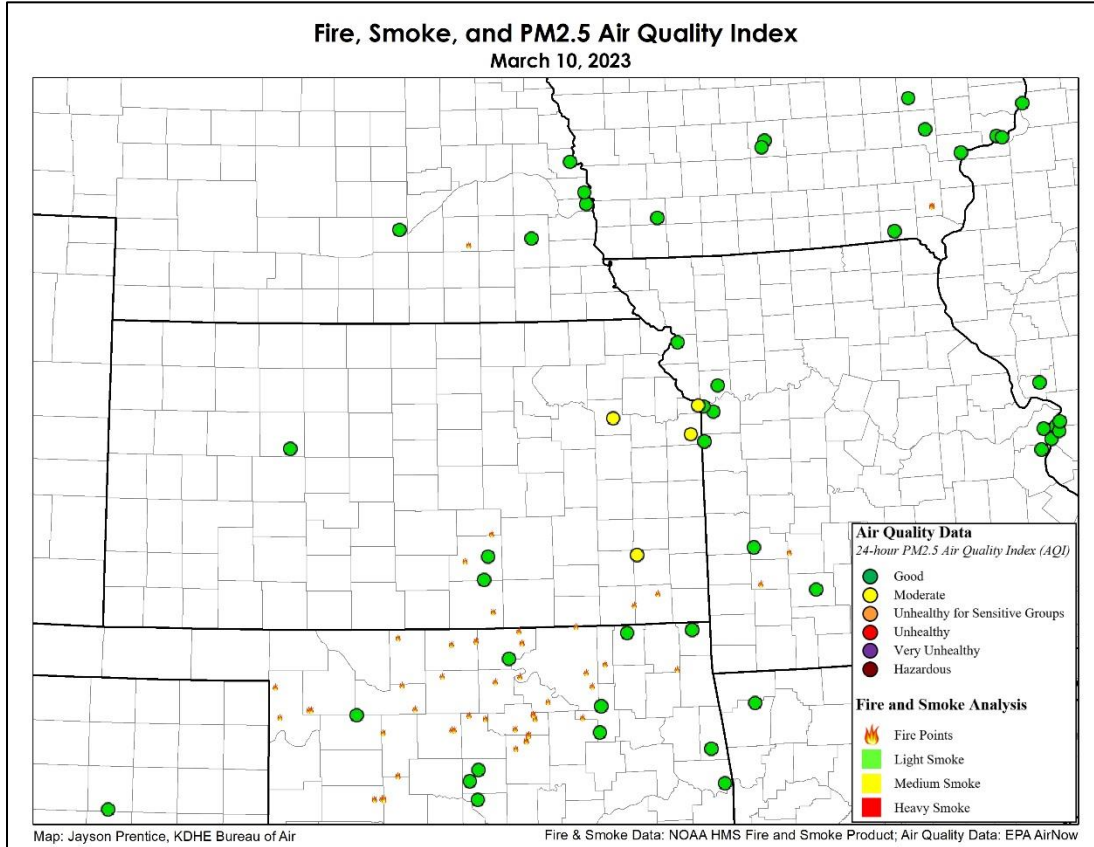
**PM<sub>2.5</sub>:** Preliminary data indicates no exceedances of the NAAQS daily 24-hour average maximum of 35 µg/m<sup>3</sup>.

Fire activity was kept to a minimum last Friday, Saturday, and Sunday (March 10-12) with cool temperatures, cloud cover, and some rainfall. A few air quality monitors reported Moderate Air Quality Index due to other regional pollutants. Despite some cooler temperatures the light winds and sunny skies led to some prescribed fire activity on Monday (March 13) under northerly winds. As temperatures warmed across the region the fire activity increased on Tuesday (March 14). Smoke impacts were primarily localized with some areas of Moderate Air Quality Index observed.

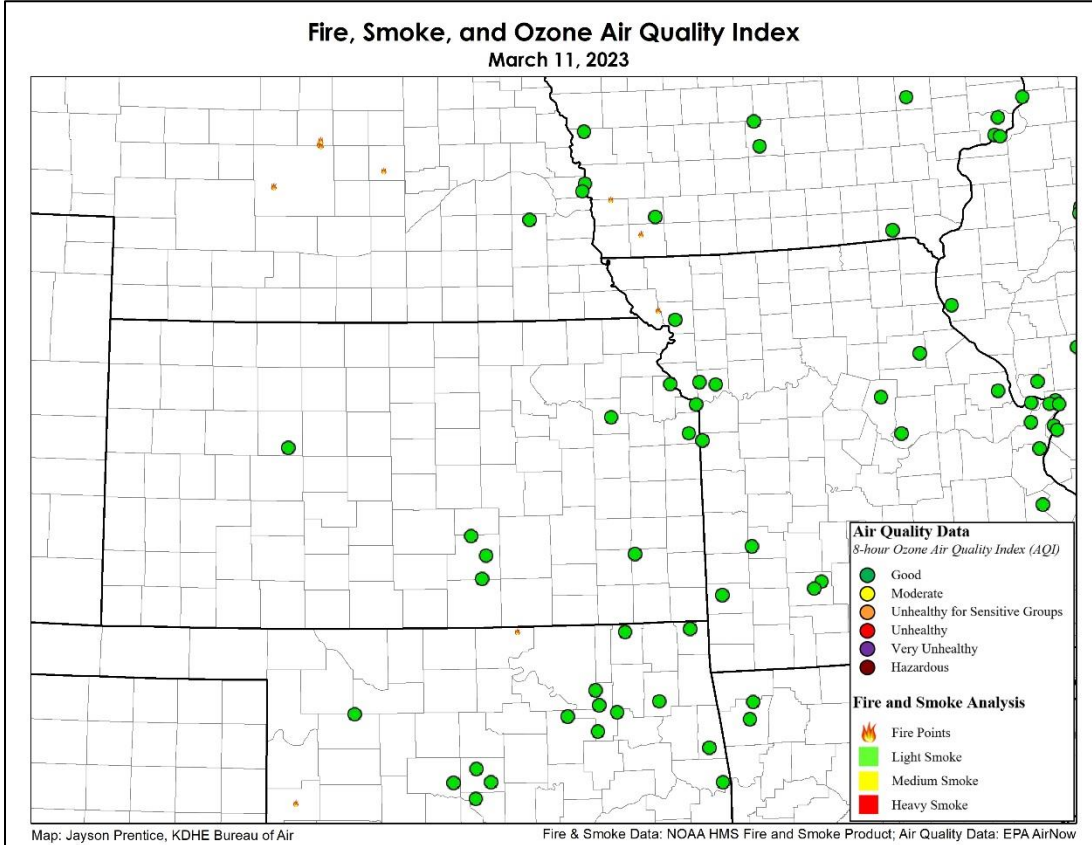
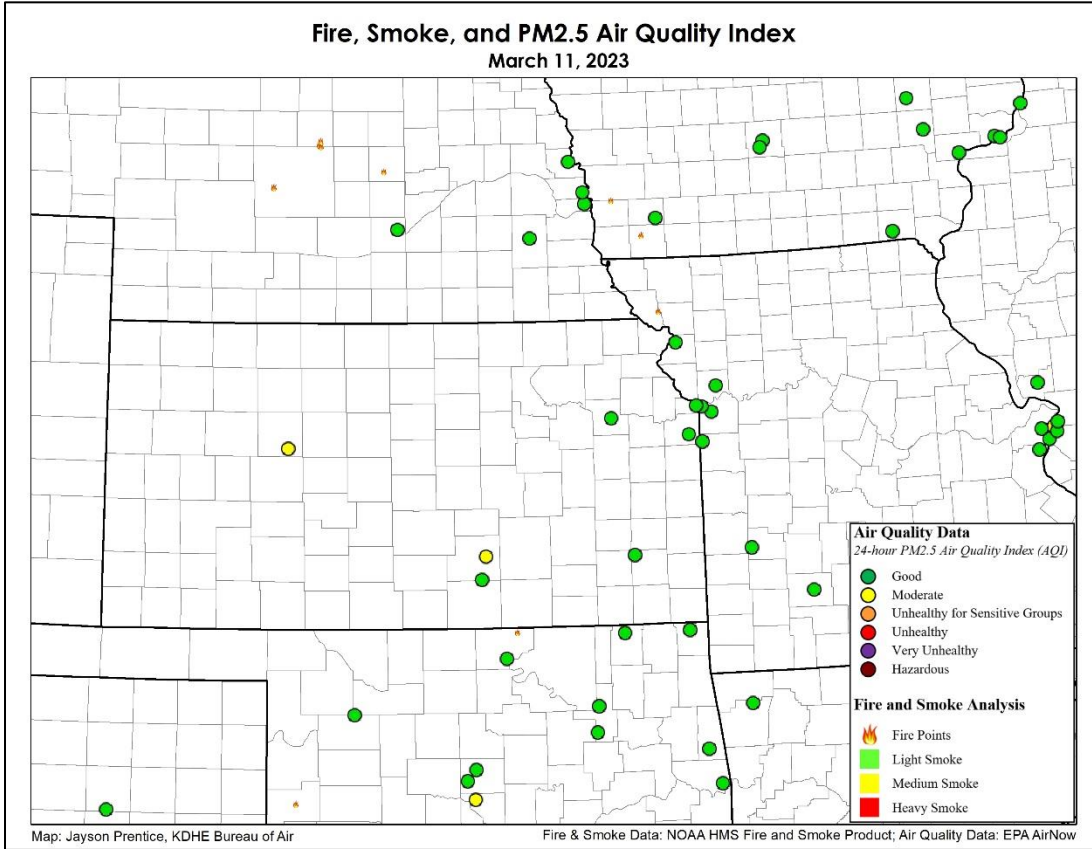
While prescribed fire activity decreased on Wednesday and Thursday (March 15-16) under strong winds and a cold front which brought light precipitation (rain and snow) to parts of the region some air quality monitors continued to report Moderate Air Quality Index values due to other pollutants and perhaps some lingering smoke impacts early Wednesday.

*The following pages have two maps for each day; One showing the 24-hour average Air Quality Index category for PM<sub>2.5</sub> 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.*

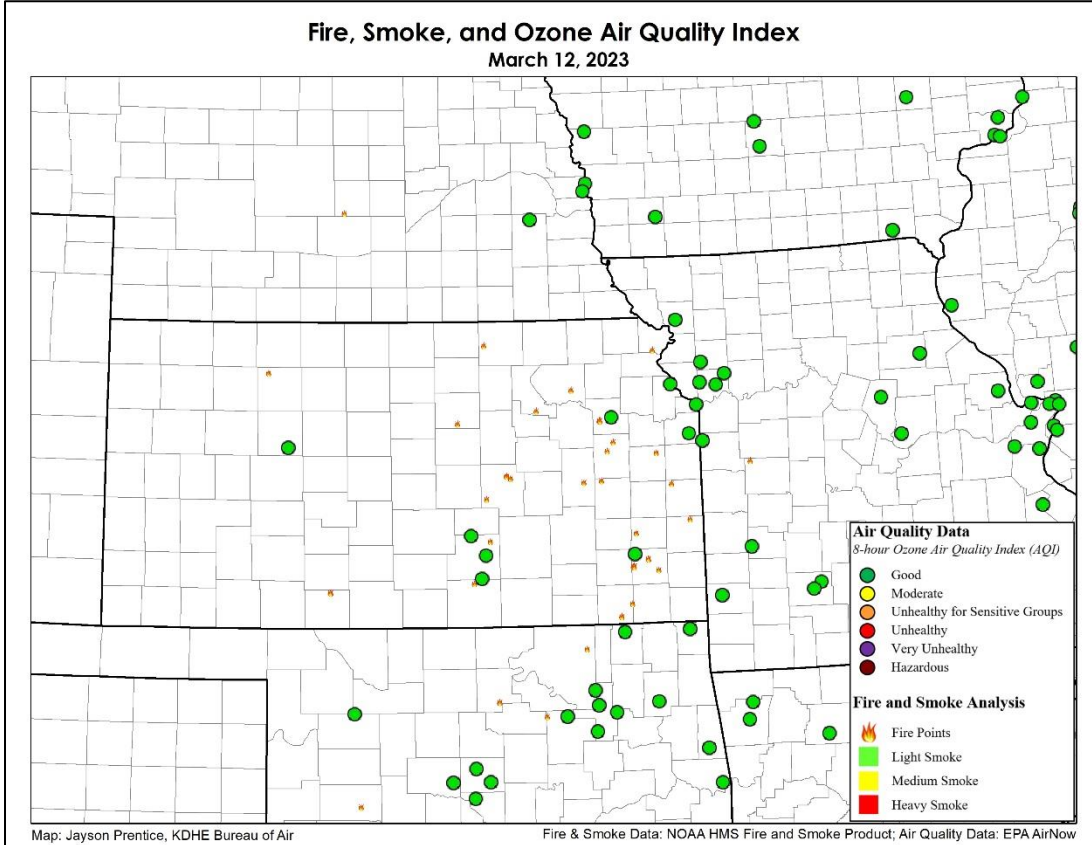
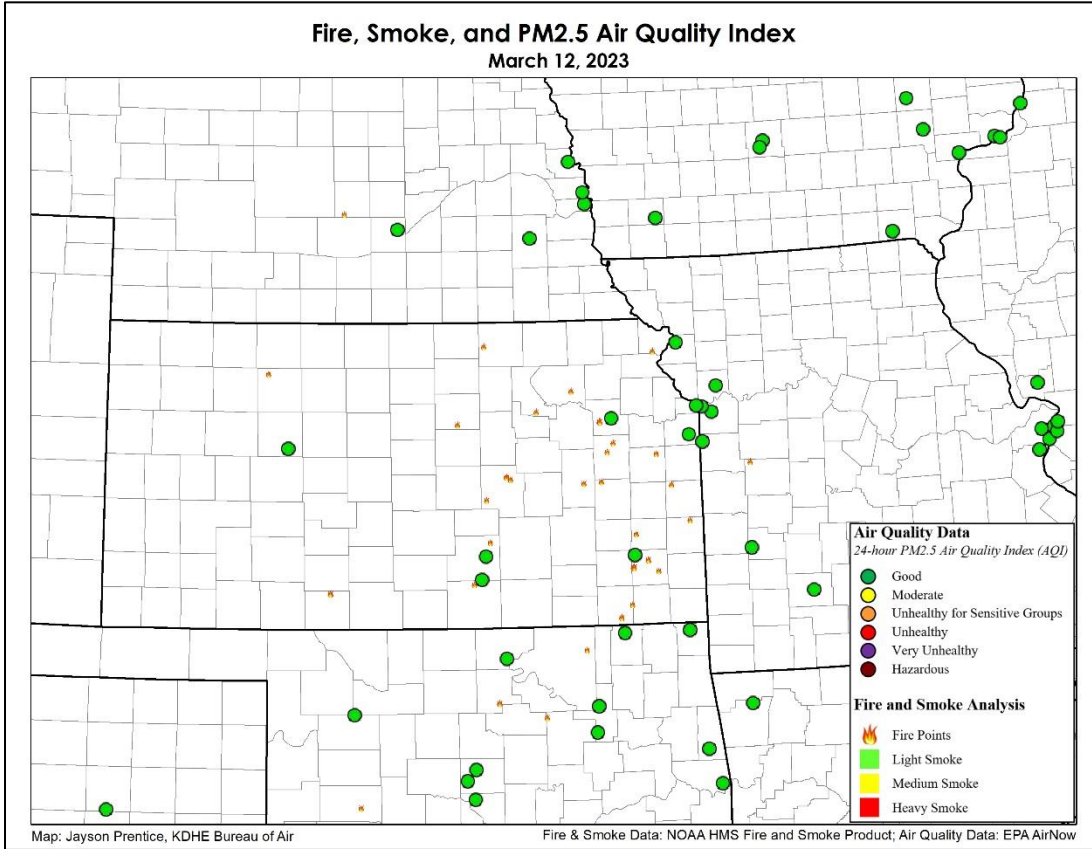
# Flint Hills Wildland Fire Update



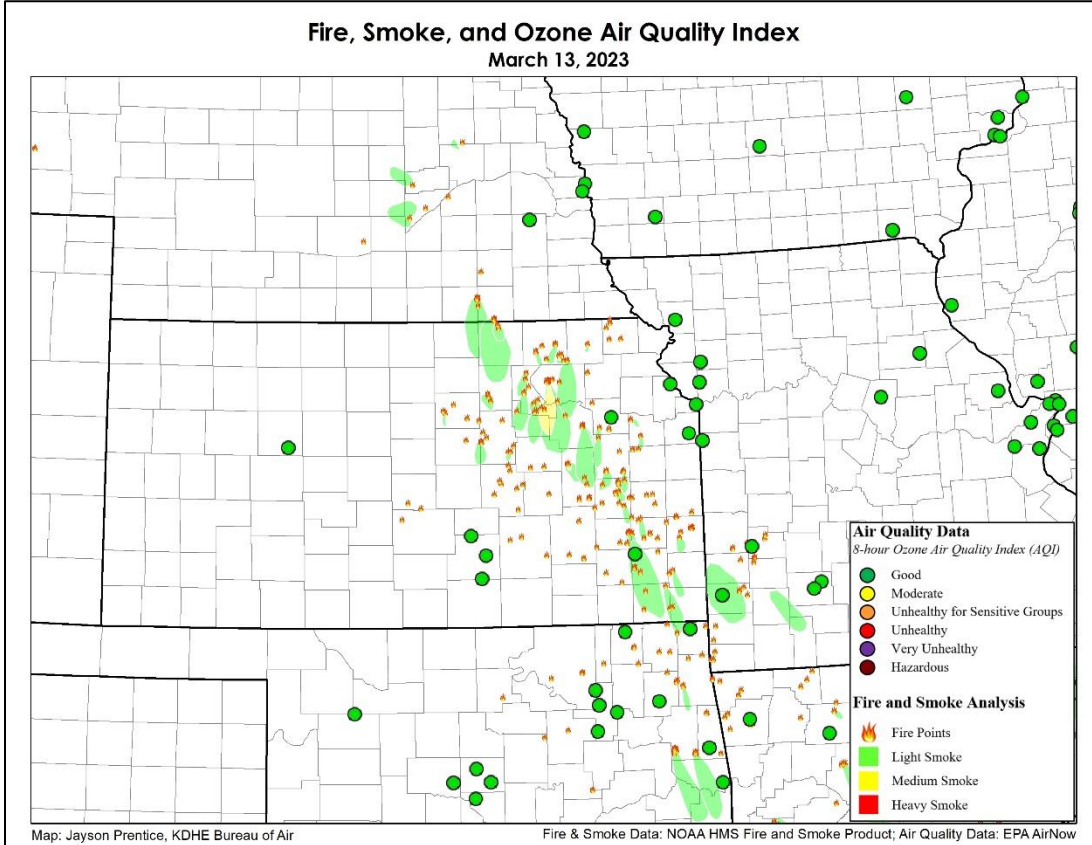
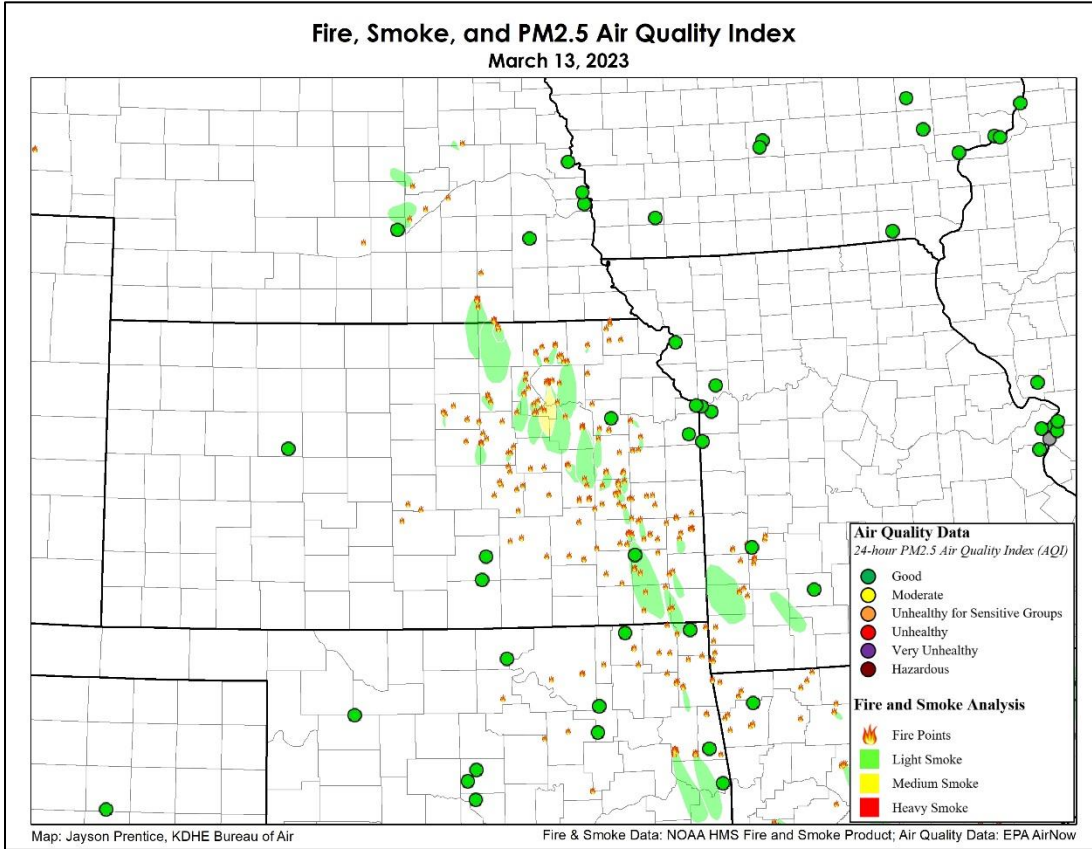
# Flint Hills Wildland Fire Update



# Flint Hills Wildland Fire Update

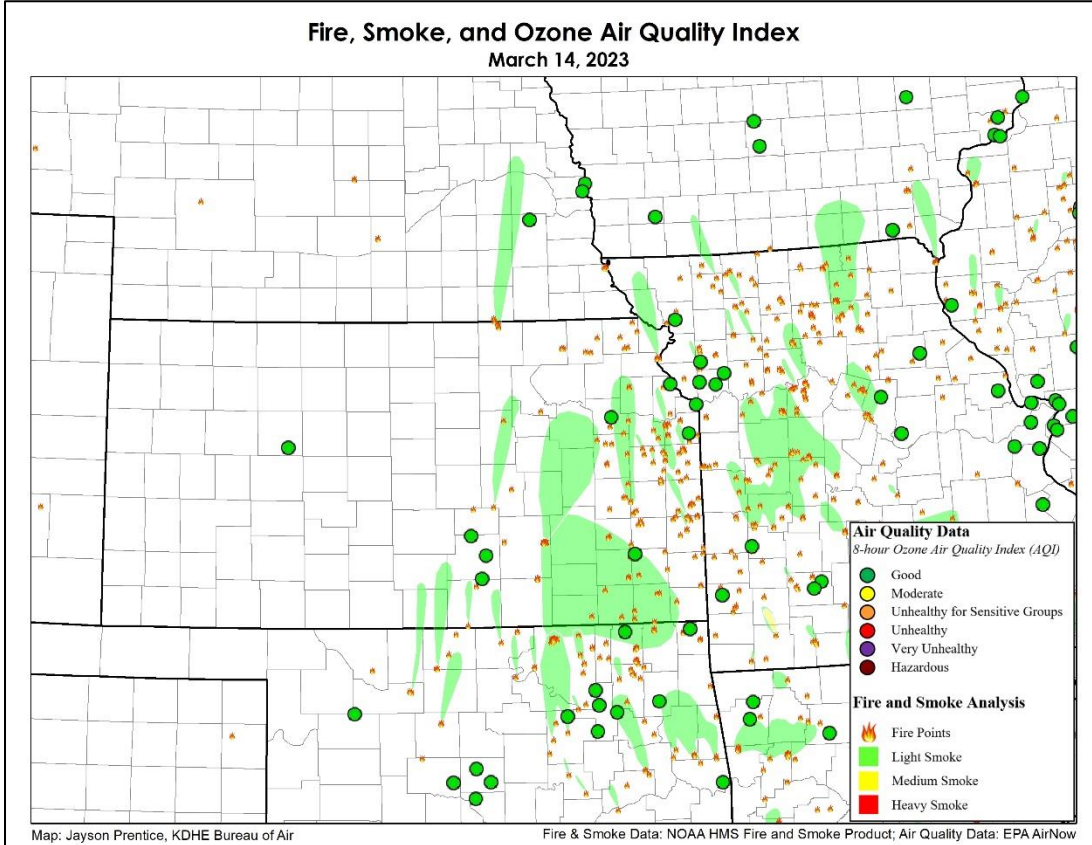
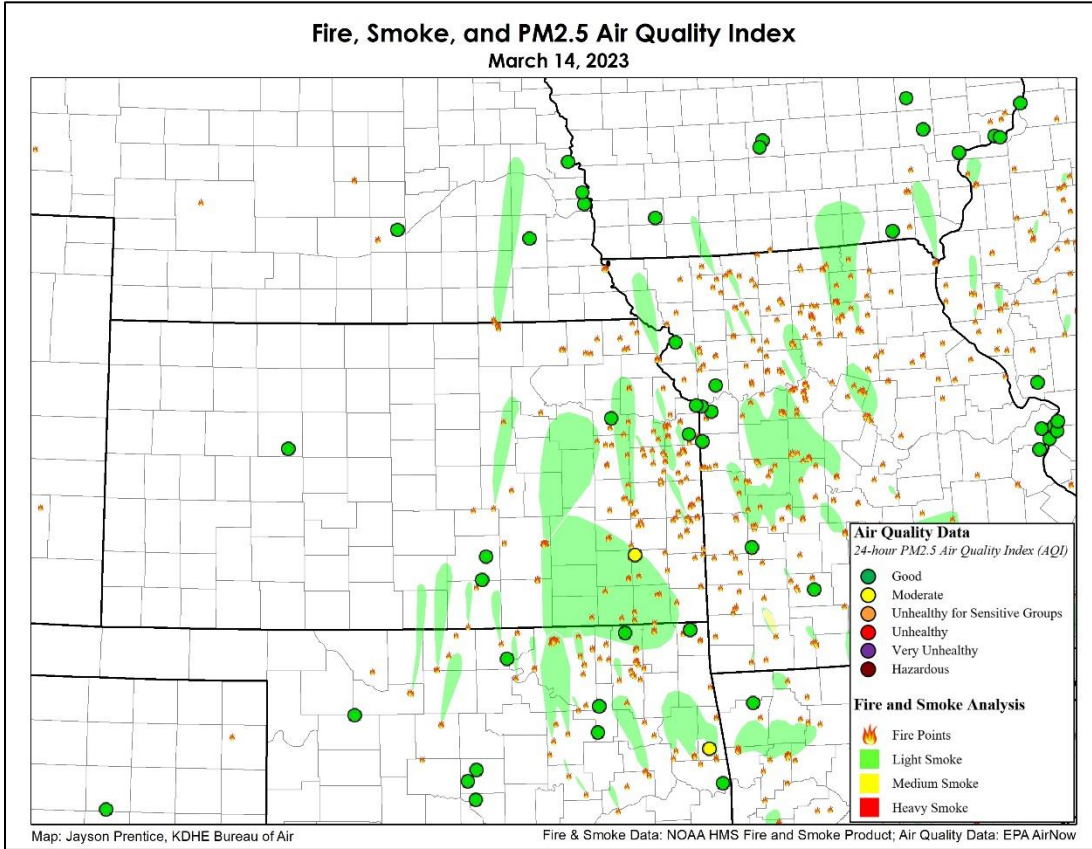


# Flint Hills Wildland Fire Update

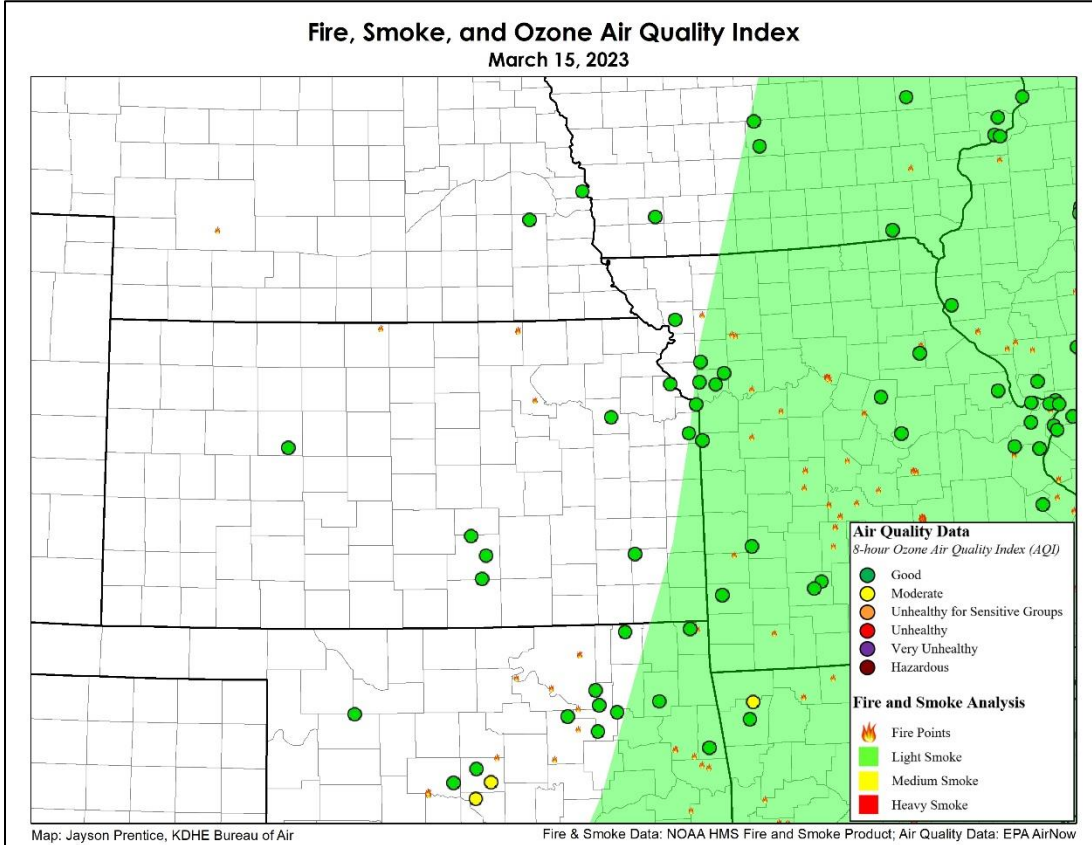
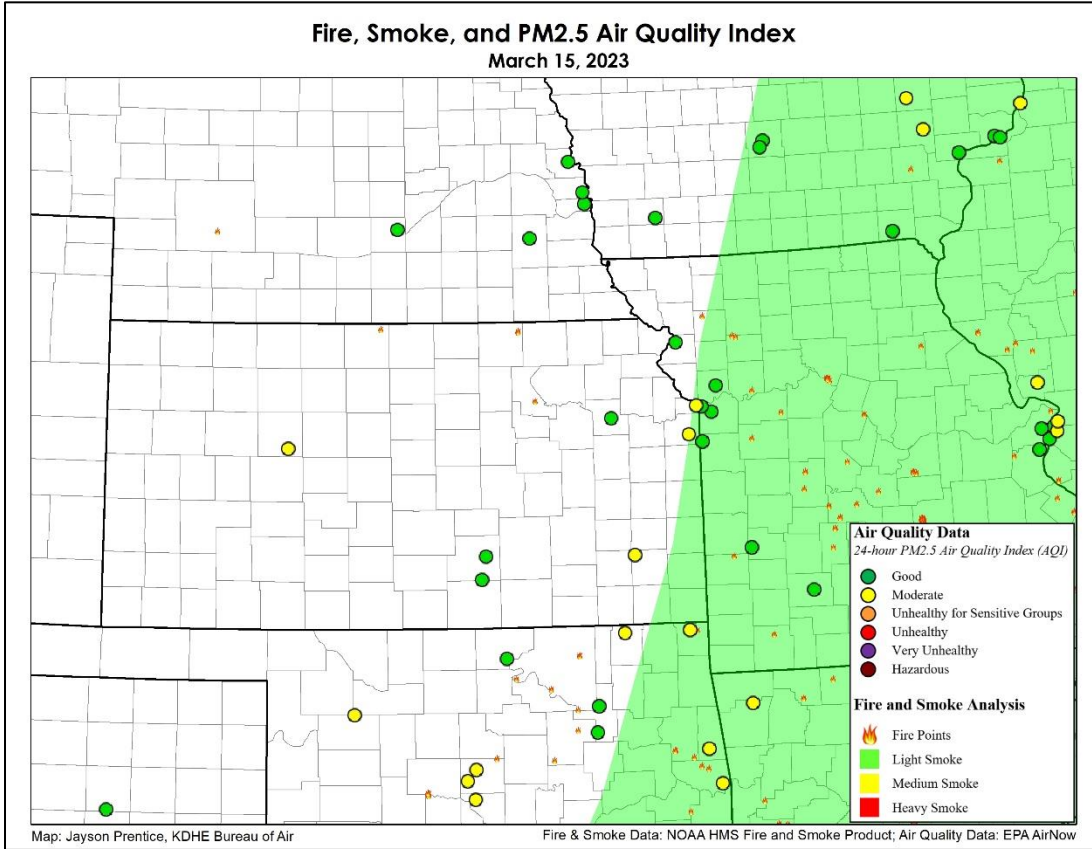




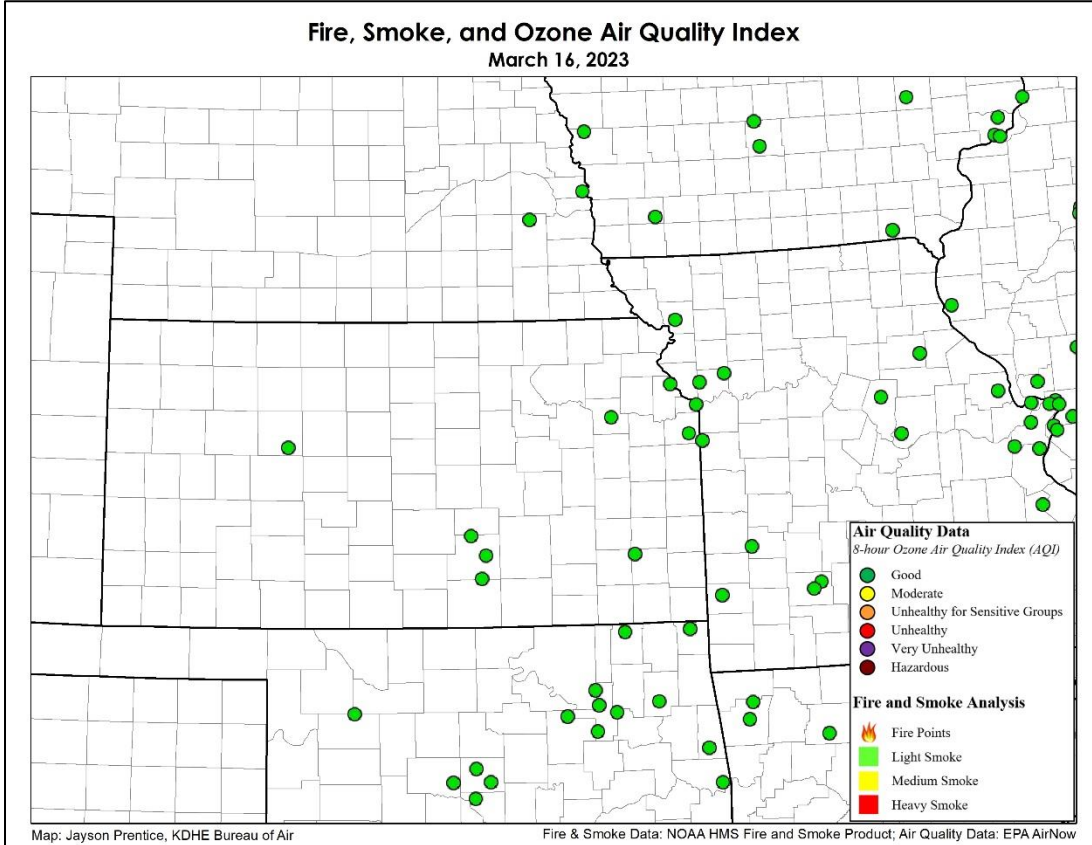
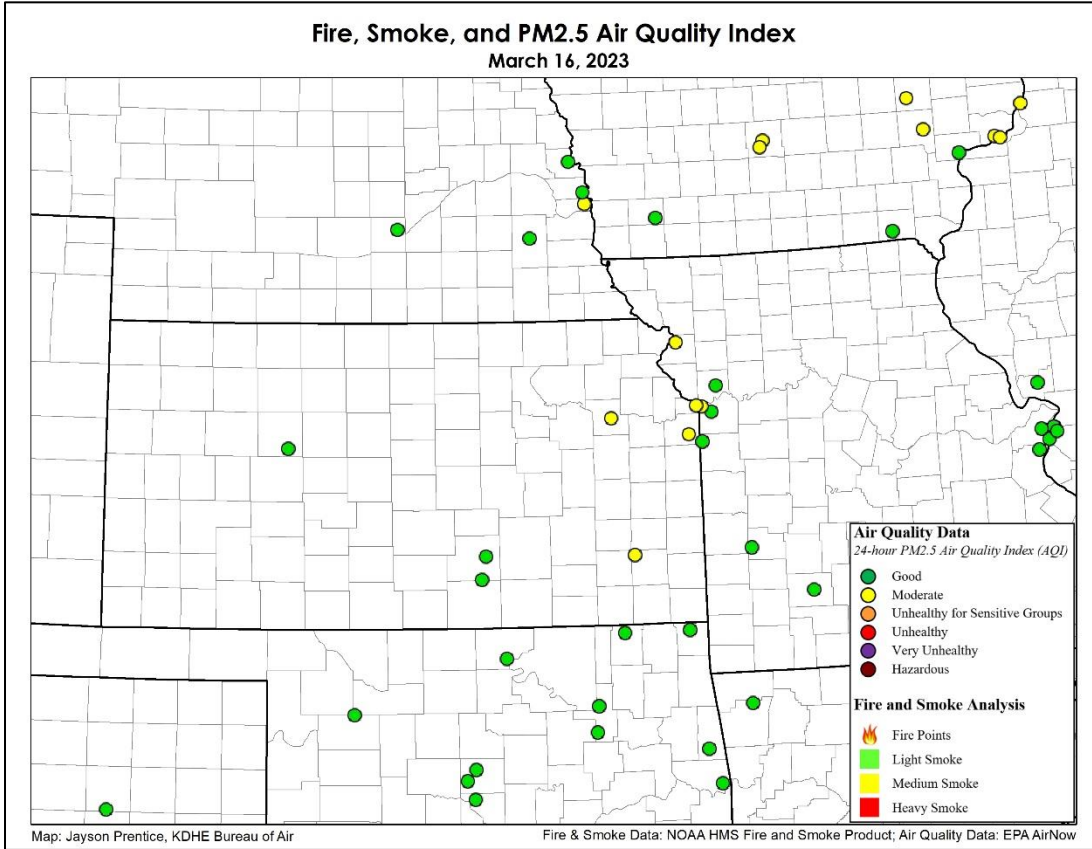
# Flint Hills Wildland Fire Update



# Flint Hills Wildland Fire Update

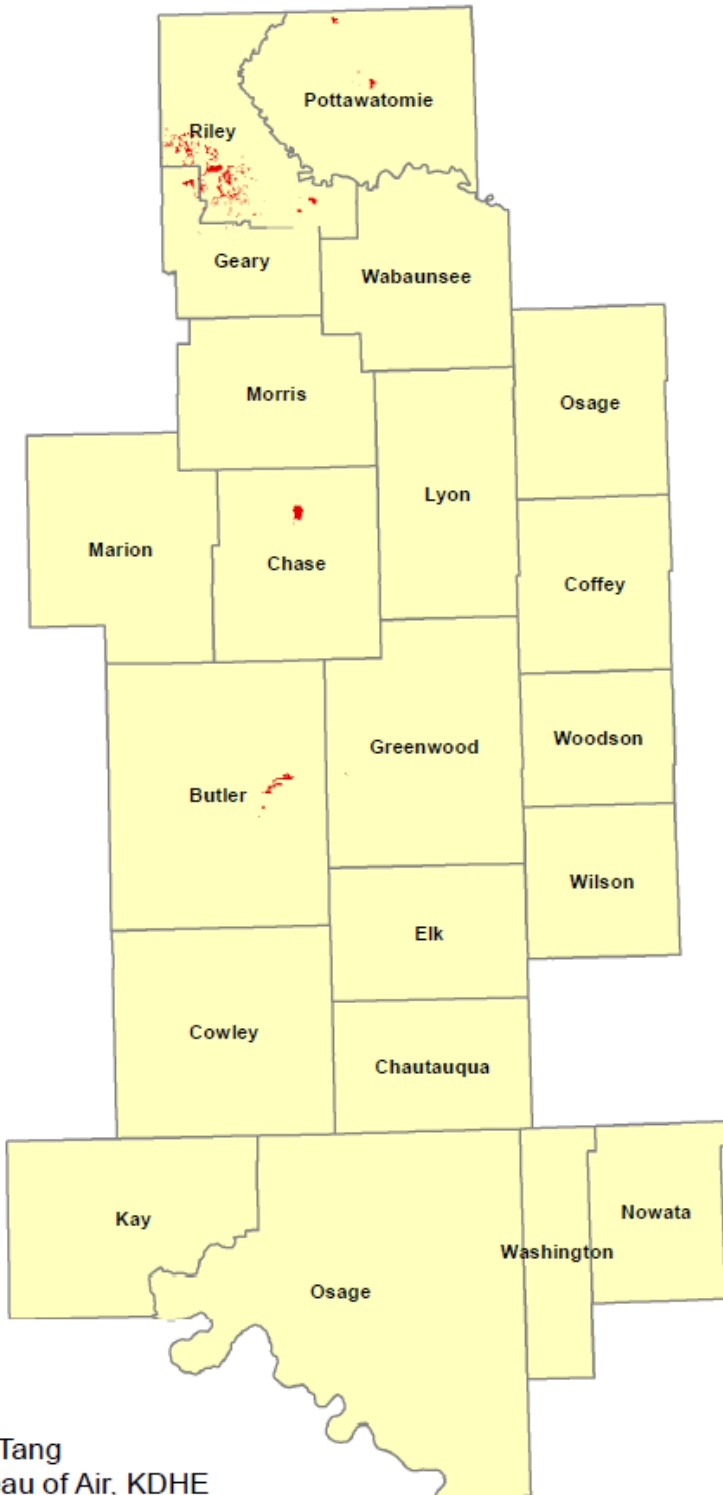


# Flint Hills Wildland Fire Update





## Flint Hills Acreage Burned (February 3 – March 5, 2023)



Yao Tang  
Bureau of Air, KDHE

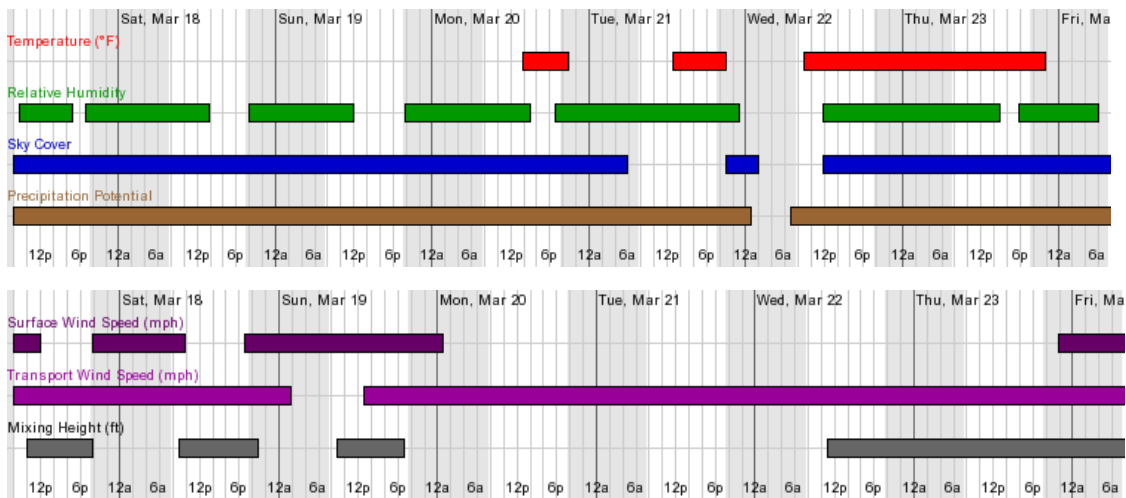
| <u>Counties</u>   | <u>Acres Burned</u> |
|---|---------------------|
| <b>Butler</b>   | 1,761               |
| <b>Chase</b>  | 1,544               |
| <b>Chautauqua</b>   | 0                   |
| <b>Coffey</b>   | 0                   |
| <b>Cowley</b>   | 0                   |
| <b>Elk</b>  | 0                   |
| <b>Geary</b>  | 1,189               |
| <b>Greenwood</b>  | 31                  |
| <b>Lyon</b>   | 0                   |
| <b>Marion</b>   | 0                   |
| <b>Morris</b>   | 0                   |
| <b>Osage (KS)</b>   | 0                   |
| <b>Pottawatomie</b>   | 958                 |
| <b>Riley</b>  | 10,749              |
| <b>Wabaunsee</b>  | 0                   |
| <b>Wilson</b>   | 0                   |
| <b>Woodson</b>  | 0                   |
| <b>Nowata (OK)</b>  | 0                   |
| <b>Osage (OK)</b>   | 0                   |
| <b>Washington (OK)</b>  | 0                   |
| <b>Kay (OK)</b>   | 0                   |
|   |                     |
| <b>Total</b>  | <b>16,232</b>       |
| * Denotes county was partly or completely covered by clouds during latest analysis. |                     |



## Upcoming Look at Fires and Smoke

Chilly temperatures and some remnant snowfall are likely to reduce prescribed fire activity for today and through the weekend. Temperatures will begin to warm-up on Monday as winds increase and become breezy from the south. These breezy conditions will likely continue Tuesday through Thursday with warmer temperatures continuing. At least one round of showers and thunderstorms are possible late Tuesday into Wednesday. Near critical fire weather conditions are possible on Monday and Thursday with afternoon relative humidity dropping below 30 percent and breezy winds. Overall another hit and miss week for prescribed fire activity with some narrow windows with potentially favorable conditions.

### 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. Forecast valid: 8am March 17, 2022.*

For more information, contact:

**Jayson Prentice**

Chief, Environmental Data & Projects, Bureau of Air  
 Kansas Department of Health & Environment  
 785-291-3782  
 Jayson.Prentice@ks.gov