

# Flint Hills Prescribed Fire Update

March 27, 2020

The following information on the Flint Hills prescribed fires will be sent weekly to keep stakeholders up to date on fires and related smoke.



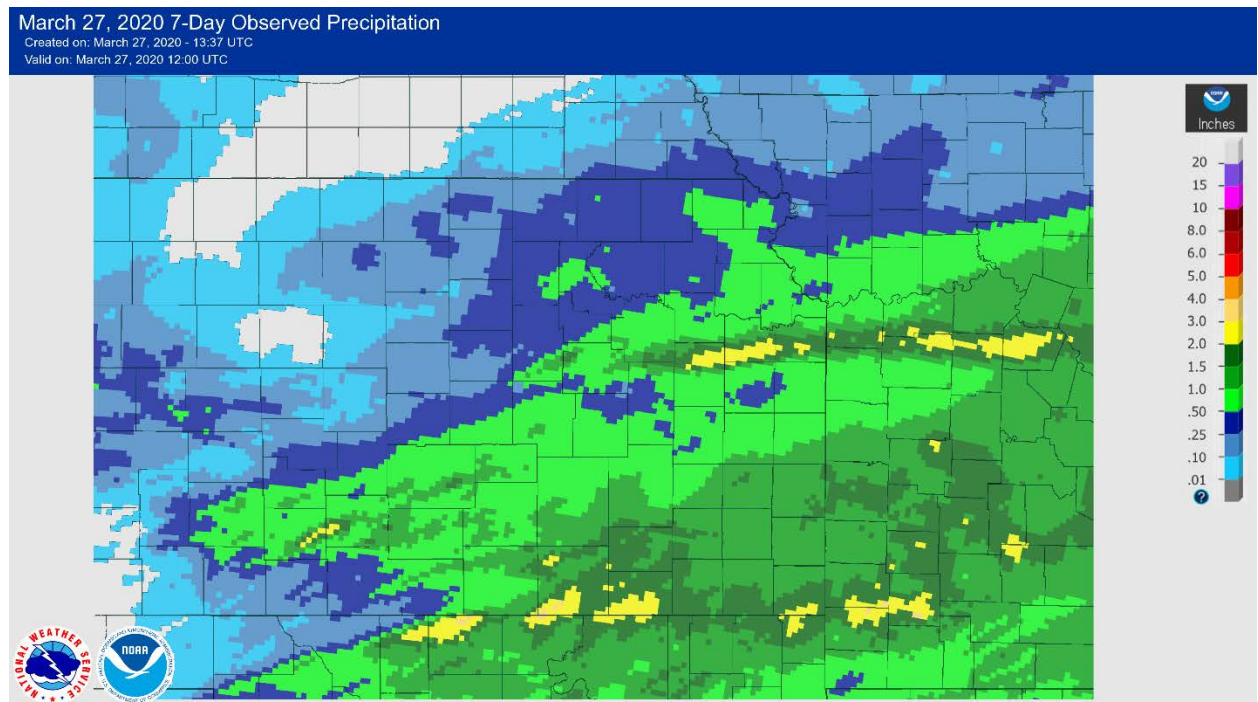


## Meteorology

Unseasonably cool temperatures and breezy conditions were seen last Friday (March 20) across the region with wind gusts nearing 40 mph and temperatures struggling to reach 40 degrees for most. More seasonable temperatures were seen for the remainder of the week before above normal temperatures returned to the area for Wednesday (March 25) and Thursday (March 26). Wind speeds were primarily less than 20 mph except for Wednesday (March 25) where gusts near 30-35 mph were seen.

A couple rounds of showers and thunderstorms were seen across the Flint Hills and surrounding over the past week. Most precipitation came with showers on Sunday (March 22), and additional rain fell on Monday night and Tuesday morning. More thunderstorms were seen last night and early this morning along a narrow-line, primarily covering areas between Emporia and Topeka. Precipitation totals this past week generally were between 0.5-1.5 inches, however some isolated areas saw more than two inches of rain.

## Precipitation



NOAA/NWS Observed Total Precipitation for March 20-26, 2020.



## Air Quality Data

Air quality data for the period of March 20-26, 2020:

**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 exceedance of the NAAQS daily 24-hour average maximum of 35  $\mu\text{g}/\text{m}^3$ .

Air quality images on the following pages for each day show preliminary data, courtesy Air Now Tech.

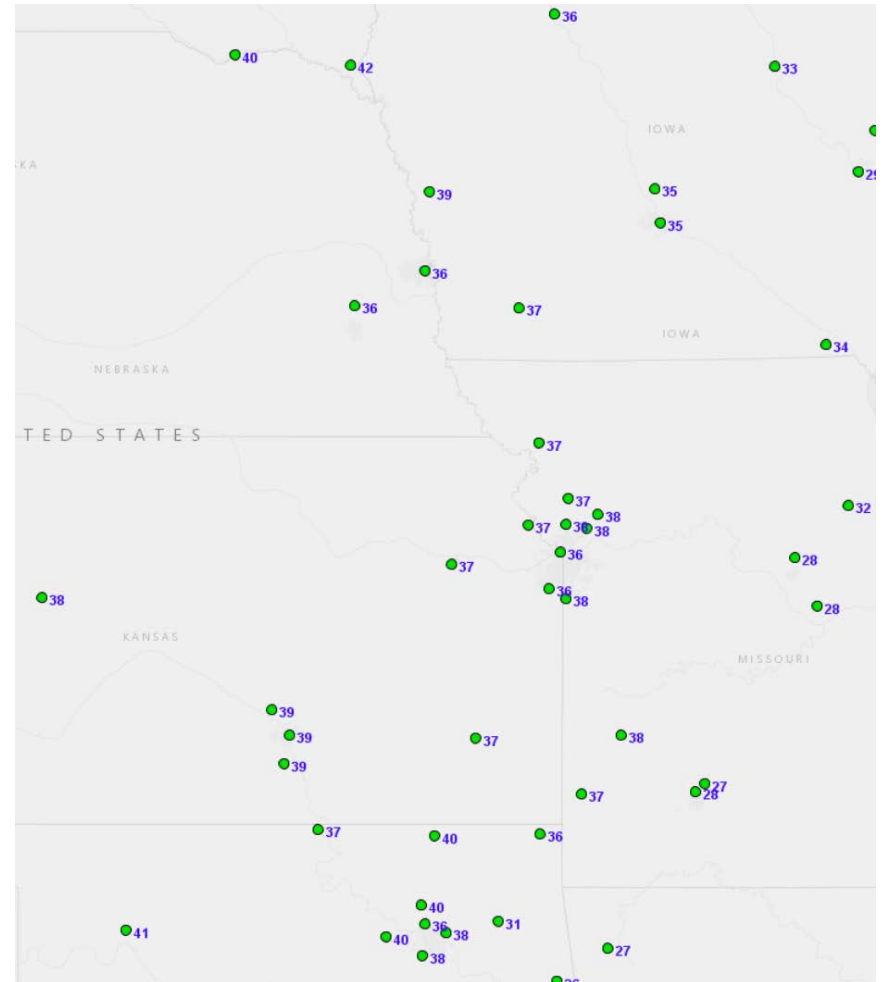
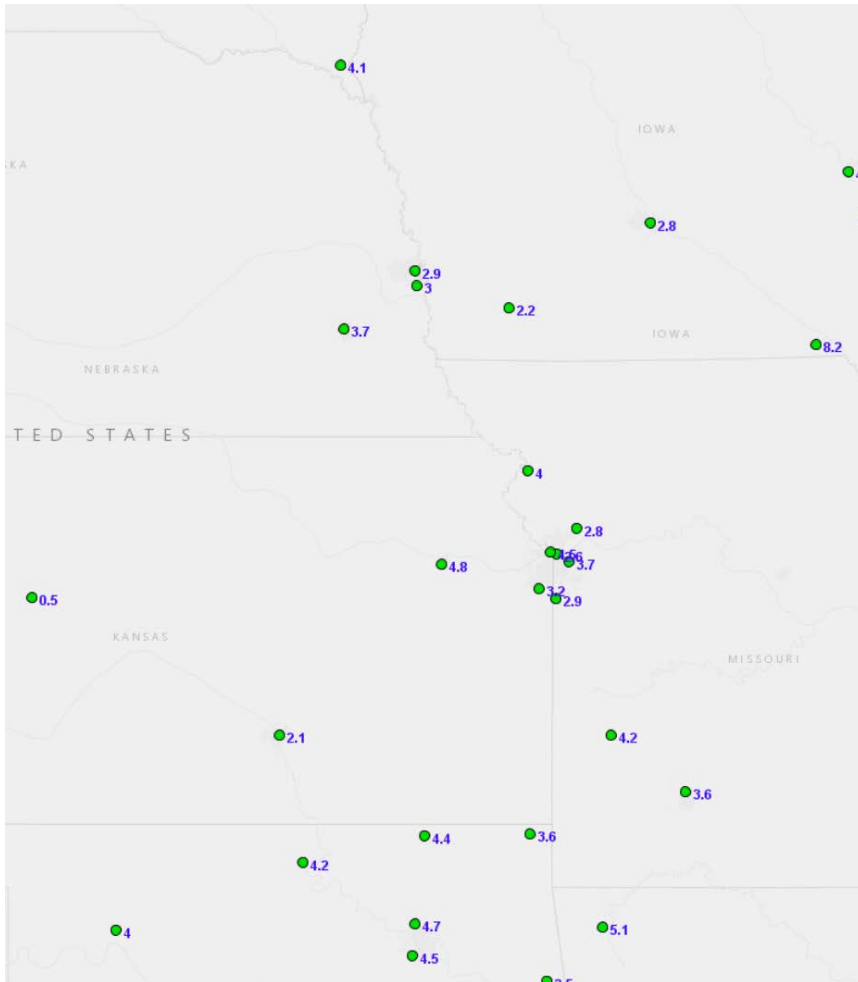
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Friday, March 20, 2020

PM2.5 (24-hour average)

Ozone (8-hour average maximum)

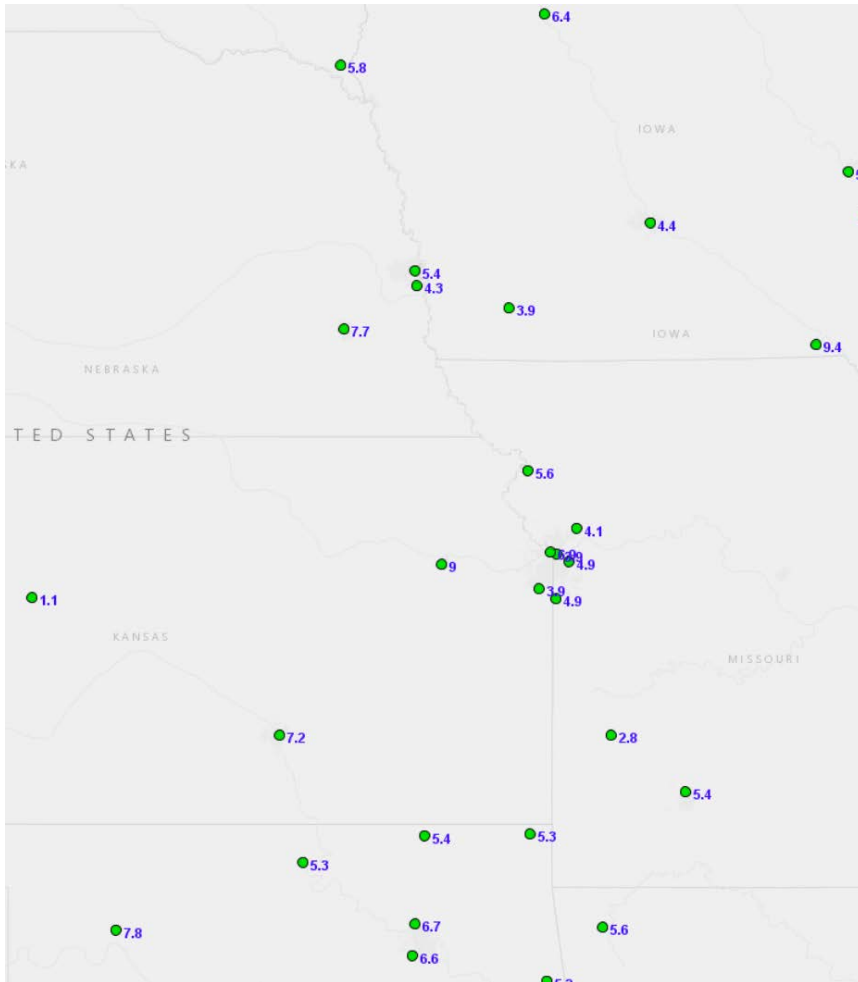


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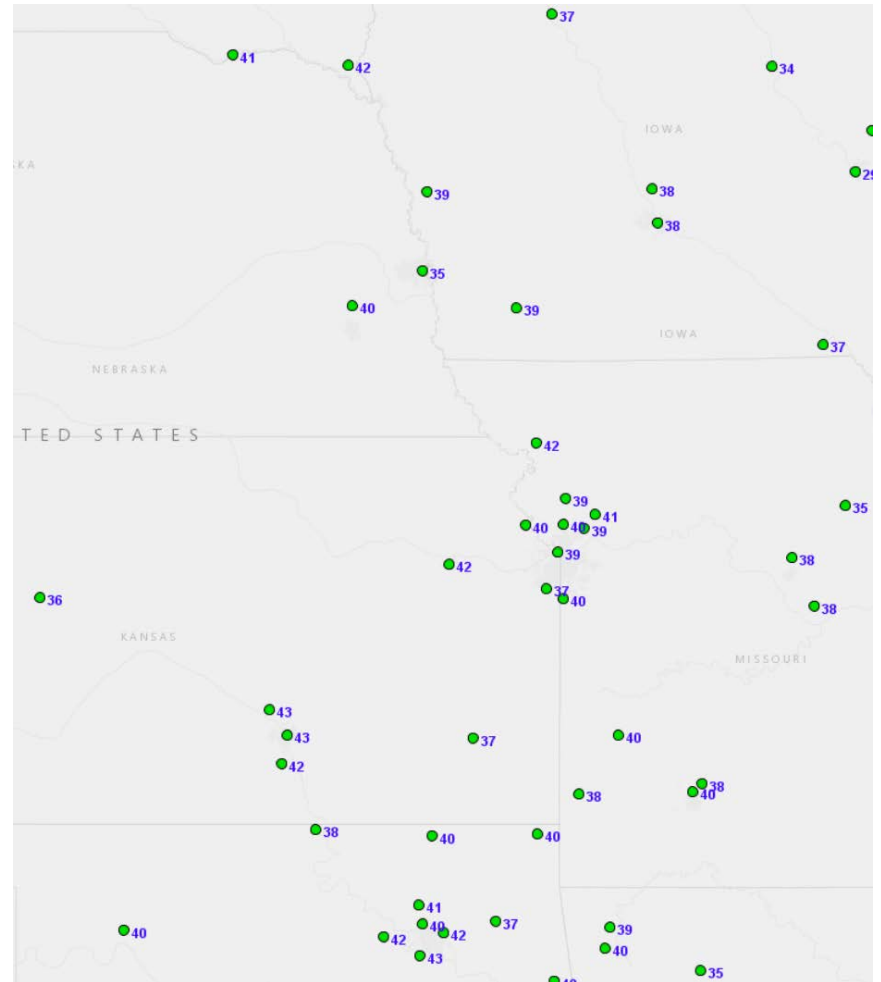


Saturday, March 21, 2020

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

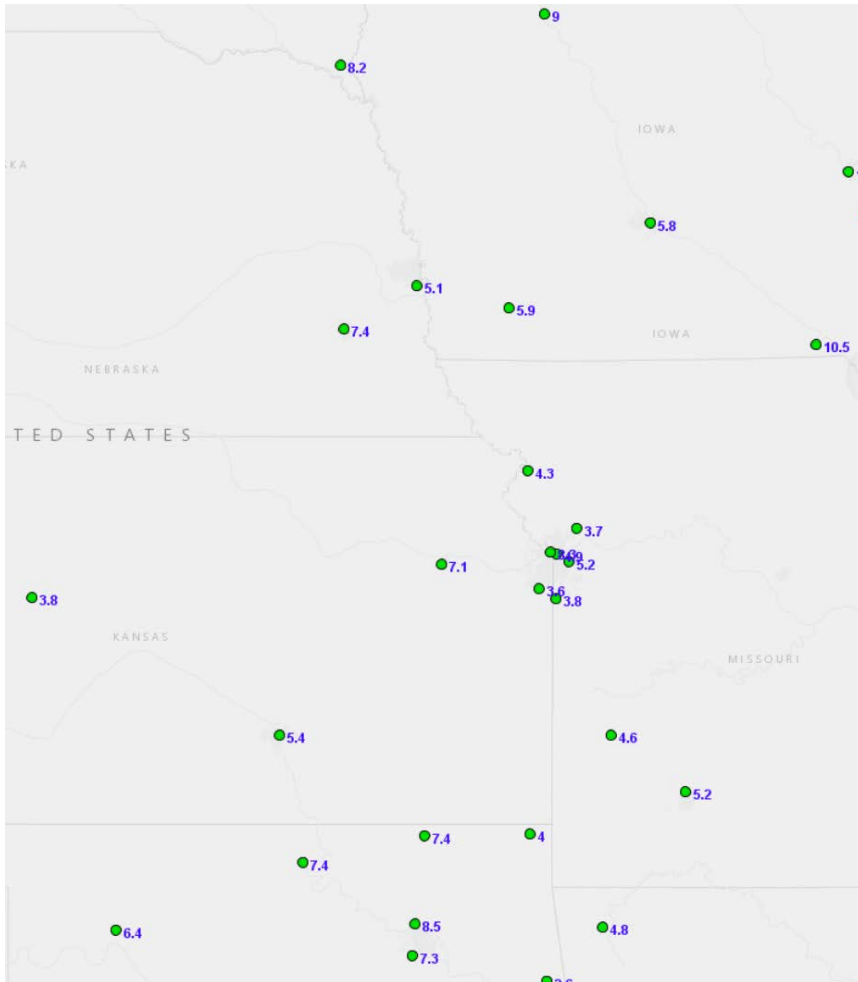


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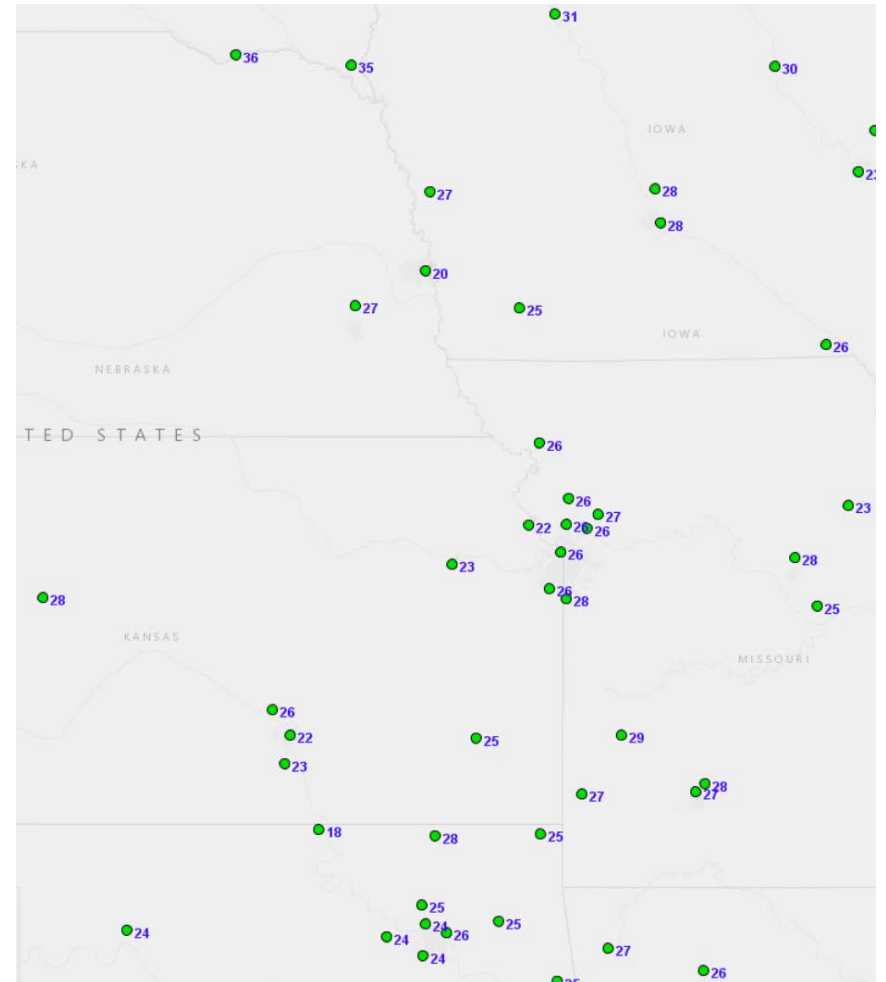


Sunday, March 22, 2020

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

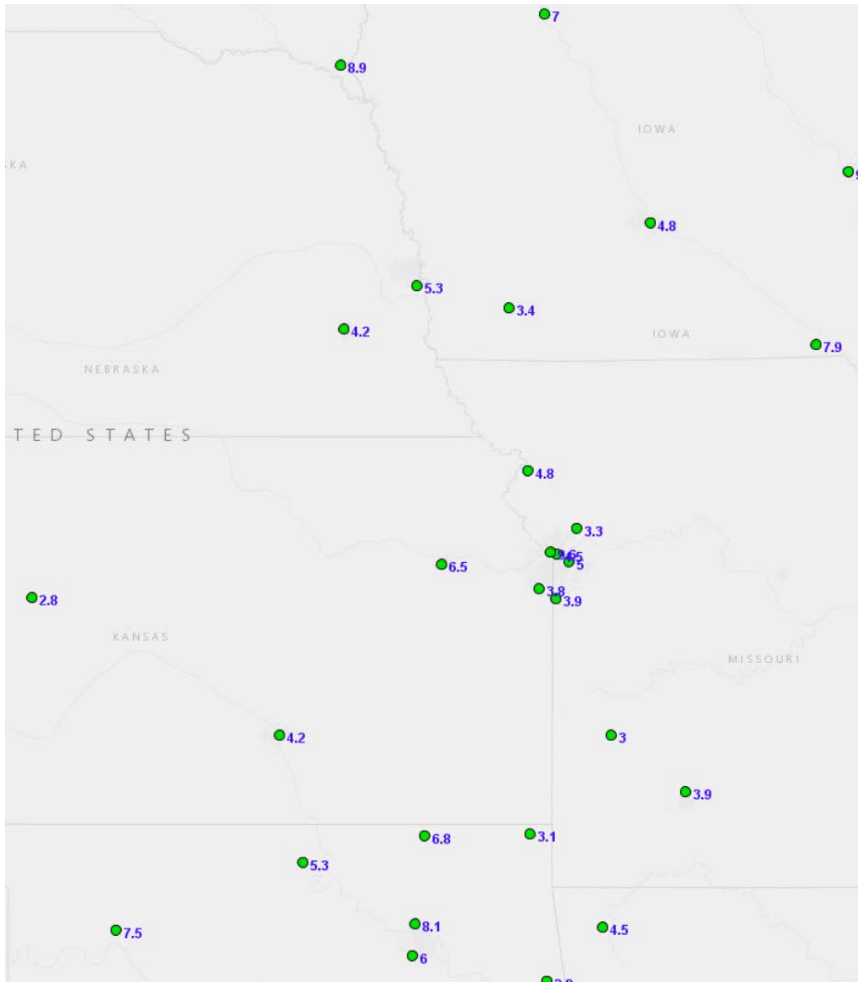


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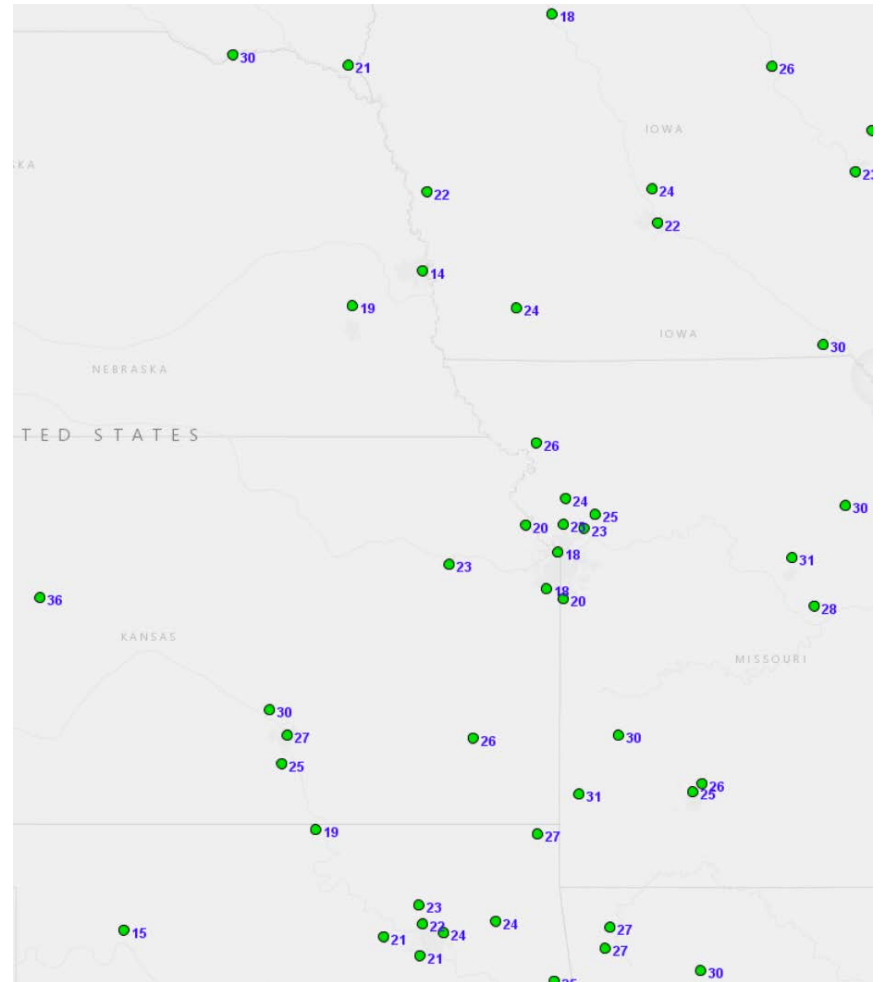


**Monday, March 23, 2020**

PM2.5 (24-hour average)



Ozone (8-hour average maximum)



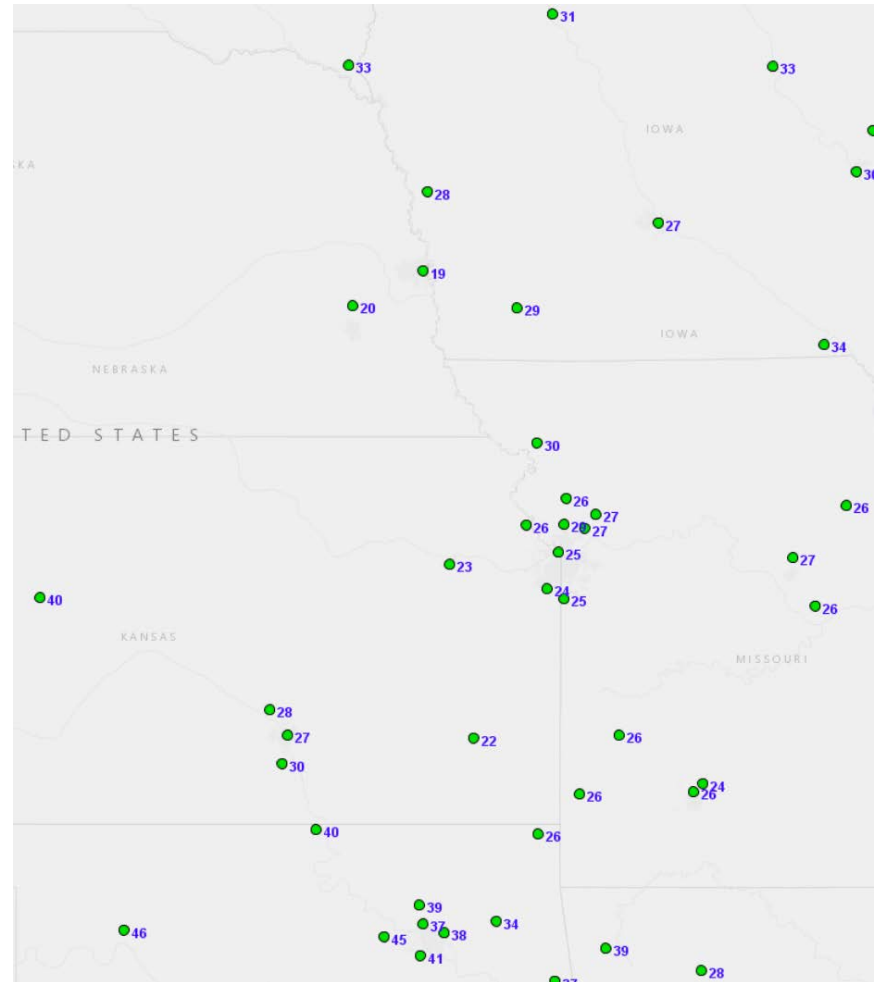
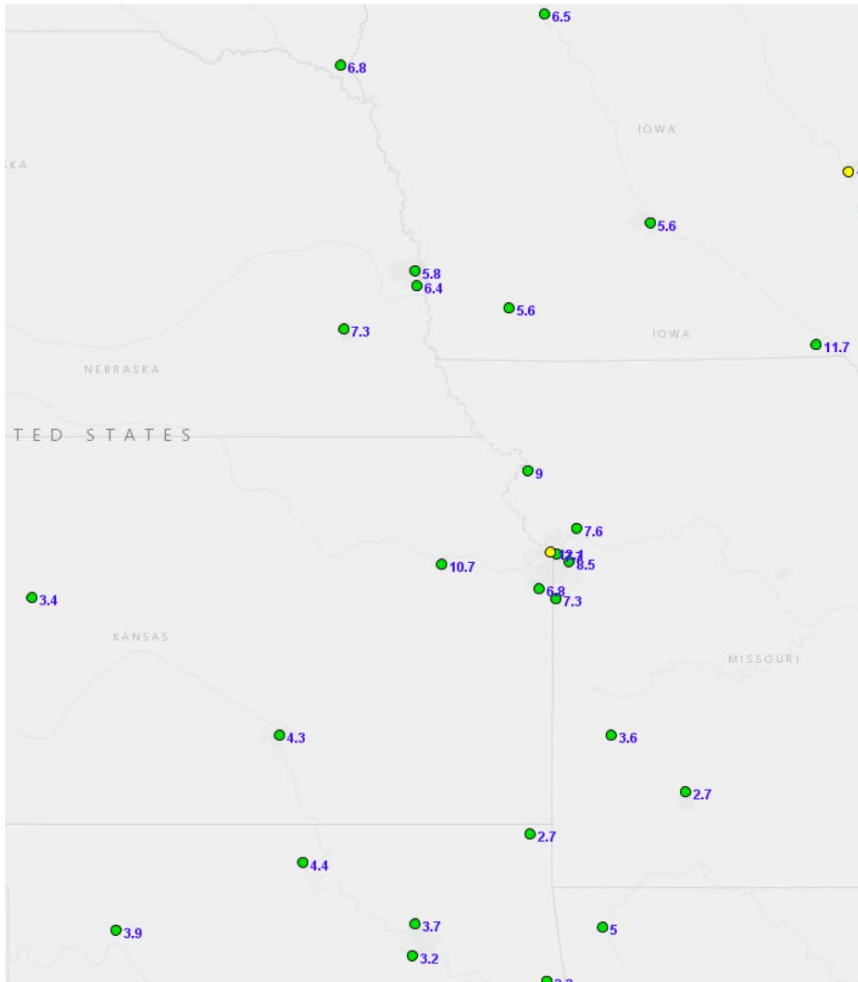
# Flint Hills Prescribed Fire Update



Tuesday, March 24, 2020

PM2.5 (24-hour average)

Ozone (8-hour average maximum)





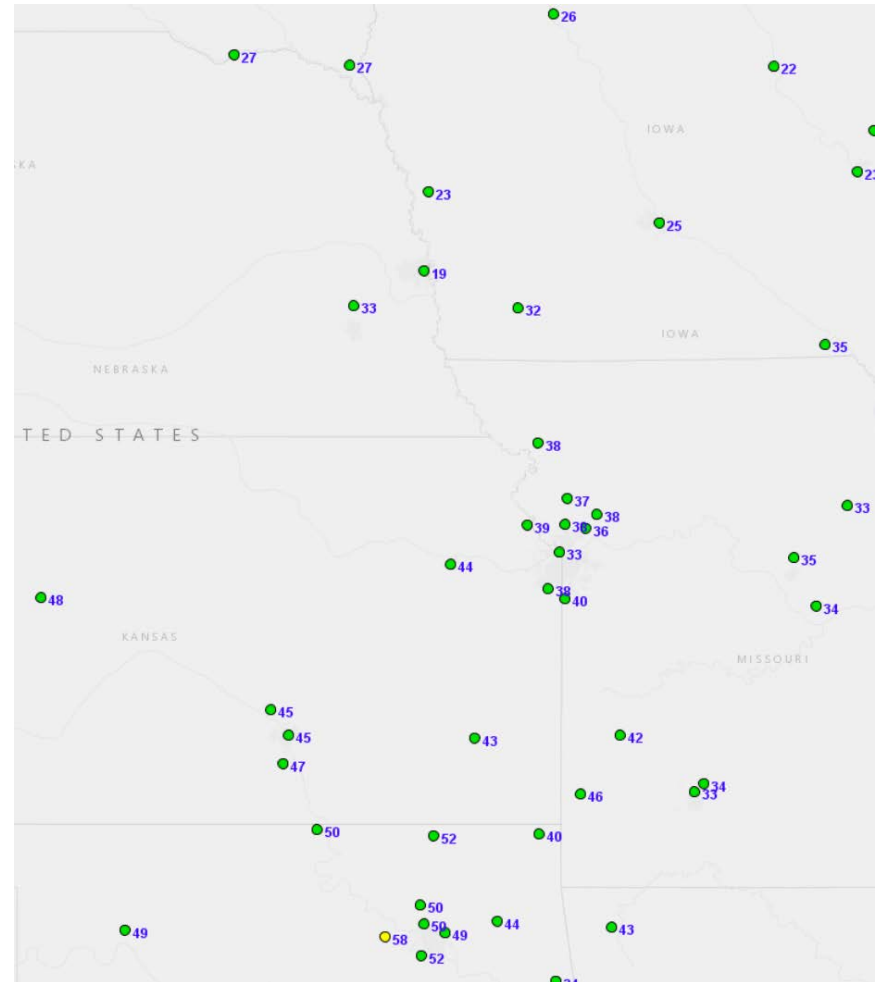
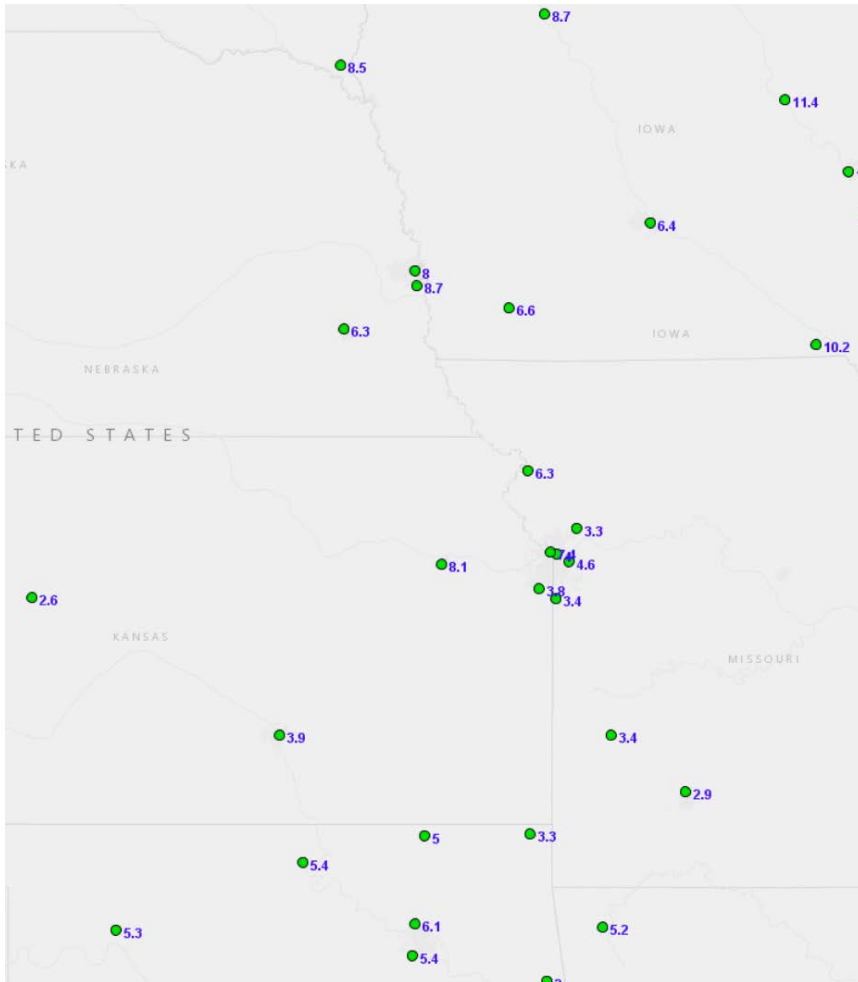
# Flint Hills Prescribed Fire Update



Wednesday, March 25, 2020

PM2.5 (24-hour average)

Ozone (8-hour average maximum)

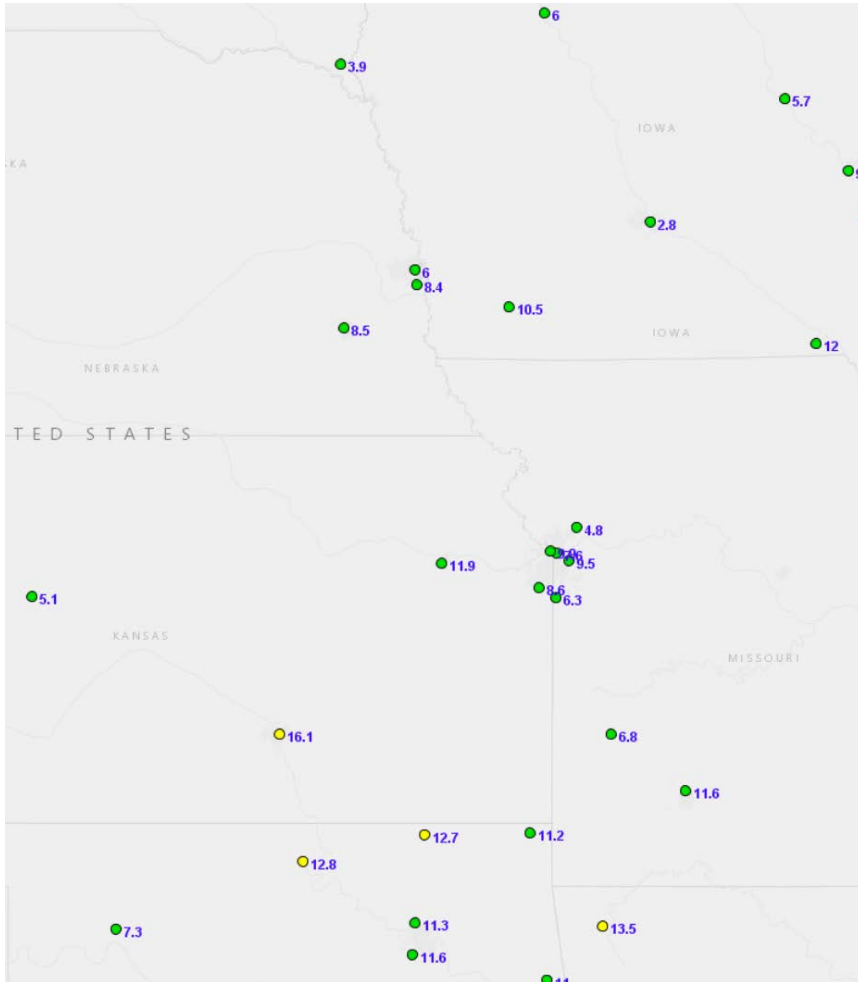


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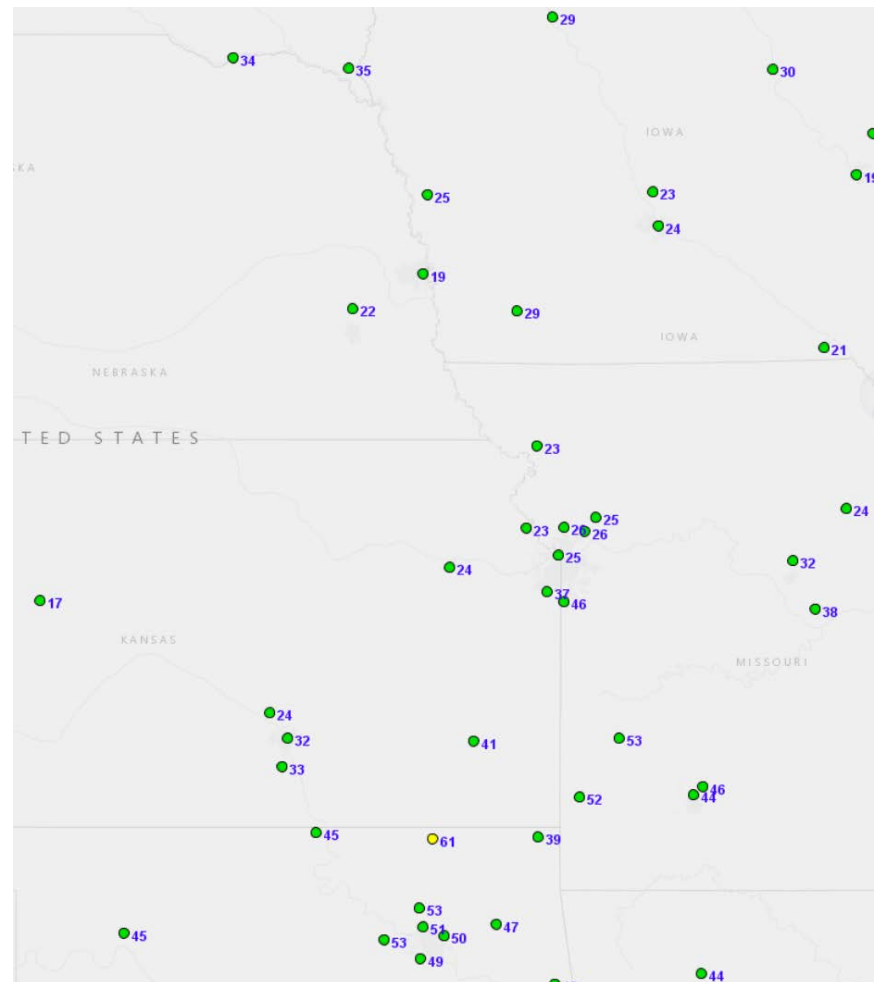


Thursday, March 26, 2020

PM2.5 (24-hour average)



Ozone (8-hour average maximum)





## Fires and Smoke

Only a handful of fires were observed last Friday (March 20) under breezy northerly winds. Light southerly winds on Saturday (March 21) led to a significant amount of burning across the eastern half of Kansas, with occasional fires in Oklahoma, Missouri, and southern Iowa too. Despite the large amount of fires, clear skies and good mixing led to sufficient smoke dispersal across the region with minimal extended air quality impact.

Sunday (March 22) saw near-zero fire activity across the Central Plains. Only a handful of fires were observed on Monday (March 23) and Tuesday (March 24) within the Flint Hills. Warmer temperatures and southerly winds prompted a fair amount of fires across Kansas, Oklahoma, and Texas on Wednesday (March 25) with a handful of wildfires in the western halves of Kansas and Oklahoma.

Southerly winds and very warm temperatures led to a significant amount of burning over southeast Kansas and northeast Oklahoma on Thursday (March 26). While daytime mixing and smoke dispersion was sufficient, the overnight hours into this morning has led to some air quality impacts as air became stagnant with light winds and a strong inversion which has led to fog development and smoke trapping.

*Note: Due to limited resources during the COVID-19 response the daily fire/smoke maps that are typically included are not available at this time. The acreage map is also not able to be updated at this time. Both will return to the update as soon as possible.*

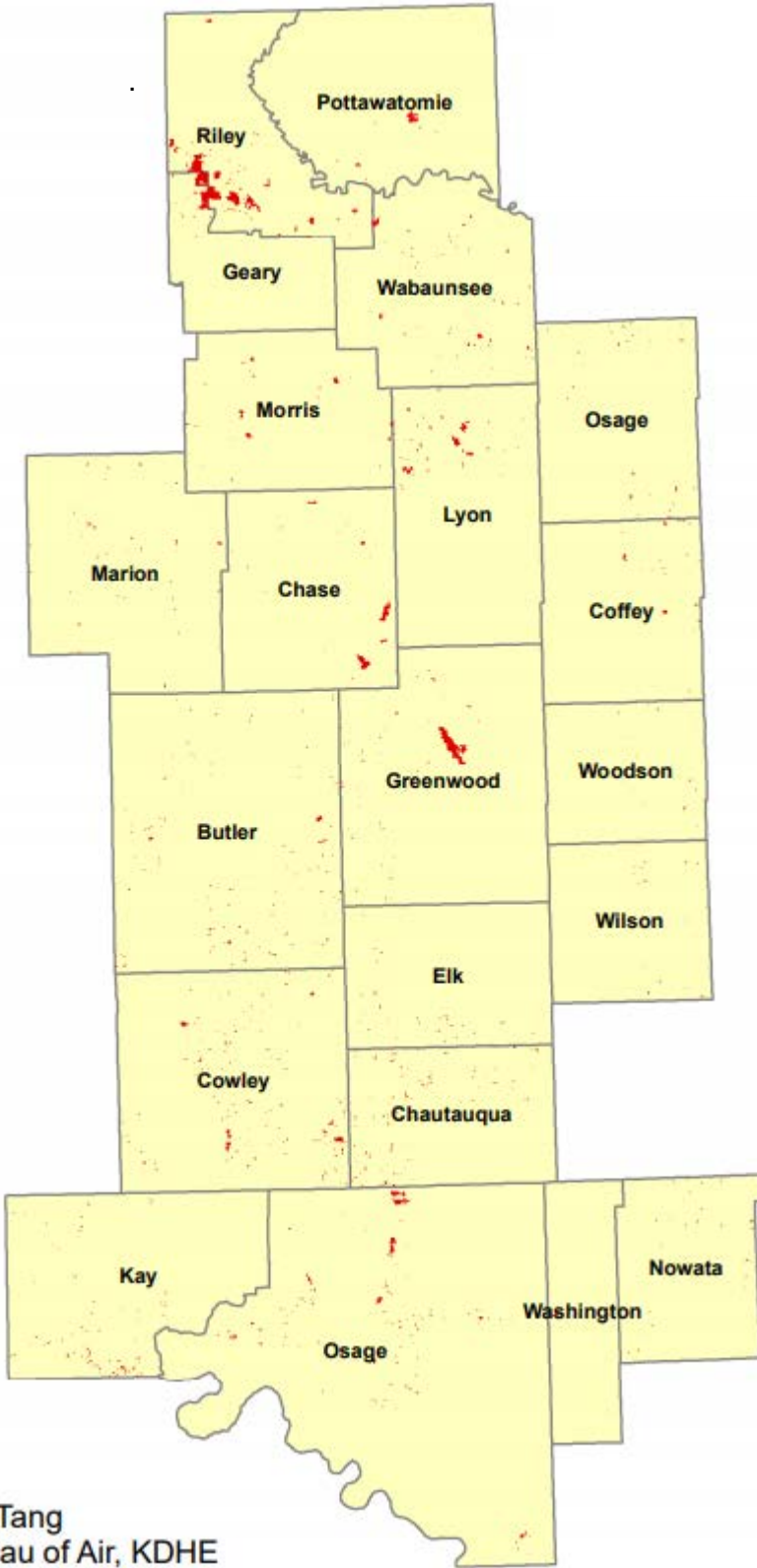
## KSFIRE.ORG



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.



**Flint Hills Acreage Burned (February 2 – March 6, 2020)**



| <u>Counties</u>   | <u>Acres Burned</u> |
|---|---------------------|
| Butler  | 2,873               |
| Chase   | 3,382               |
| Chautauqua  | 2,286               |
| Coffey  | 973                 |
| Cowley  | 4,680               |
| Elk   | 710                 |
| Geary   | 3,985               |
| Greenwood   | 5,637               |
| Lyon  | 2,949               |
| Marion  | 1,282               |
| Morris  | 1,699               |
| Osage (KS)  | 973                 |
| Pottawatomie  | 1,405               |
| Riley   | 10,703              |
| Wabaunsee   | 2,224               |
| Wilson  | 432                 |
| Woodson   | 340                 |
| Nowata (OK)   | 556                 |
| Osage (OK)  | 5,653               |
| Washington (OK)   | 247                 |
| Kay (OK)  | 2,023               |
|   |                     |
| <b>Total</b>  | <b>55,012</b>       |
| * Denotes county was partly or completely covered by clouds during latest analysis. |                     |

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Bureau of Air, KDHE

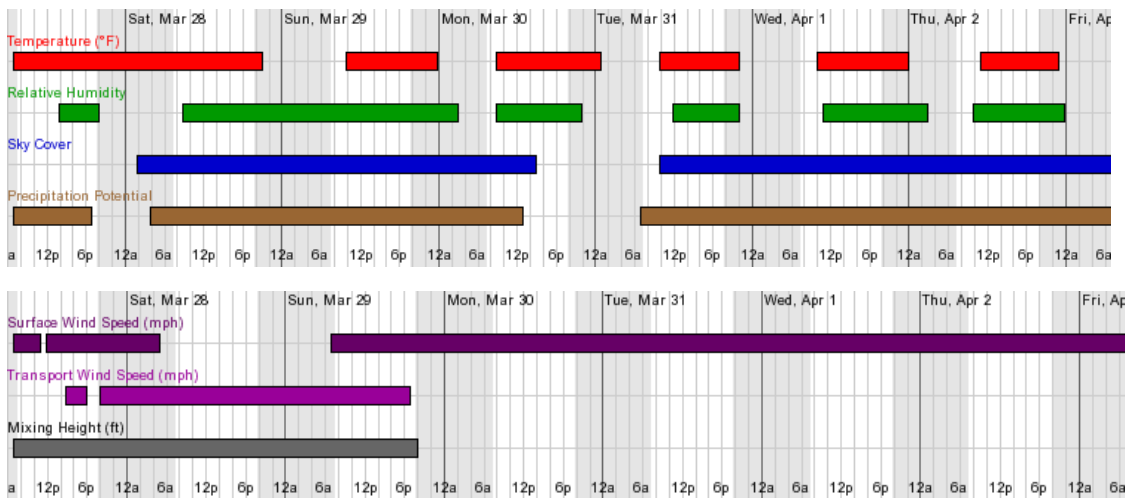


## Upcoming Look at Fires and Smoke

Warm temperatures are forecast today with light winds; however, thunderstorms are also possible by this evening and conditions will likely remain cloudy for much of the day. Mixing will be okay, however light winds at the surface and transport levels will likely lead to decrease smoke dispersion from any fires. Windy conditions are forecast for Saturday into Sunday which will likely inhibit prescribed fire activity for most. Perhaps a narrow window exists late Sunday into Monday for prescribed fire before rain showers become likely on Monday into Tuesday.

Conditions dry on Tuesday with seasonable temperatures, mostly clear skies, and reasonable wind speeds for the remainder of the week. Prescribed fire activity will likely be on the increase as the week progresses if these forecast conditions hold.

### 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](http://KSFire.org). Conditions are most favorable when each parameter has a colored boxplot displayed.*

*Note: Forecast for mixing height and transport winds are only out to 2 days.*

*Forecast valid: 8am March 27, 2020.*

For more information, contact:

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