

Flint Hills Prescribed Fire Update

April 24, 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.



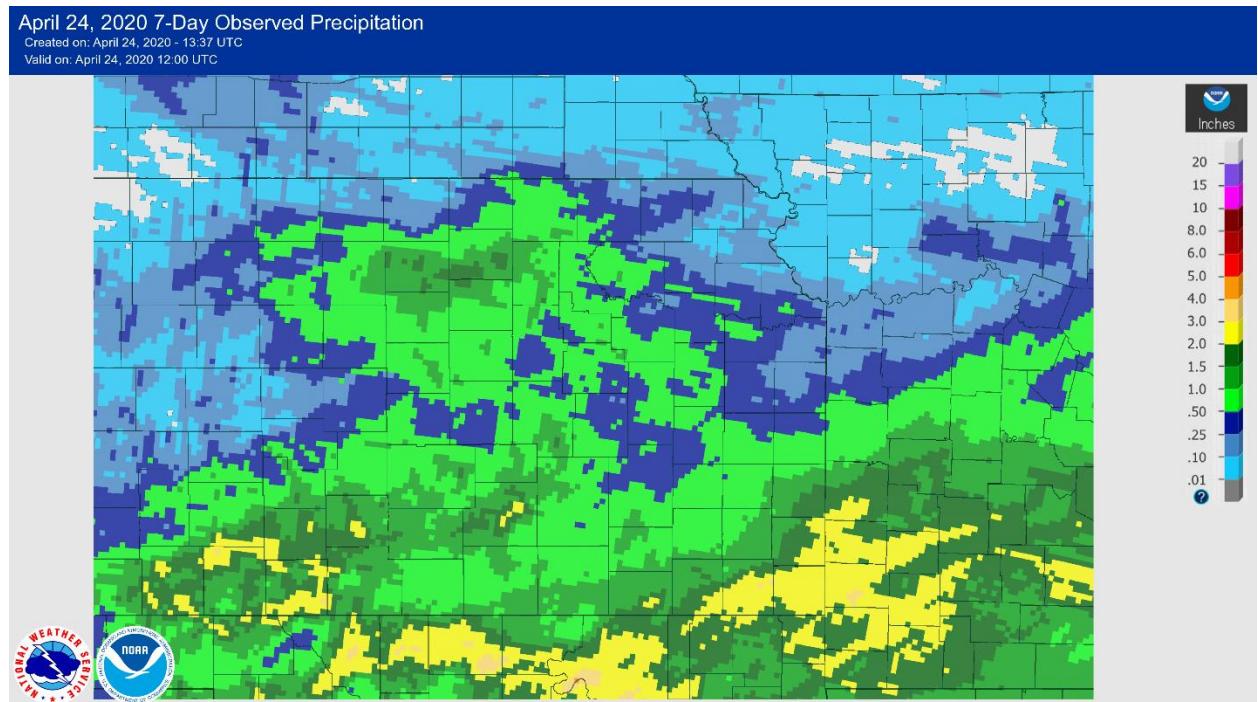


Meteorology

Cold and brisk conditions began the past week on Friday (April 17) with high temperatures only making it into the 40s for most of the Flint Hills and north winds gusting near 30 mph. The warm-up began quickly on Saturday (April 18) with temperatures rebounding into the 60s under south winds at 10-30 mph. A few showers or thunderstorms were seen across the southern Flint Hills late Saturday into Sunday. Sunday through Tuesday (April 19-21) were dry and gradually warmer with highs in the 70s each afternoon with variable winds; Tuesday had light southeast winds at 5-15 mph. Another round of rain showers and thunderstorms moved across the area Wednesday (April 22) which kept conditions cloudy and cooler with highs only in the 60s. Temperatures warmed into the 70s and 80s on Thursday (April 23) under sunny skies, but light and variable winds.

Additional showers and thunderstorms moved across parts of the Flint Hills Thursday evening and has continued into this Friday (April 24) morning. Total precipitation amounts over the past week have ranged from near a tenth of an inch to upwards of two inches in isolated areas.

Precipitation



NOAA/NWS Observed Total Precipitation for April 17-23, 2020.



Air Quality Data

Air quality data for the period of April 17-23, 2020:

Ozone: Preliminary data indicates no exceedance 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 $\mu\text{g}/\text{m}^3$.

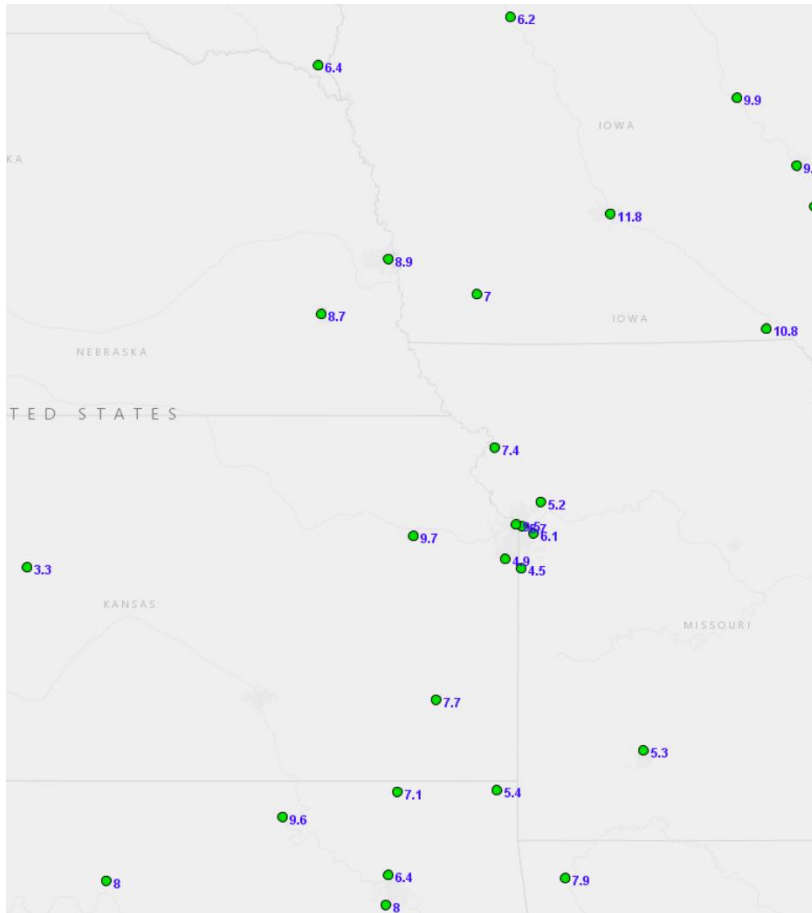
Air quality images on the following pages for each day show preliminary data, courtesy Air Now Tech.

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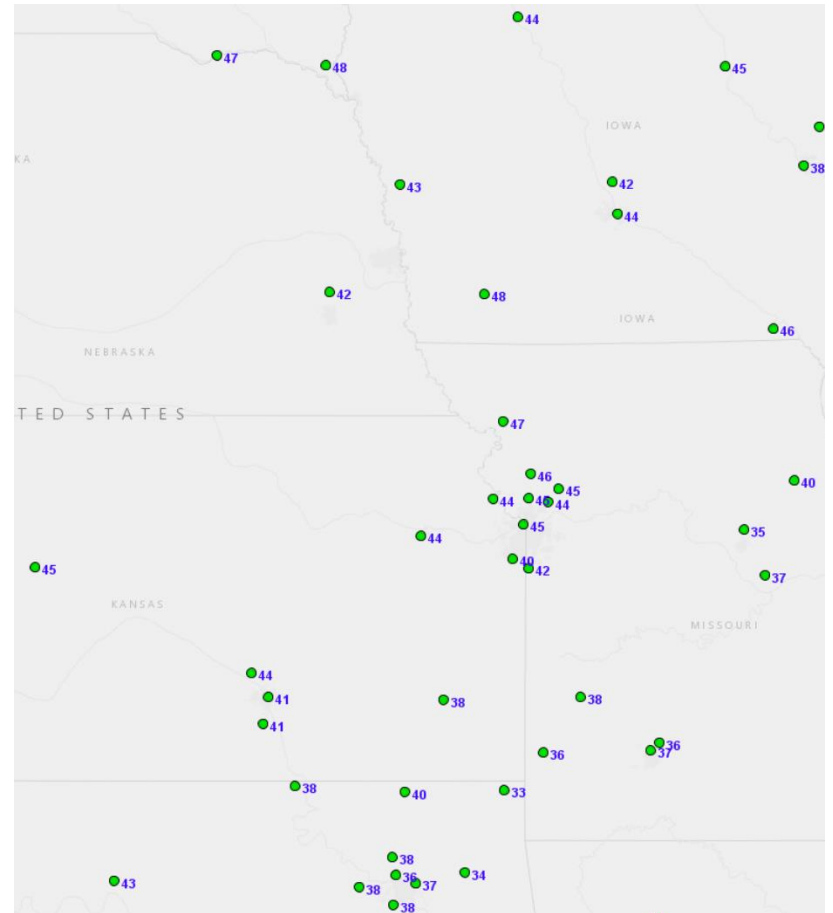


Friday, April 17, 2020

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

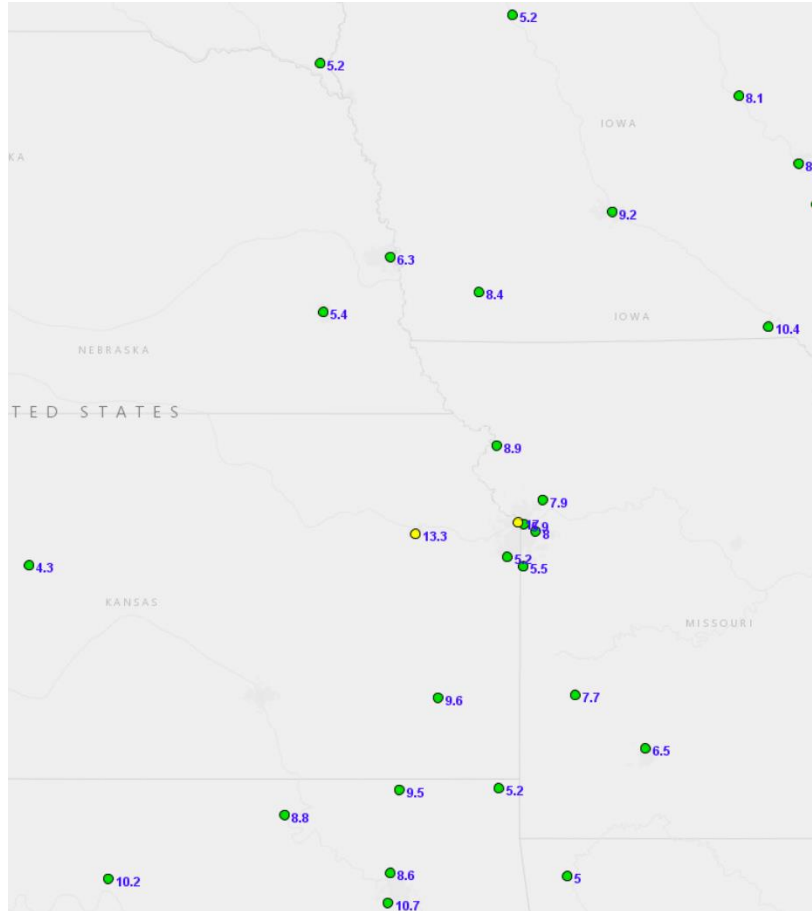


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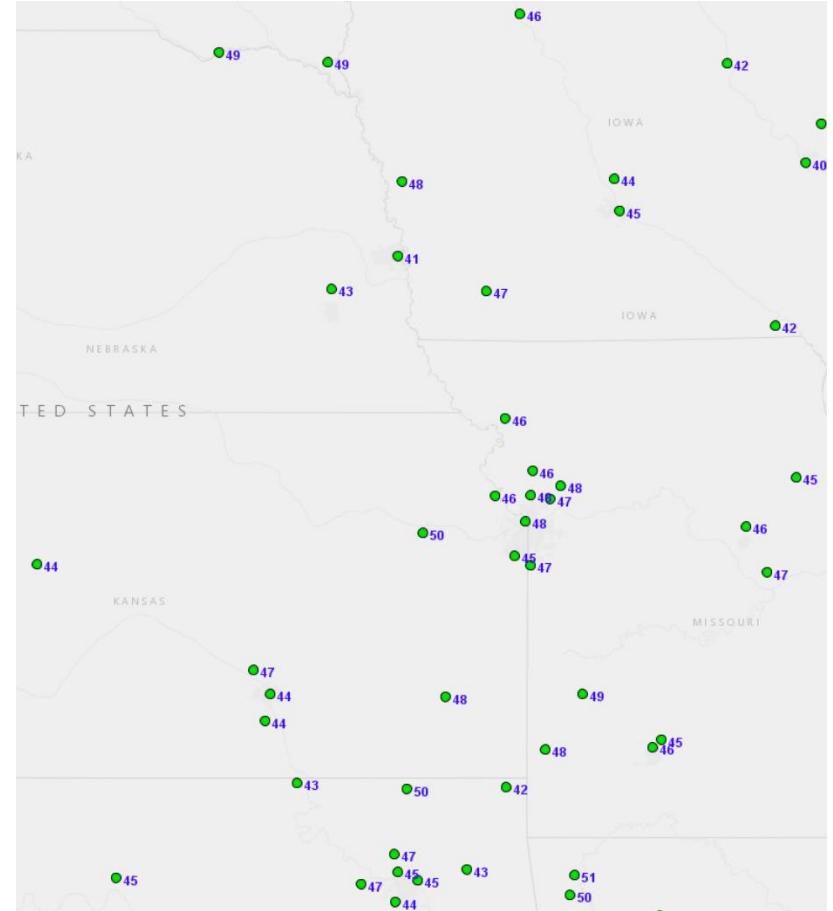


Saturday, April 18, 2020

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

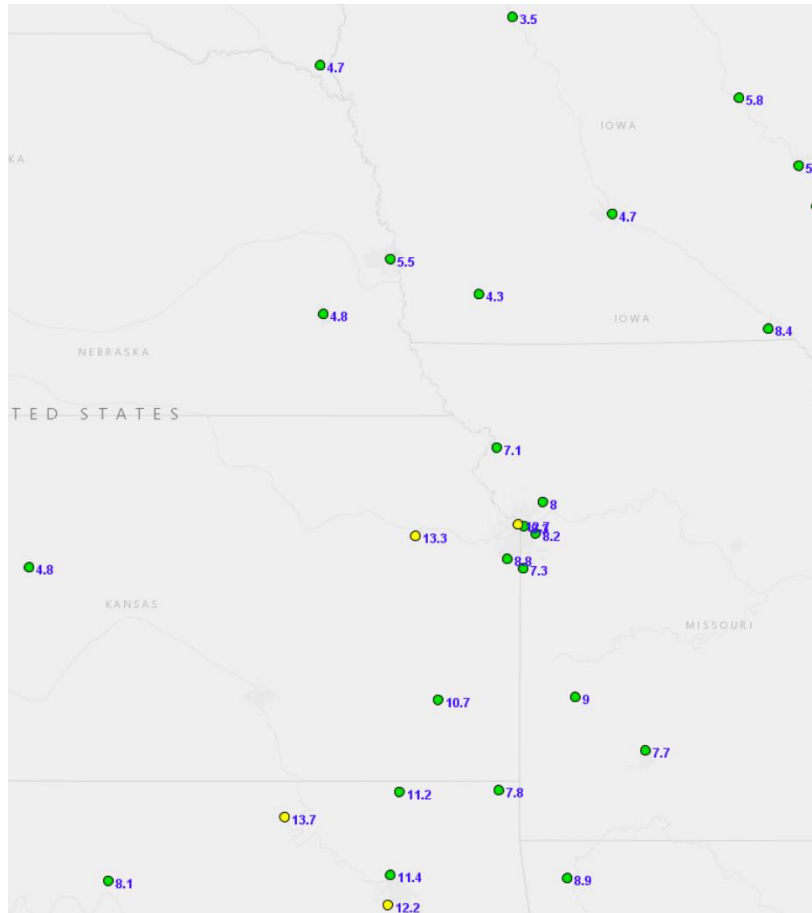


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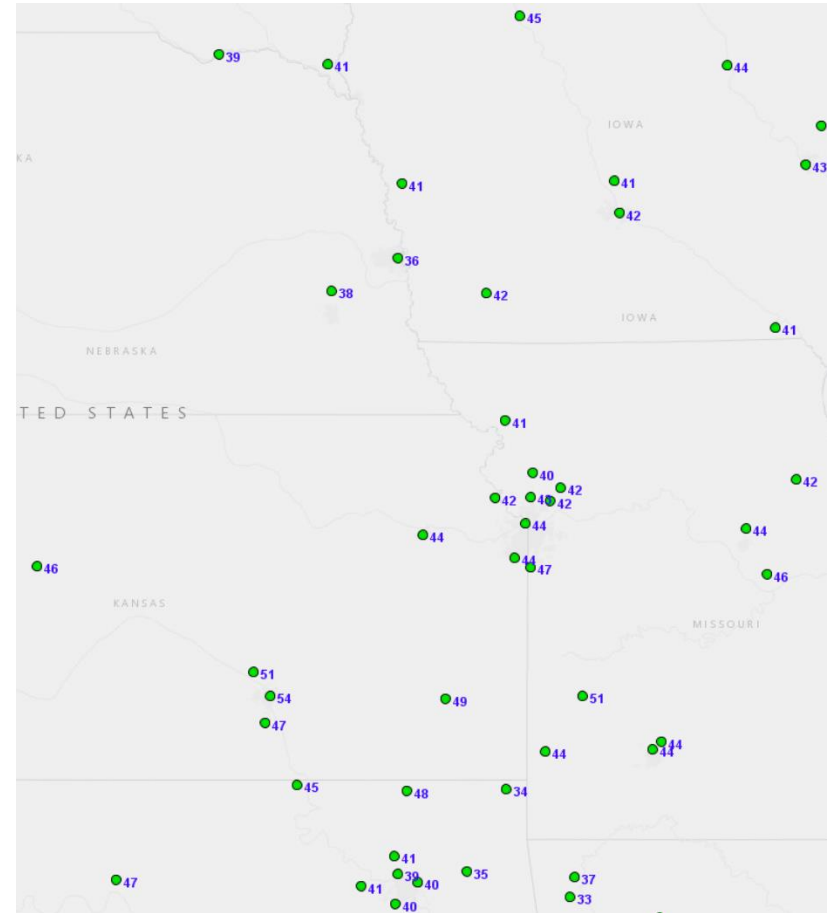


Sunday, April 19, 2020

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

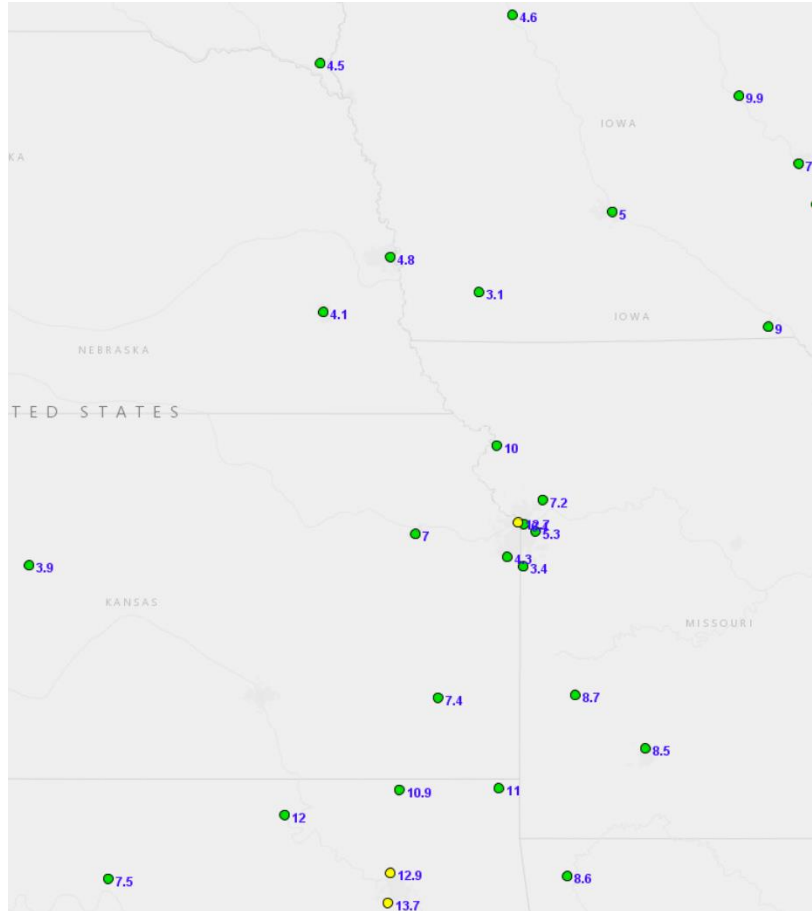


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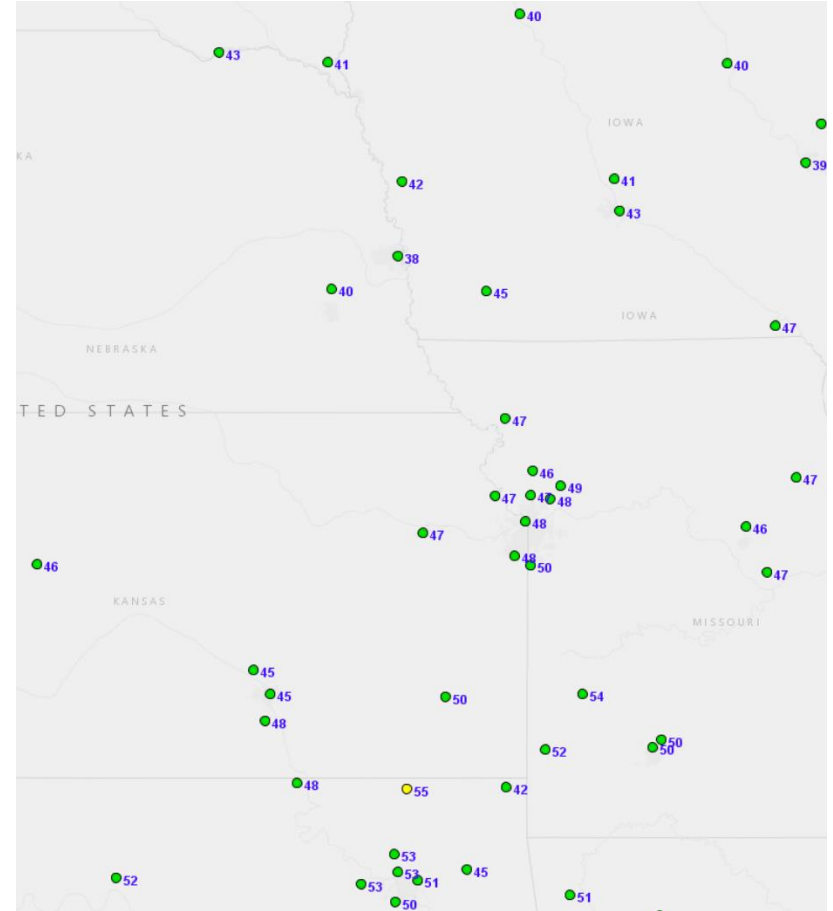


Monday, April 20, 2020

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

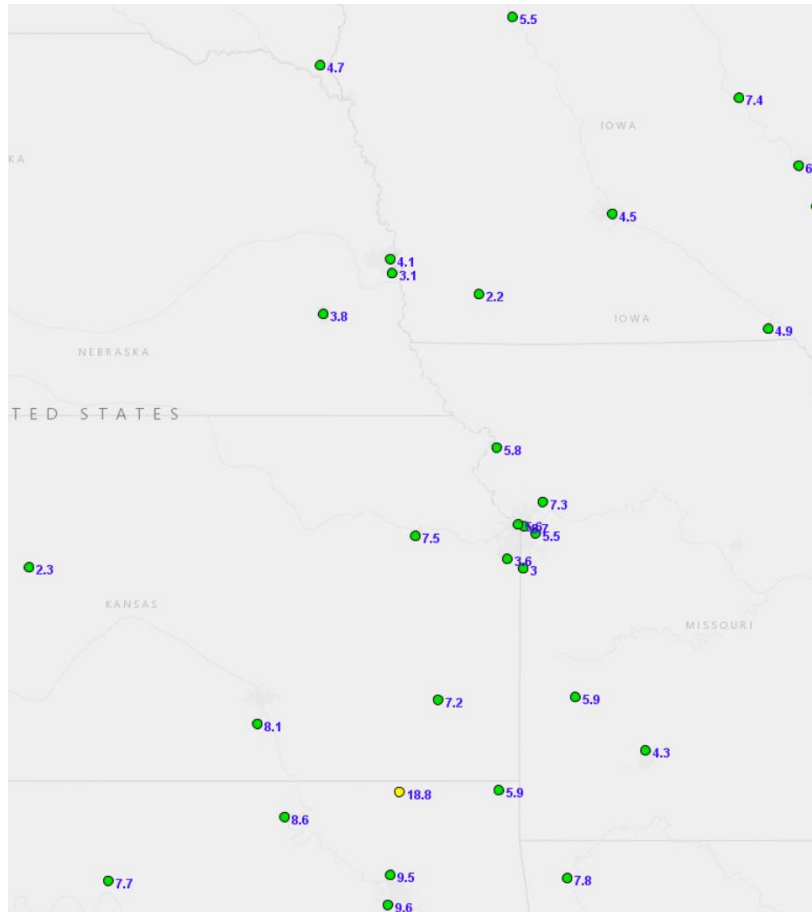


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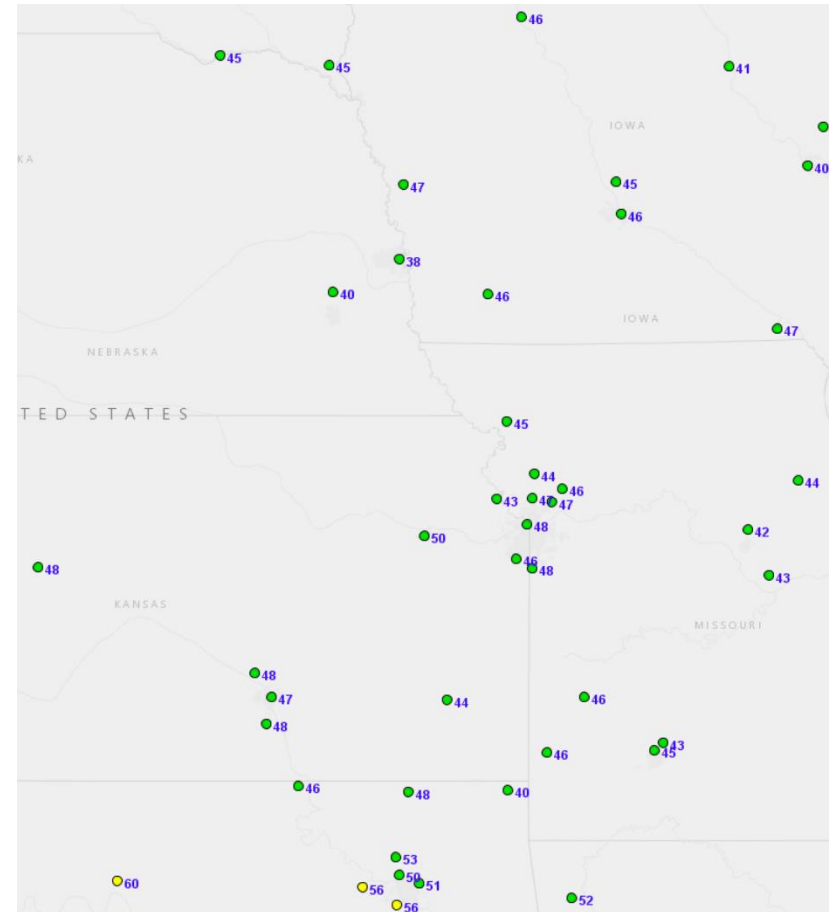


Tuesday, April 21, 2020

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

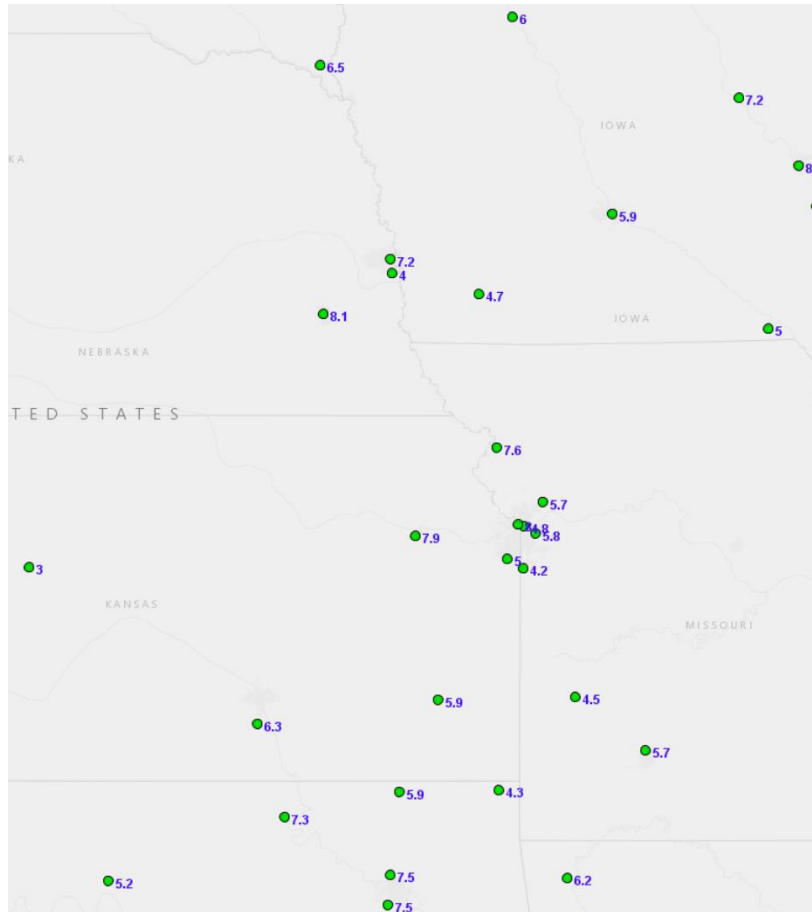


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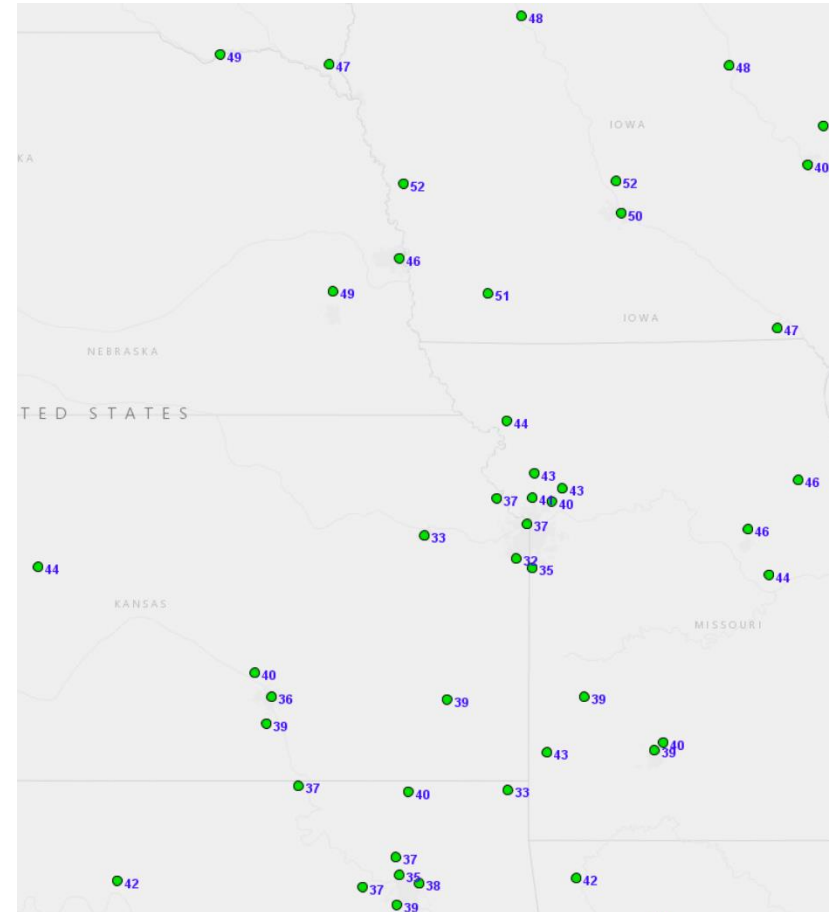


Wednesday, April 22, 2020

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

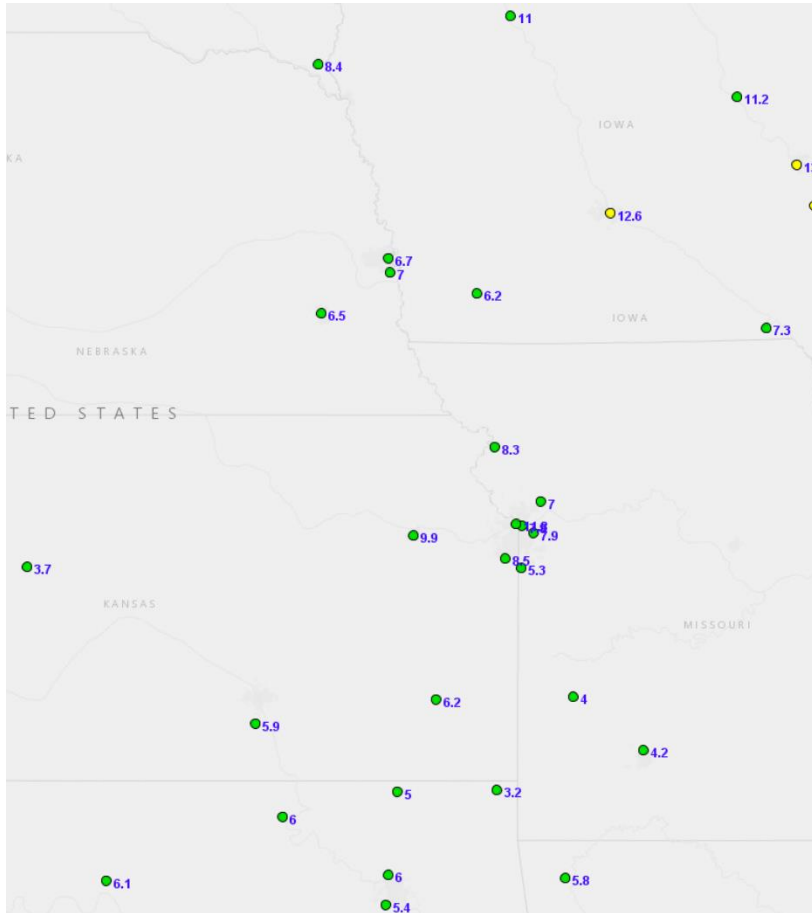


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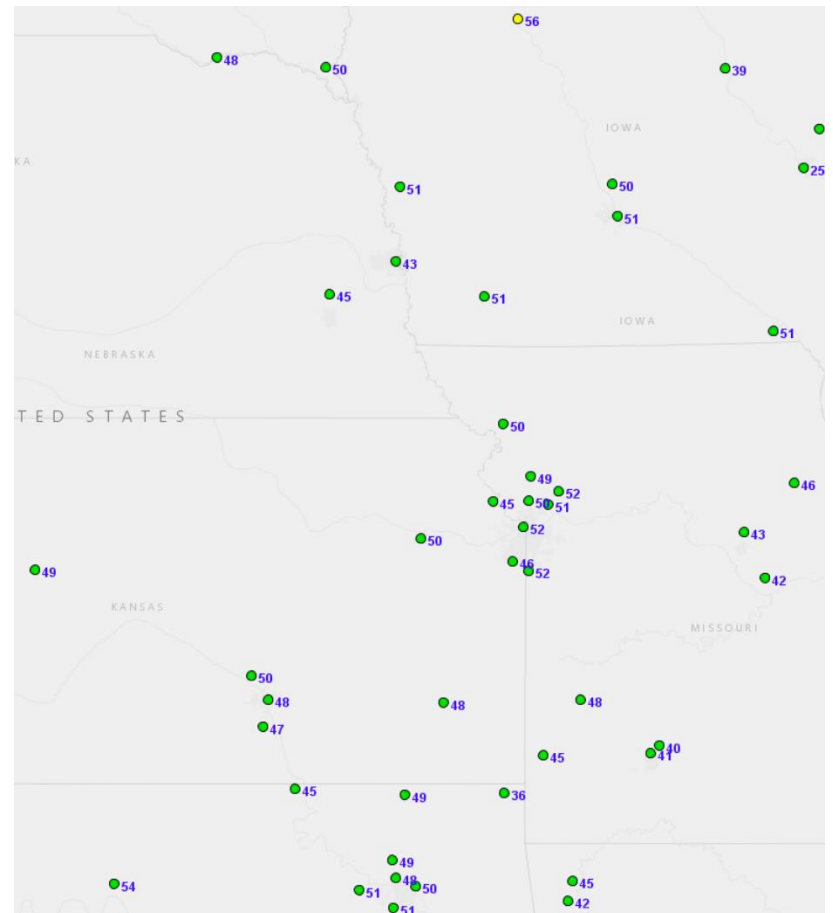


Thursday, April 23, 2020

PM2.5 (24-hour average)



Ozone (8-hour average maximum)





Fires and Smoke

A brisk northwest wind and cooler temperatures kept prescribed burning to a minimum last Friday (April 17) across the entire region. Warmer temperatures and south winds aided in more prescribed fire activity on Saturday (April 18), especially in the southern Flint Hills. Impacts to air quality were observed in Topeka late Saturday into Sunday due to this prescribed fire activity, although values remained well below national air quality standards. Prescribed fire activity was prevalent on Sunday (April 19) throughout the Flint Hills with smoke transporting southwestward towards Wichita and northeast Oklahoma which saw air quality impacts late Sunday into Monday.

Prescribed fire activity on Monday (April 20) was fairly light, but northwest winds pushed smoke into primarily northeast Oklahoma which saw some Moderate Air Quality Index values. Fire activity on Tuesday (April 21) increased under sunny skies and warmer temperatures with light south-southeast winds. Despite lighter winds, overall dispersion was good and led to minimal air quality impacts throughout the region.

Cloudy skies and areas of rain kept any burning on Wednesday (April 22) to a minimum throughout the region. Warmer temperatures and dry conditions on Thursday (April 23) allowed sufficient drying for some prescribed fire activity, although light and variable winds likely inhibited some from burning due to potential for erratic fire behavior.

KSFIRE.ORG

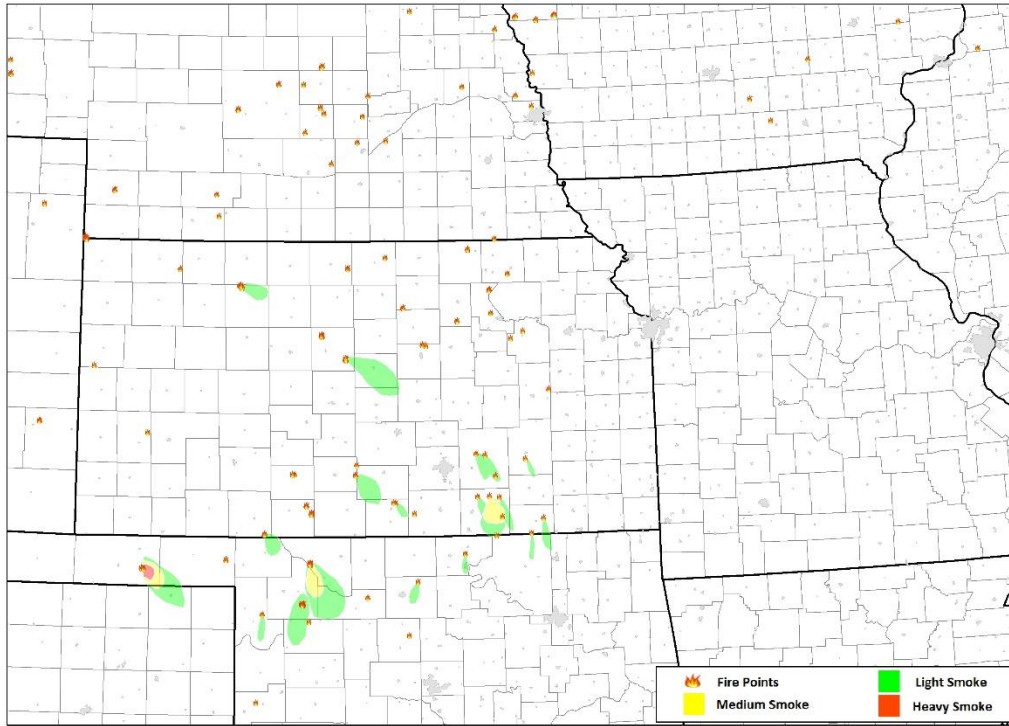


This website was developed as part of the development of the Kansas Flint Hills Smoke Management Plan. Kansas State University hosts the webpage and it includes important information for ranchers and others who might be interested in the Flint Hills. It provides training, regulations, policies, publications,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



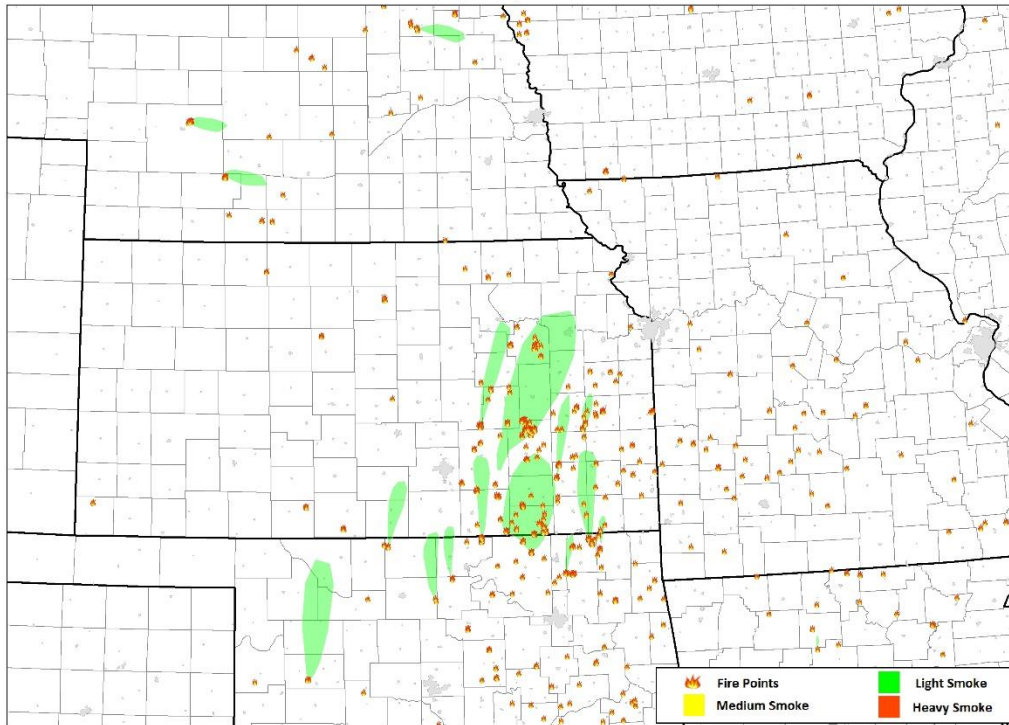
HMS Fire & Smoke Analysis April 17, 2020



Map: Jayson Prentice, KDHE Bureau of Air

Data: NOAA NESDIS OSPO Hazard Mapping System Fire and Smoke Product

HMS Fire & Smoke Analysis April 18, 2020



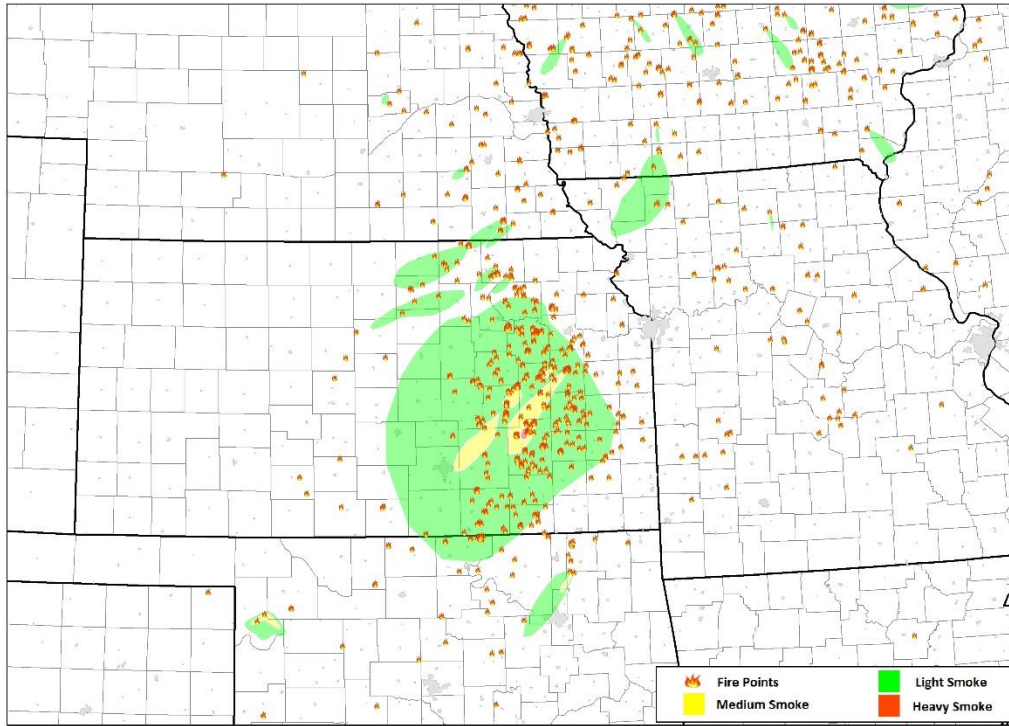
Map: Jayson Prentice, KDHE Bureau of Air

Data: NOAA NESDIS OSPO Hazard Mapping System Fire and Smoke Product

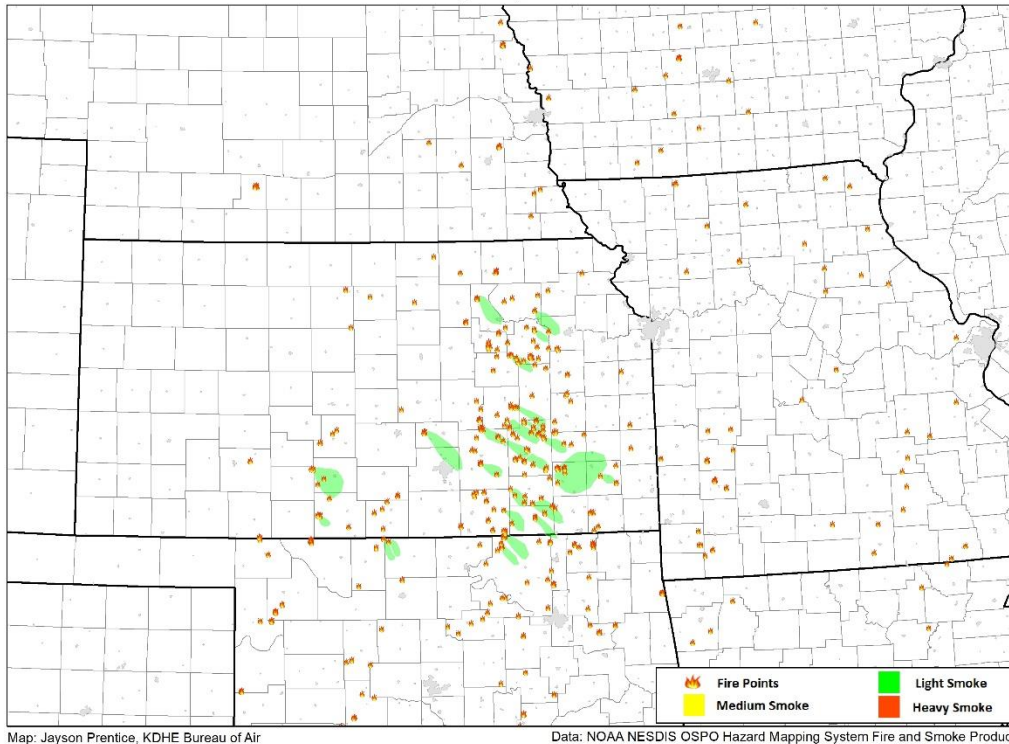
Flint Hills Prescribed Fire Update



HMS Fire & Smoke Analysis April 19, 2020



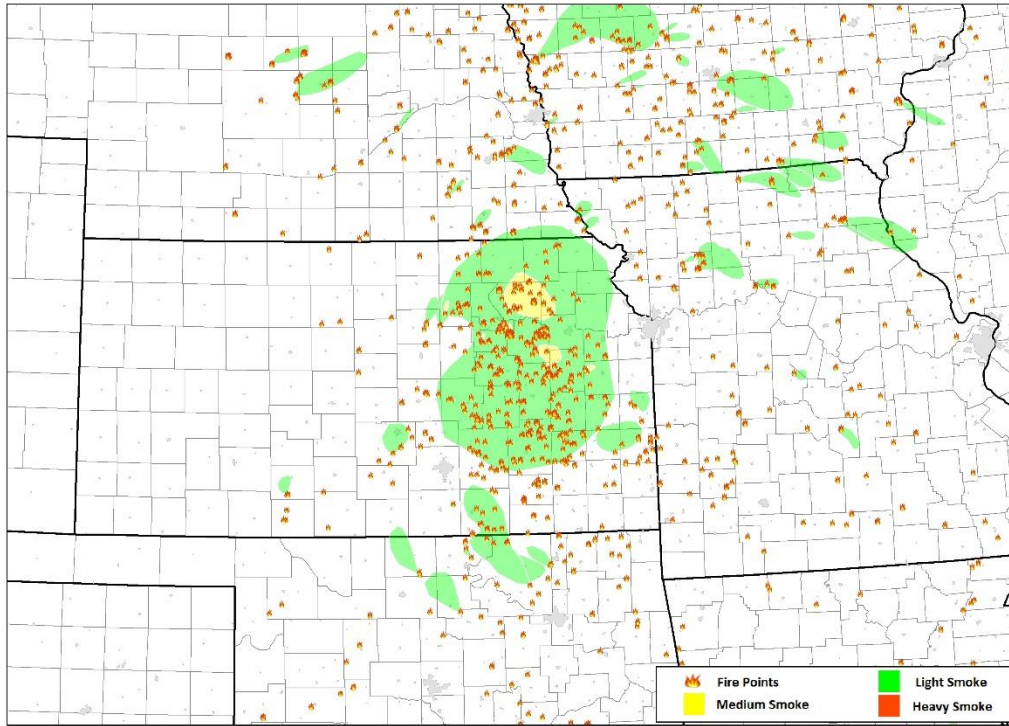
HMS Fire & Smoke Analysis April 20, 2020



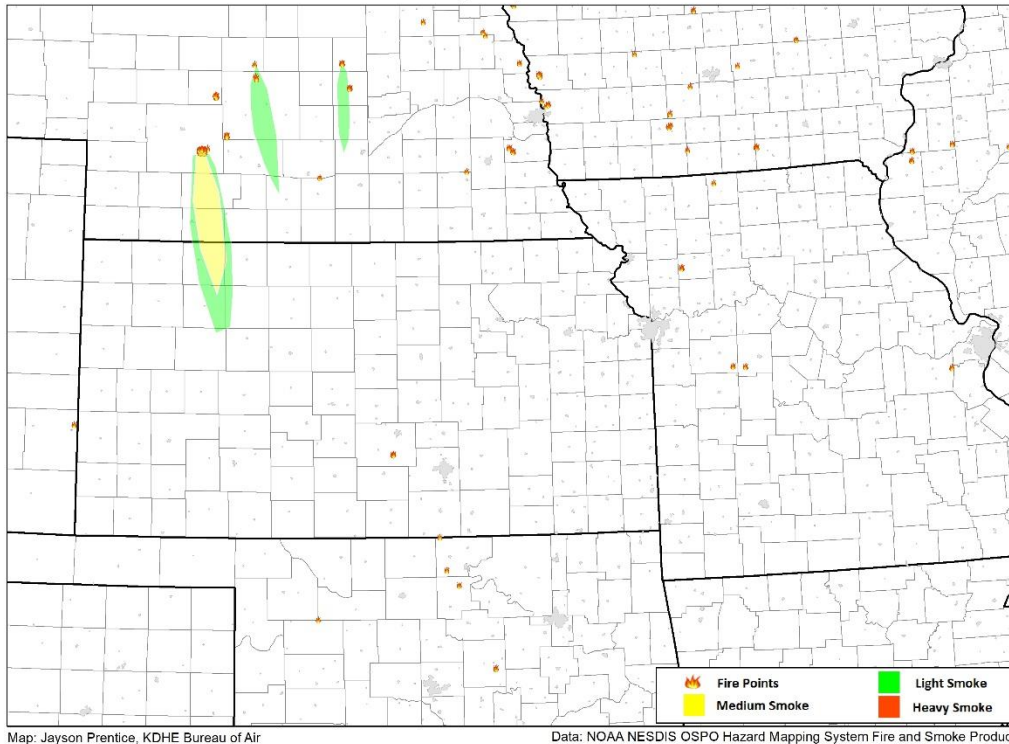
Flint Hills Prescribed Fire Update



HMS Fire & Smoke Analysis April 21, 2020



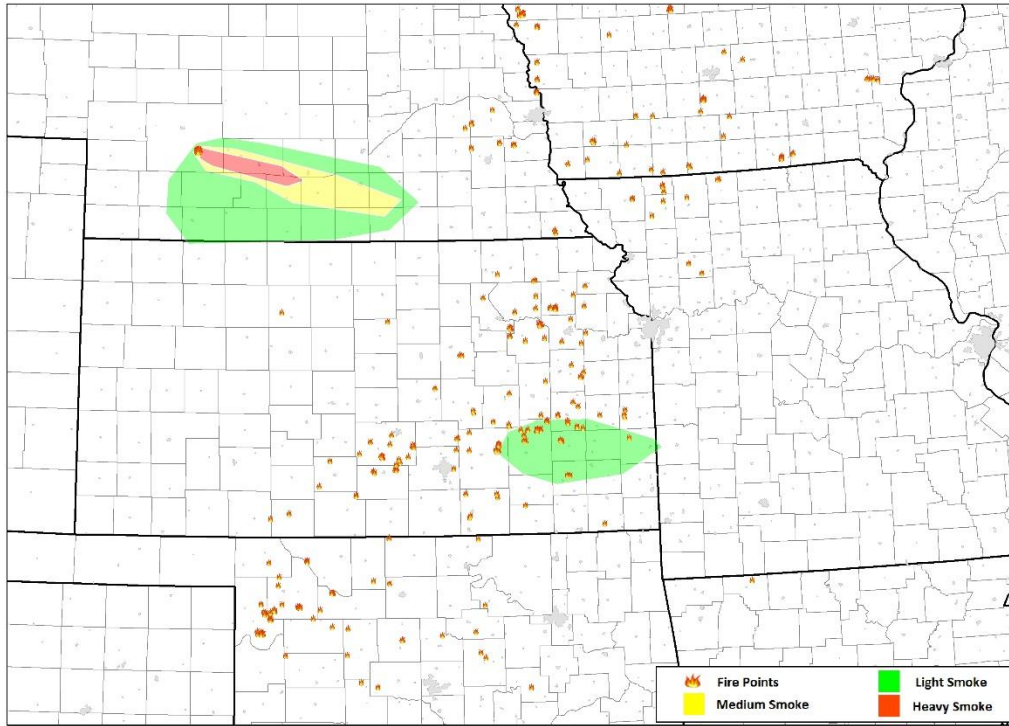
HMS Fire & Smoke Analysis April 22, 2020



Flint Hills Prescribed Fire Update

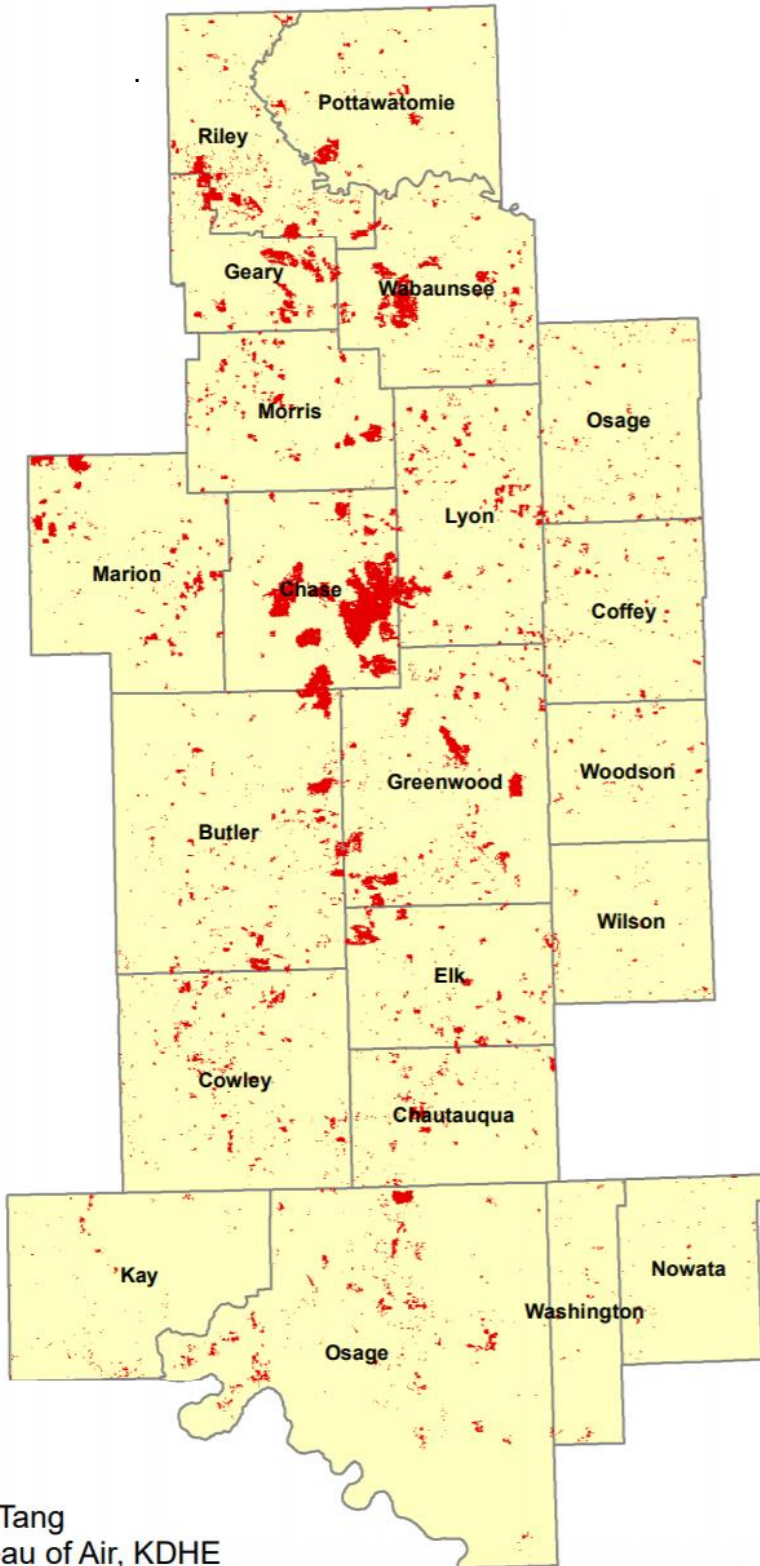


HMS Fire & Smoke Analysis April 23, 2020





Flint Hills Acreage Burned (February 2 – April 3, 2020)



Yao Tang
Bureau of Air, KDHE

| <u>Counties</u> | <u>Acres Burned</u> | |
|---|---------------------|---|
| Butler | 36,279 | * |
| Chase | 94,272 | * |
| Chautauqua | 11,707 | * |
| Coffey | 8,633 | * |
| Cowley | 20,587 | * |
| Elk | 18,934 | * |
| Geary | 25,839 | * |
| Greenwood | 40,865 | * |
| Lyon | 27,799 | * |
| Marion | 26,039 | * |
| Morris | 20,263 | * |
| Osage (KS) | 7,506 | * |
| Pottawatomie | 12,850 | * |
| Riley | 27,537 | * |
| Wabaunsee | 33,947 | * |
| Wilson | 3,243 | * |
| Woodson | 4,402 | * |
| Nowata (OK) | 1,591 | * |
| Osage (OK) | 29,792 | * |
| Washington (OK) | 2,224 | * |
| Kay (OK) | 4,340 | * |
| | | |
| Total | 458,649 | |
| * Denotes county was partly or completely covered by clouds during latest analysis. | | |



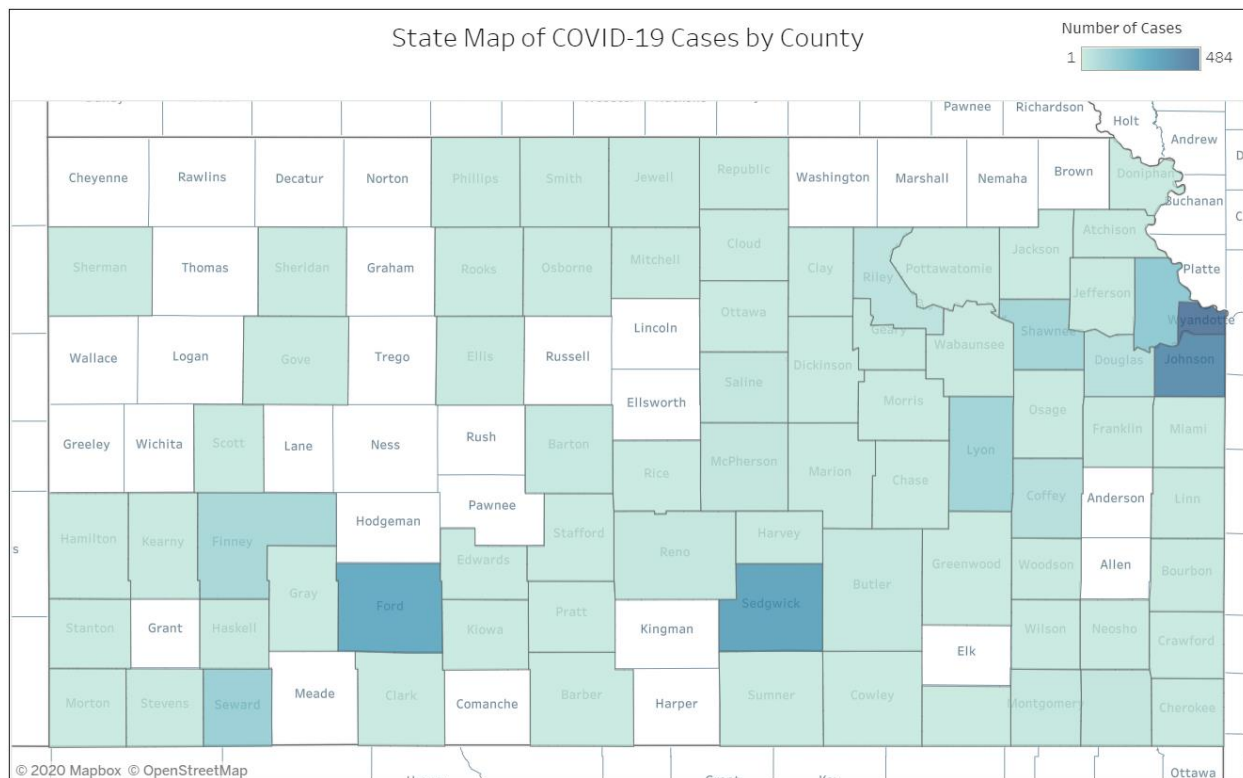
Kansas Coronavirus Disease 2019 (COVID-19)

On March 28, 2020 the Kansas Department of Health and Environment alongside Kansas Department of Agriculture released a statement encouraging all land owners and managers voluntarily reduce the number of acres that they intend to burn this spring. With resources of the county emergency response staff already being taxed with COVID-19 response, it is important to minimize responses that would come with prescribed fire activity. The full release is available [here](#).

As of April 23, 2020 at 10am the following information was available from the Kansas Department of Health and Environment regarding COVID-19 cases in Kansas. For most information and the most up to date data please see the [KDHE Coronavirus Updates](#).

| Cases* | Hospitalizations | Statewide Deaths | Negative Tests |
|--------|------------------|------------------|----------------|
| 2,482 | 442 | 112 | 18,836 |

*A case is defined as a person who tested positive for the novel coronavirus (SARS-CoV-2), which causes Coronavirus Disease 2019 (COVID-19).
Case counts are preliminary and subject to verification.



Case counts are preliminary and subject to change.

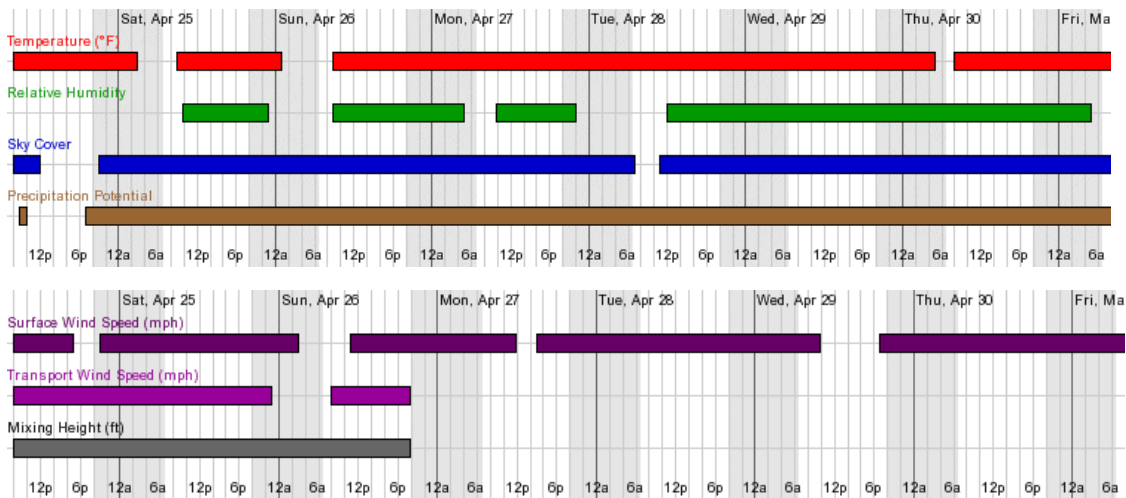


Upcoming Look at Fires and Smoke

Scattered showers and thunderstorms are forecast today (April 24) throughout the Flint Hills which will likely inhibit any large prescribed burns. Prescribed fire activity may be possible on Saturday, however may be largely dependent upon how wet conditions are from today's rainfall. Light winds and very poor dispersion are likely Saturday night, so look smoke to linger if any late Saturday burns are conducted.

Weather conditions for the remainder of the week are largely conducive for prescribed burning with warm temperatures, and mostly clear skies. Although the potential for precipitation is not significant at this time there is a chance Monday night into Tuesday, and perhaps later in the week as well. Winds may be breezy at times on Monday and Wednesday too.

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.

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

Forecast valid: 8am April 24, 2020.

For more information, contact:

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