

# Flint Hills Prescribed Fire Update

March 29, 2019

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

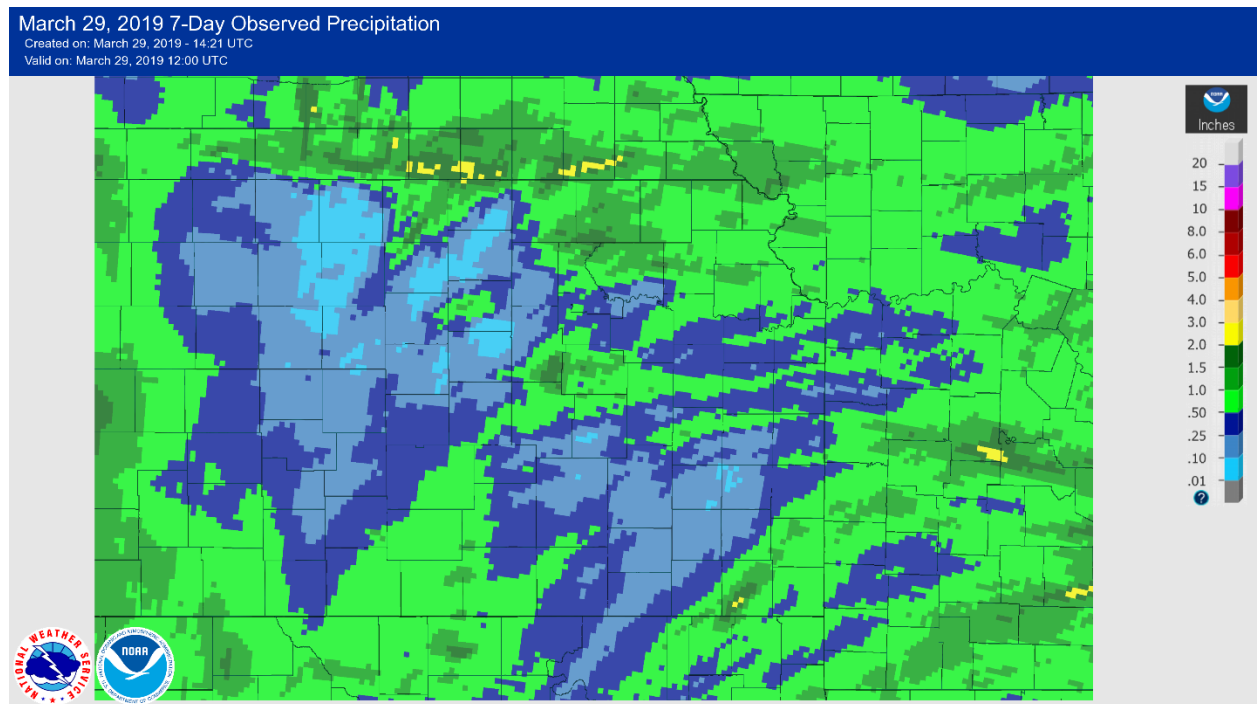




## Meteorology

Last Friday (March 22) saw a light and somewhat variable wind with mostly sunny skies and temperatures in the 60s. This ideal Spring weather gave way to widespread area of light rain, cloud conditions, and temperatures in the 50s for Saturday and Sunday (March 23-24). A cool day was observed on Monday (March 25) as the weekend storm system departed the region – northwest winds and a high temperature struggling in the 50s. Winds turned back to the south for Tuesday (March 26) and temperatures rose back into the 60s for most under mostly sunny skies. The south wind increased for Wednesday (March 27) with gusts near 45 mph for many locations – this did bring even warmer temperatures with highs in the 70s for many locations. Another storm system arrived yesterday (March 28) bringing bands of showers and thunderstorms (some severe) over the Flint Hills with temperatures in the 60s.

## Precipitation

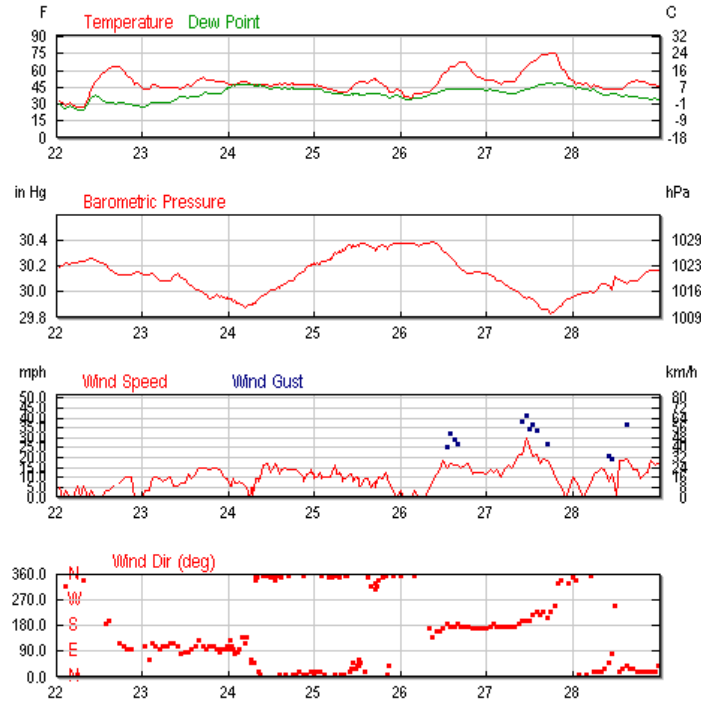


NOAA/NWS Observed Total Precipitation for March 22-28, 2019.

# Flint Hills Prescribed Fire Update

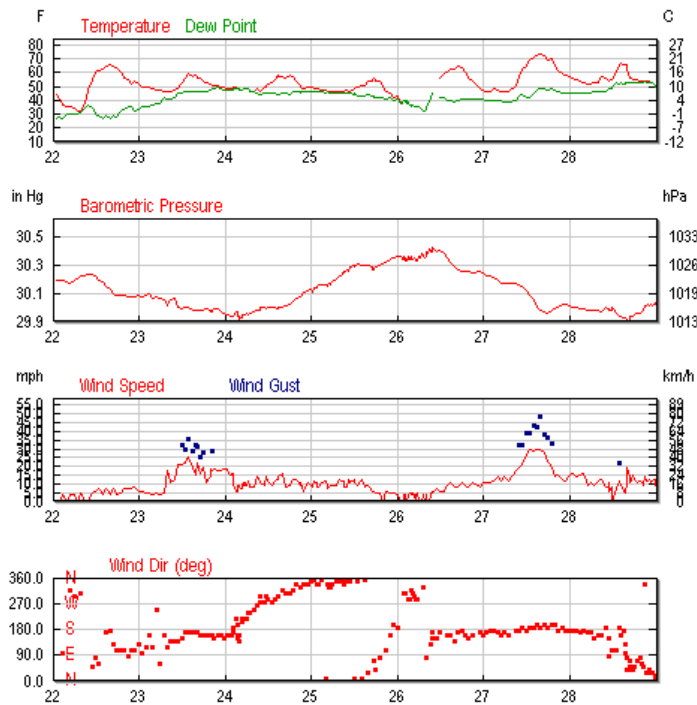


## Lincoln, NE



March 22-28, 2019 Observed Weather from KLNK. Graphic: Weather Underground, Inc.

## Emporia, KS



March 22-28, 2019 Observed Weather from KEMP. Graphic: Weather Underground, Inc.



## Air Quality Data

Air quality data for the period of March 22-28, 2019:

**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 an exceedance of the PM<sub>2.5</sub> NAAQS 24-hour standard occurred on Friday, March 22 at the Ponca City, Oklahoma ambient air quality monitor operated by the Oklahoma Department of Environmental Quality. The observed daily 24-hour average was 37.7  $\mu\text{g}/\text{m}^3$ , the NAAQS standard is a 24-hour average of 35  $\mu\text{g}/\text{m}^3$ .

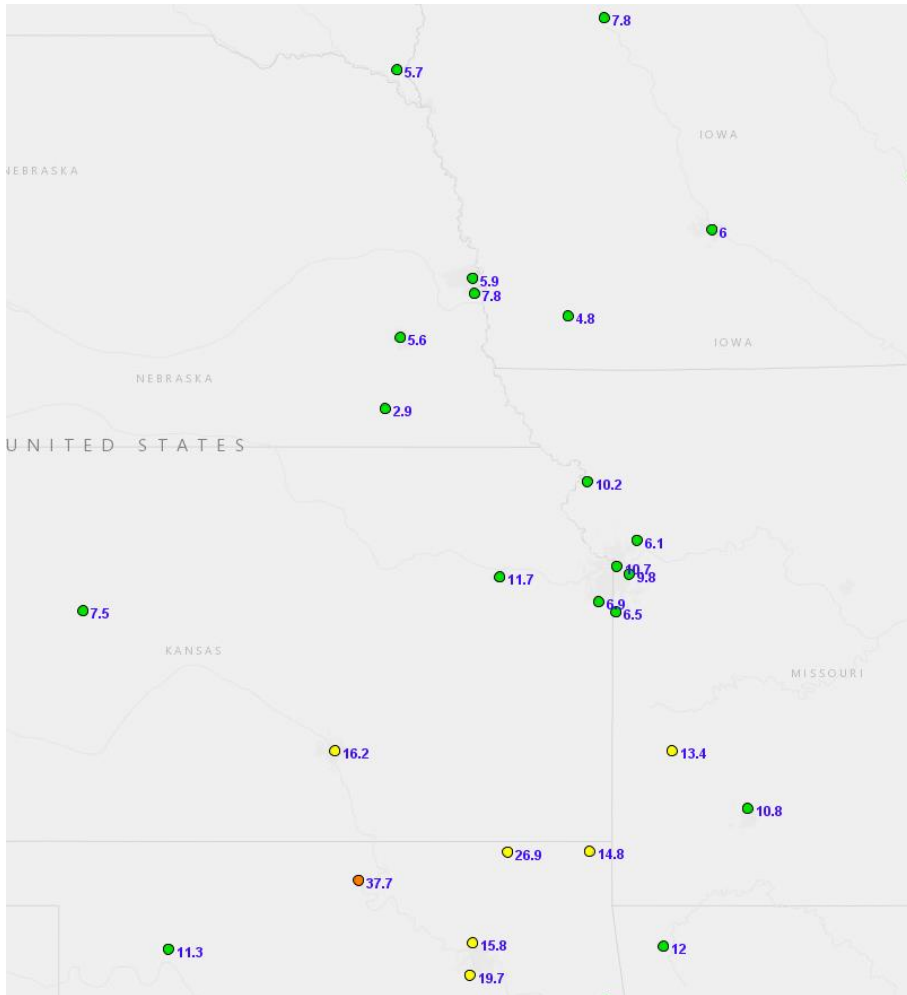
Air quality images on the following pages for each day show preliminary data, courtesy Air Now Tech.

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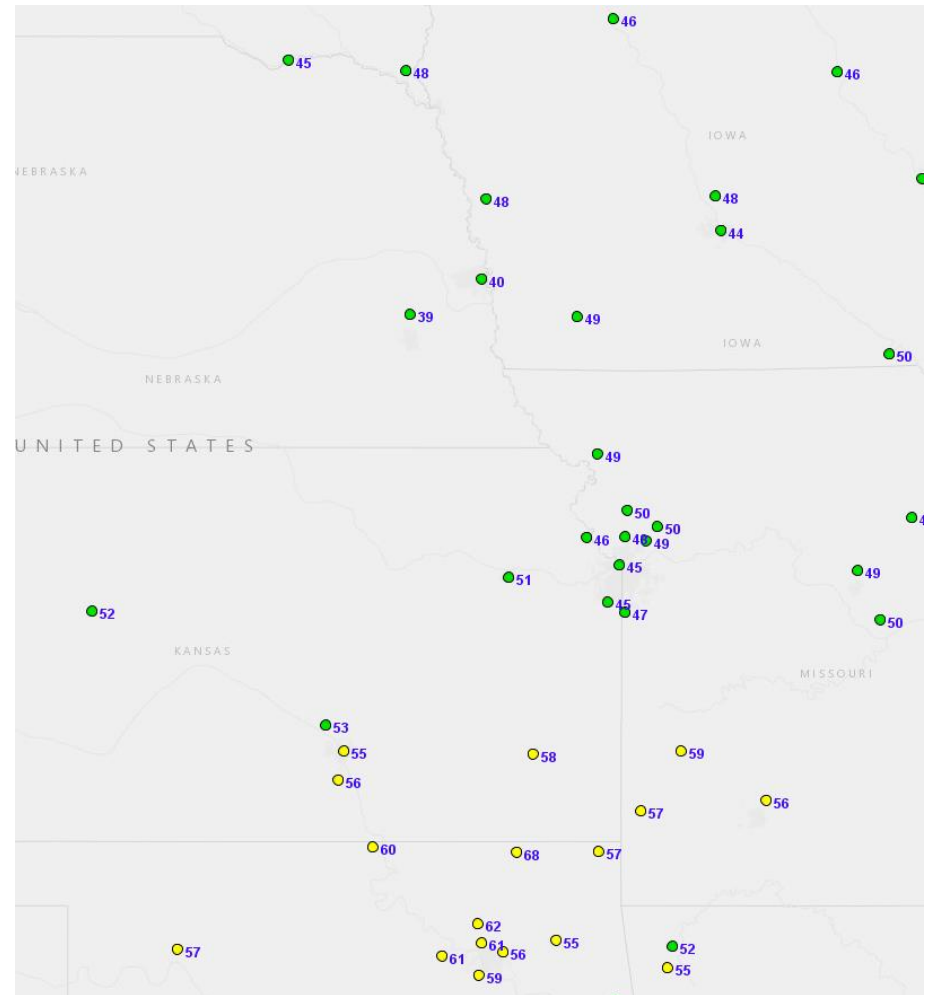


Friday, March 22, 2019

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

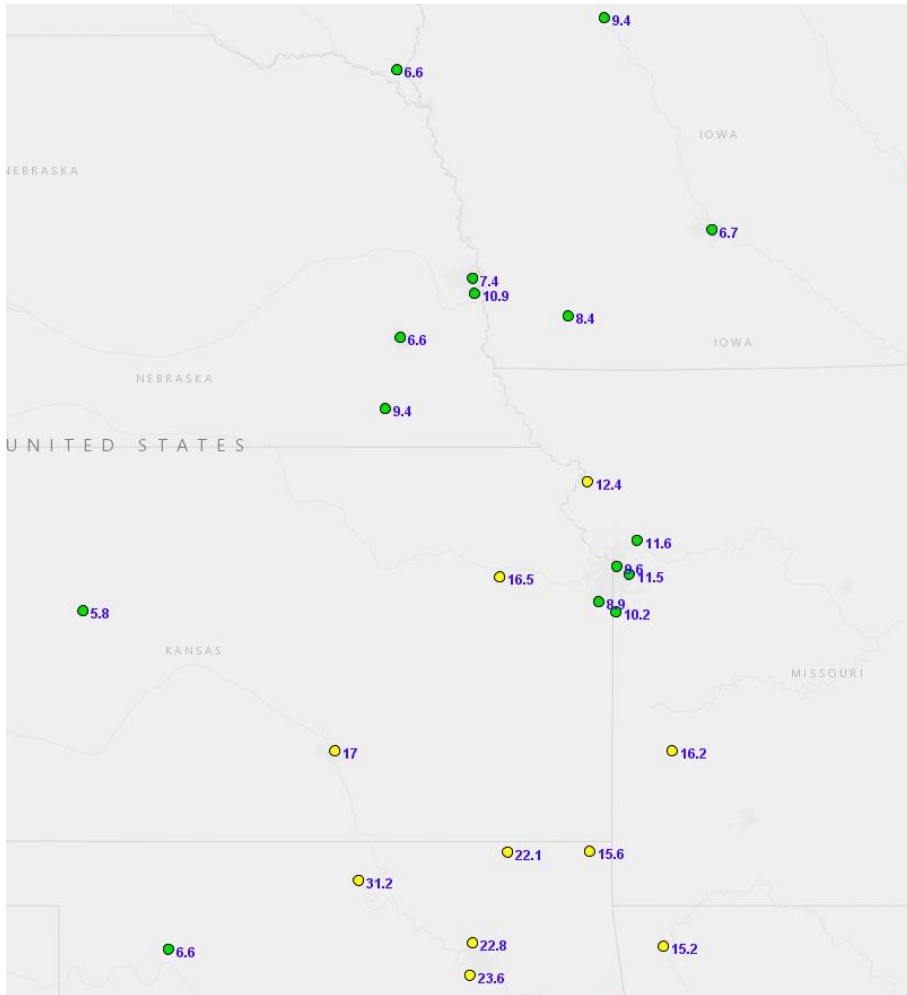


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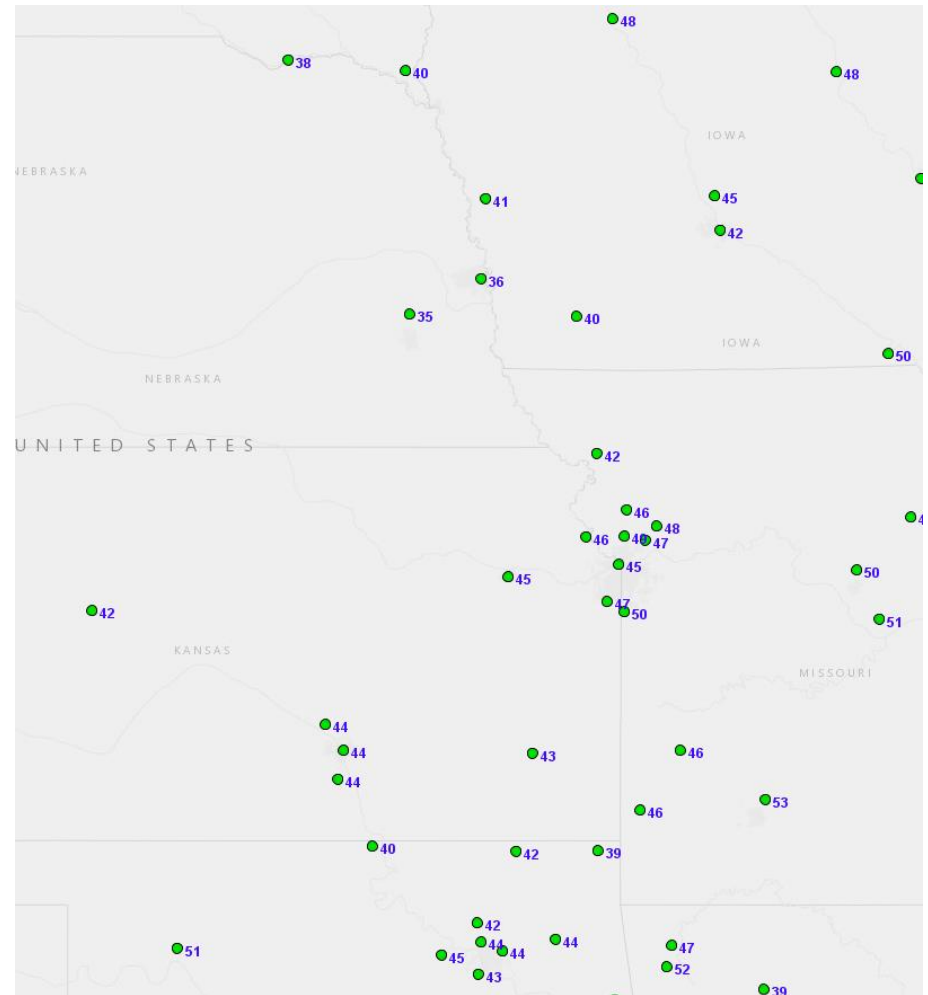


Saturday, March 23, 2019

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

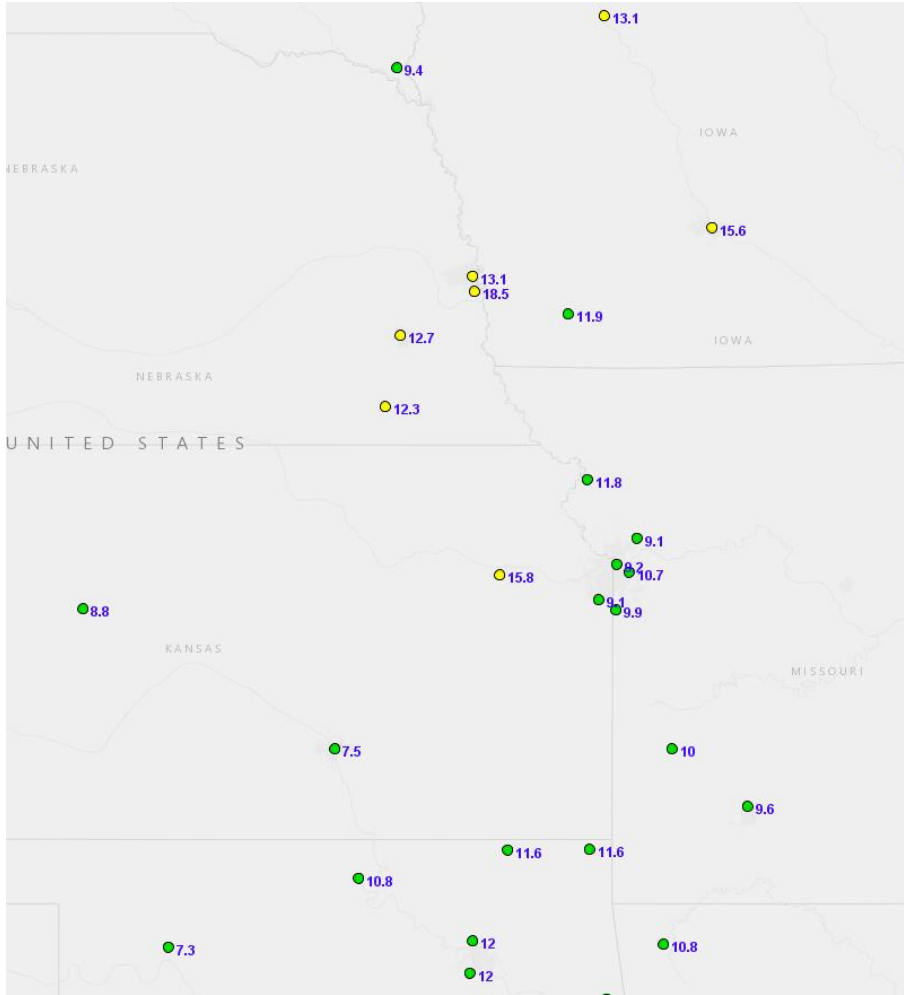


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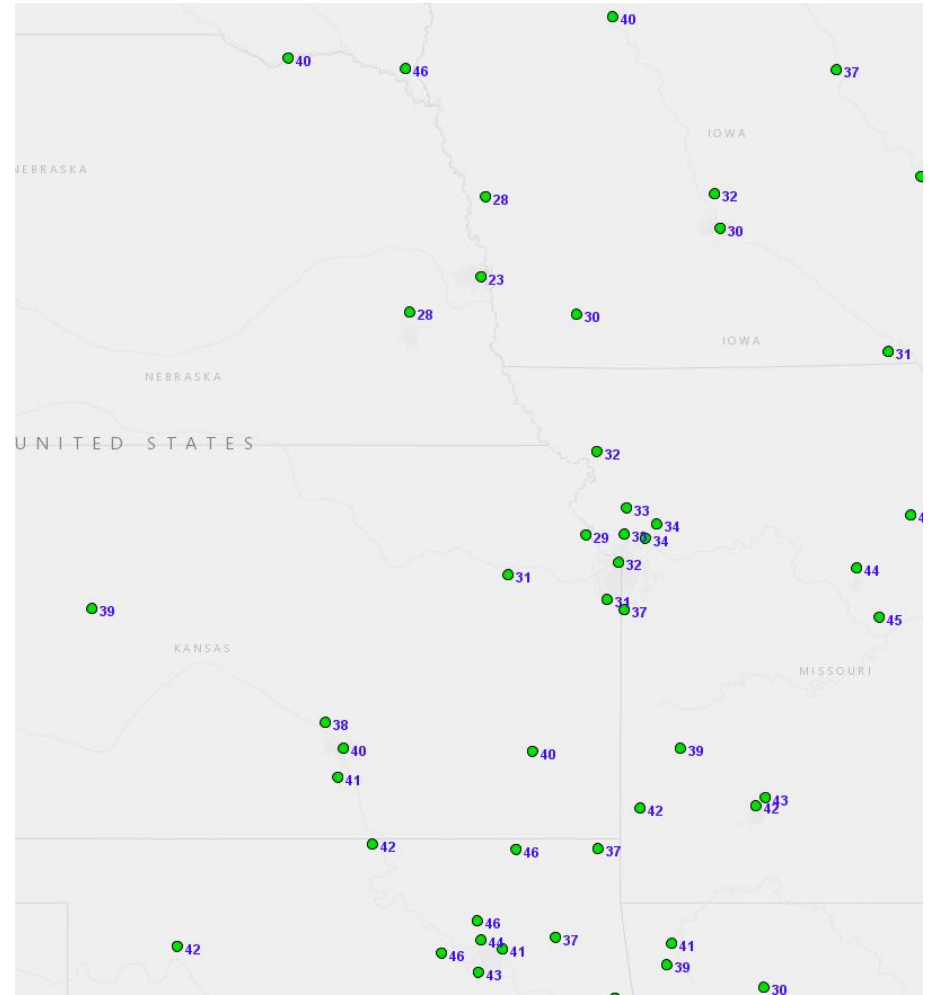


Sunday, March 24, 2019

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

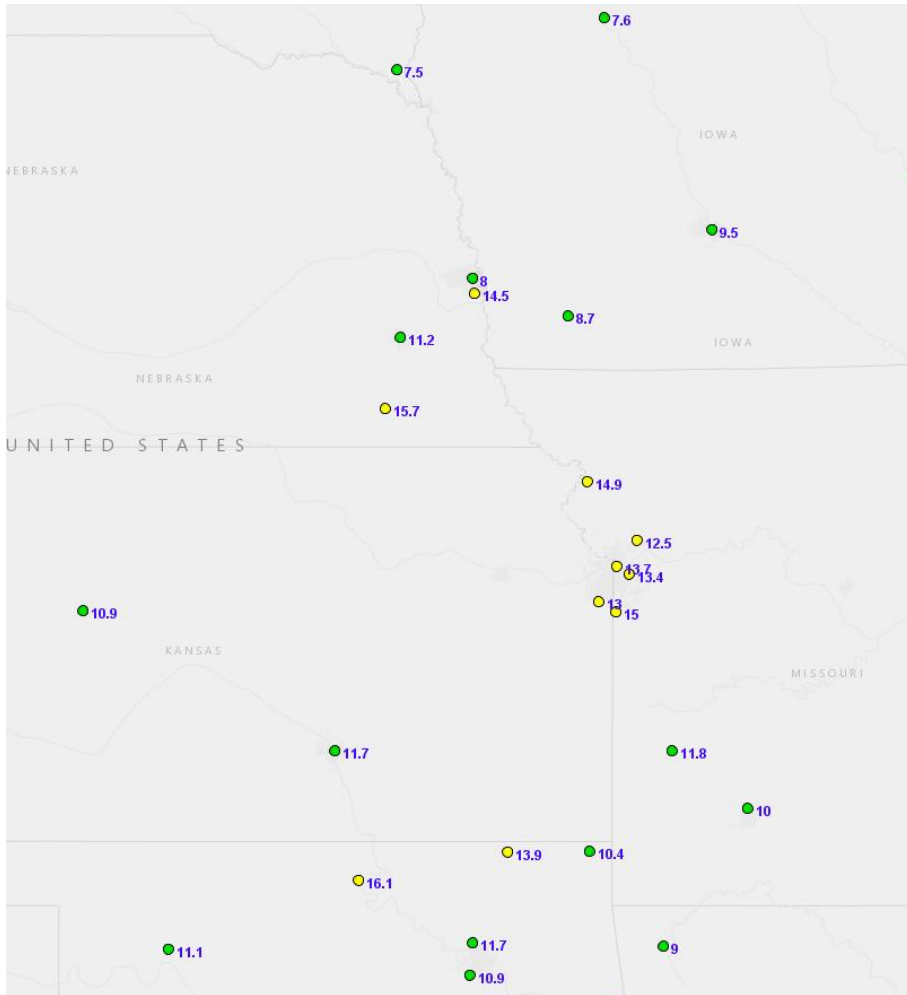


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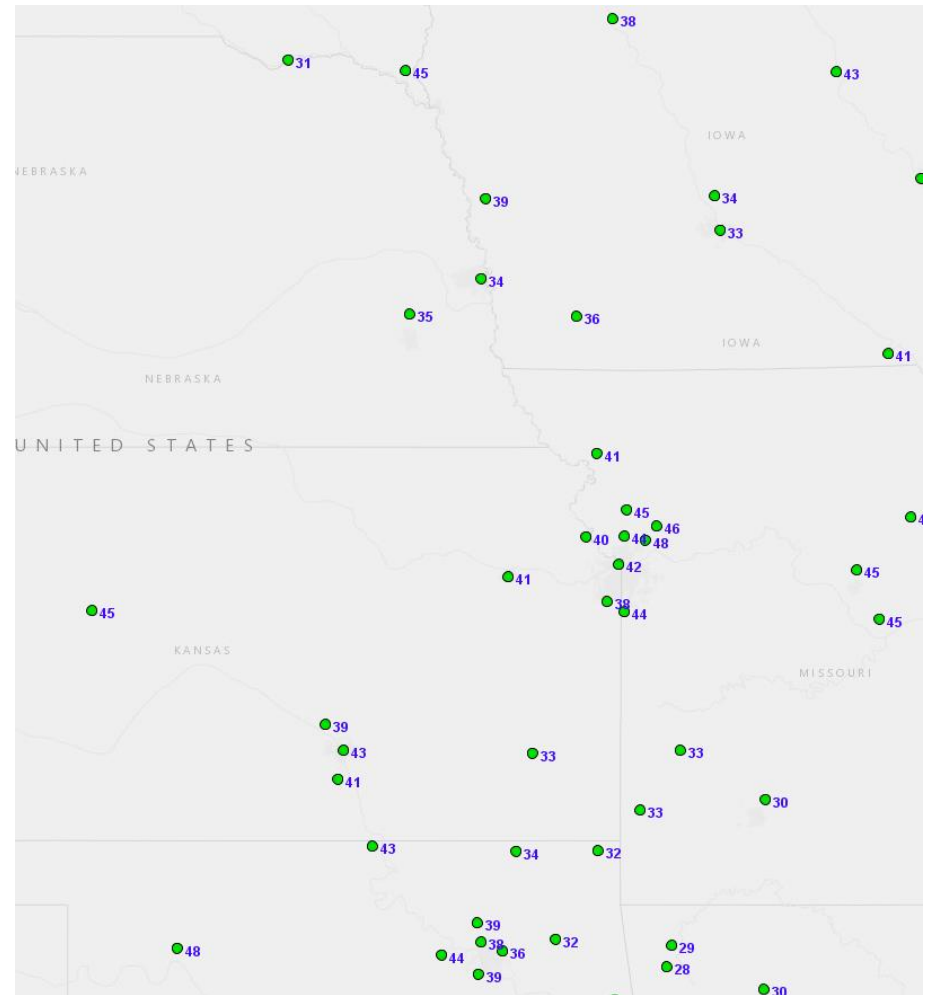


Monday, March 25, 2019

PM2.5 (24-hour average)



Ozone (8-hour average maximum)



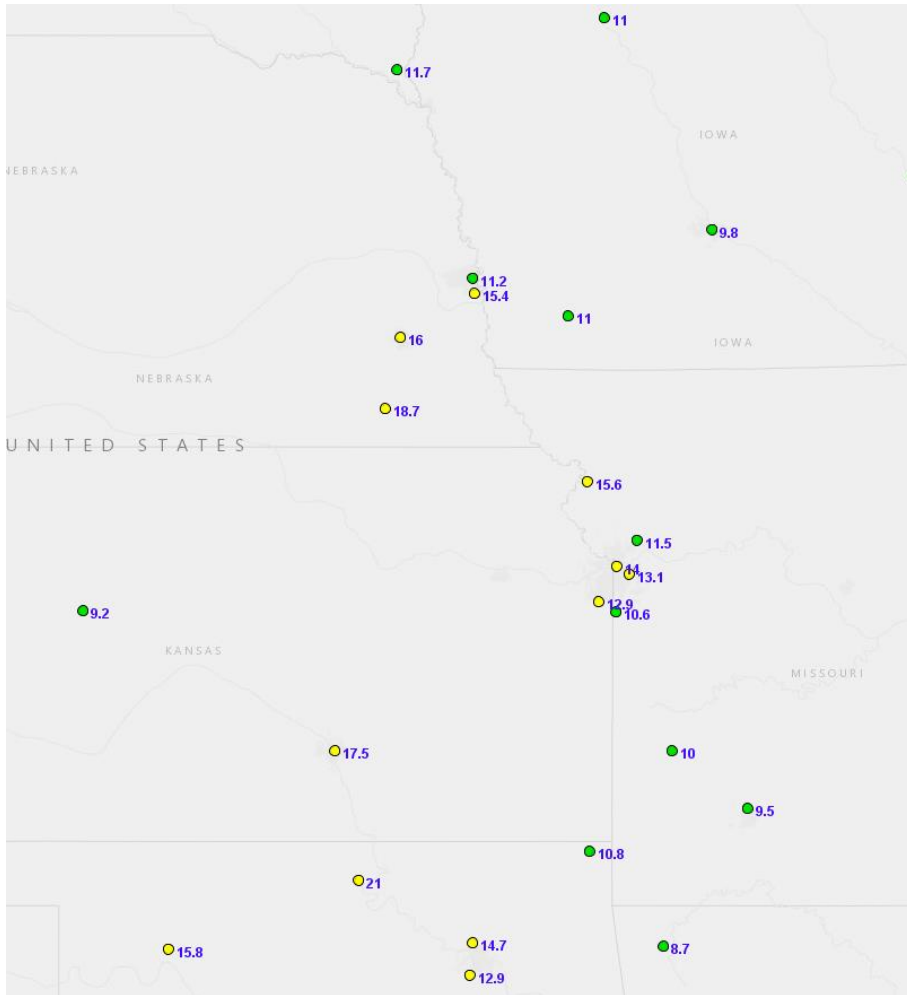


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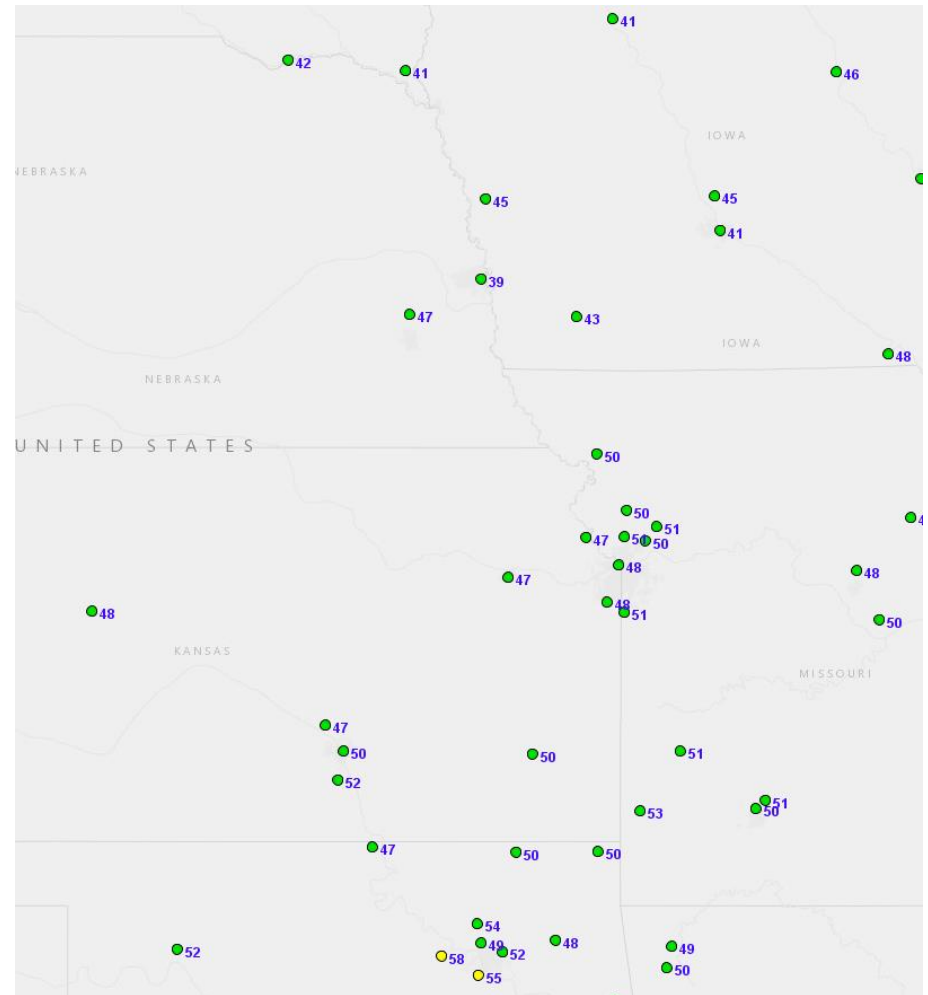


Tuesday, March 26, 2019

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

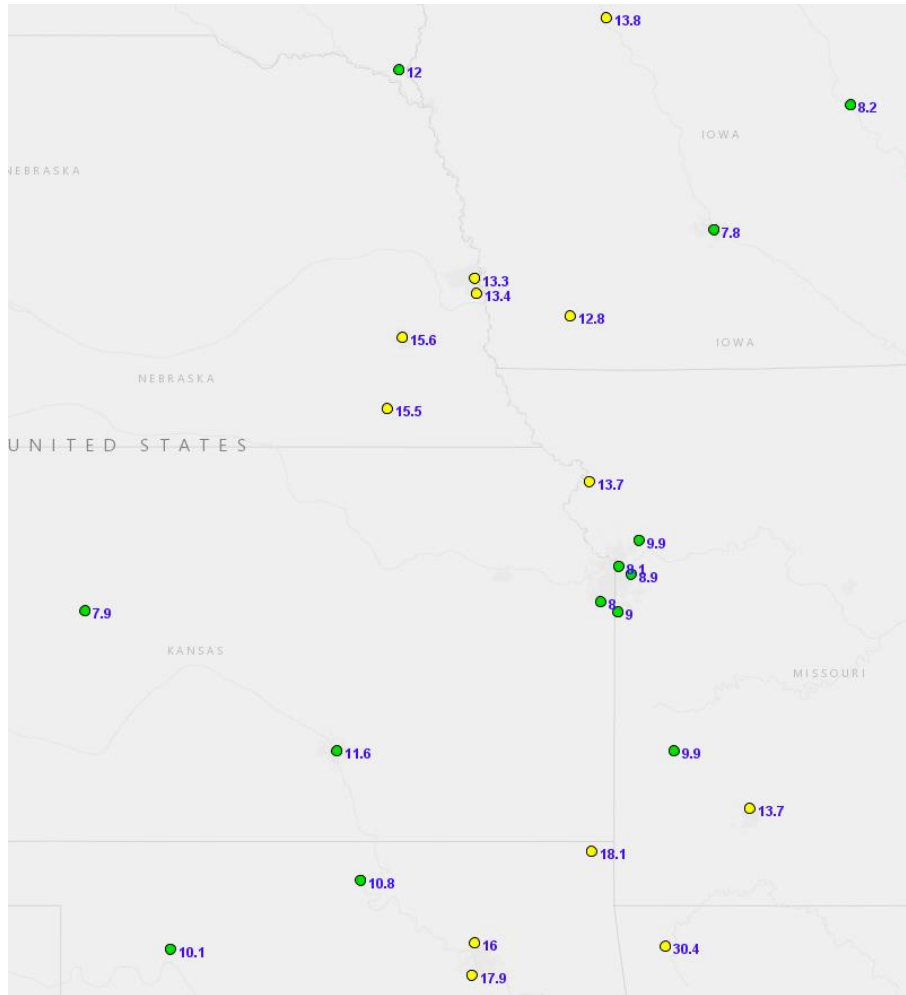


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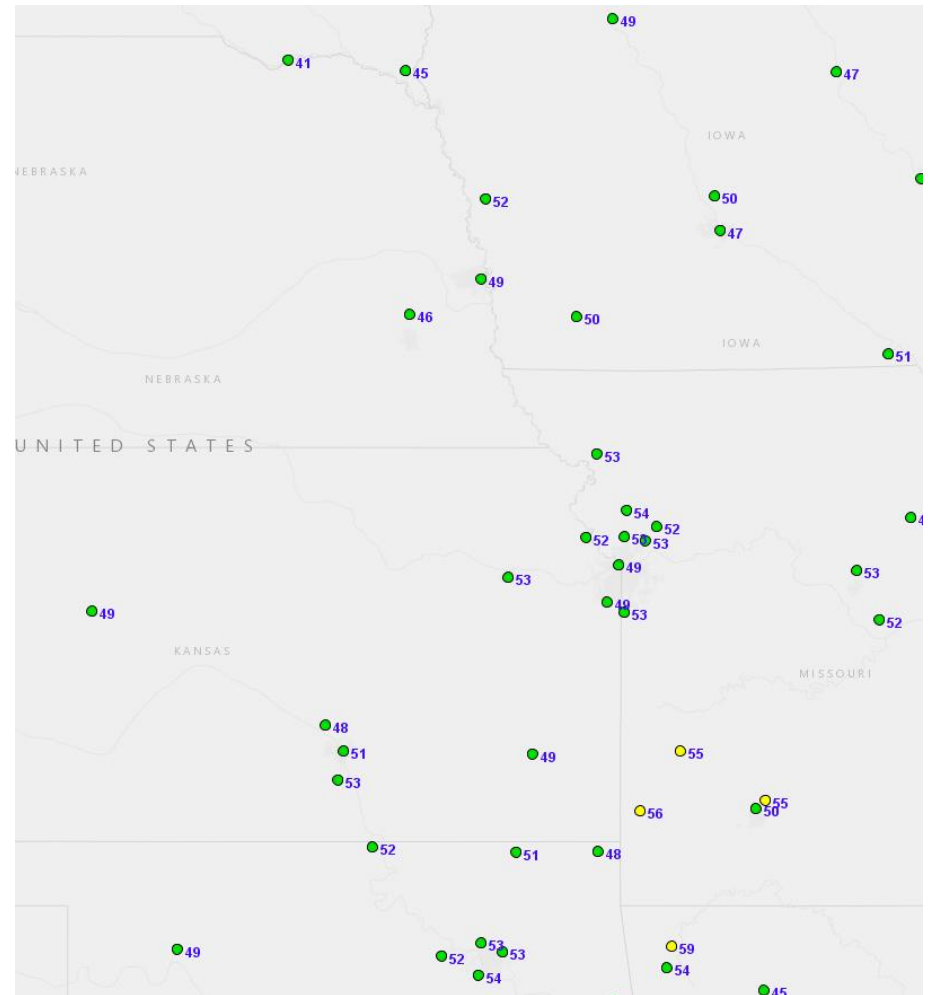


Wednesday, March 27, 2019

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

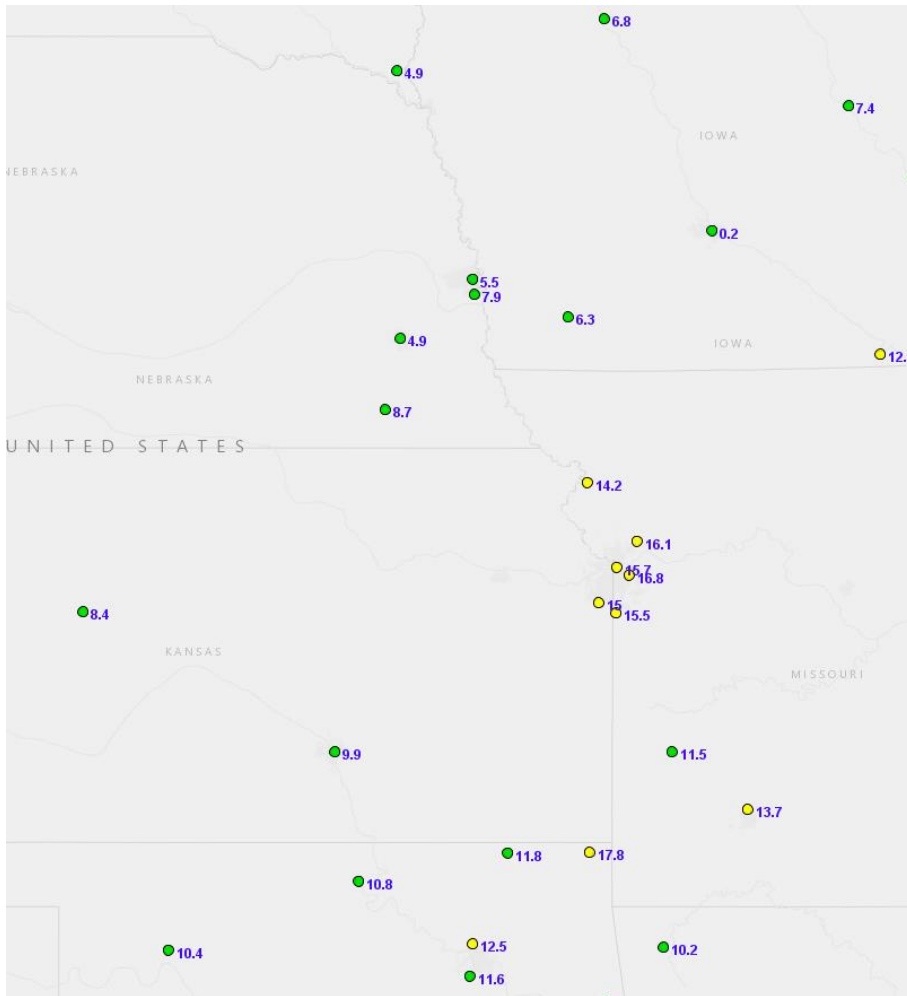


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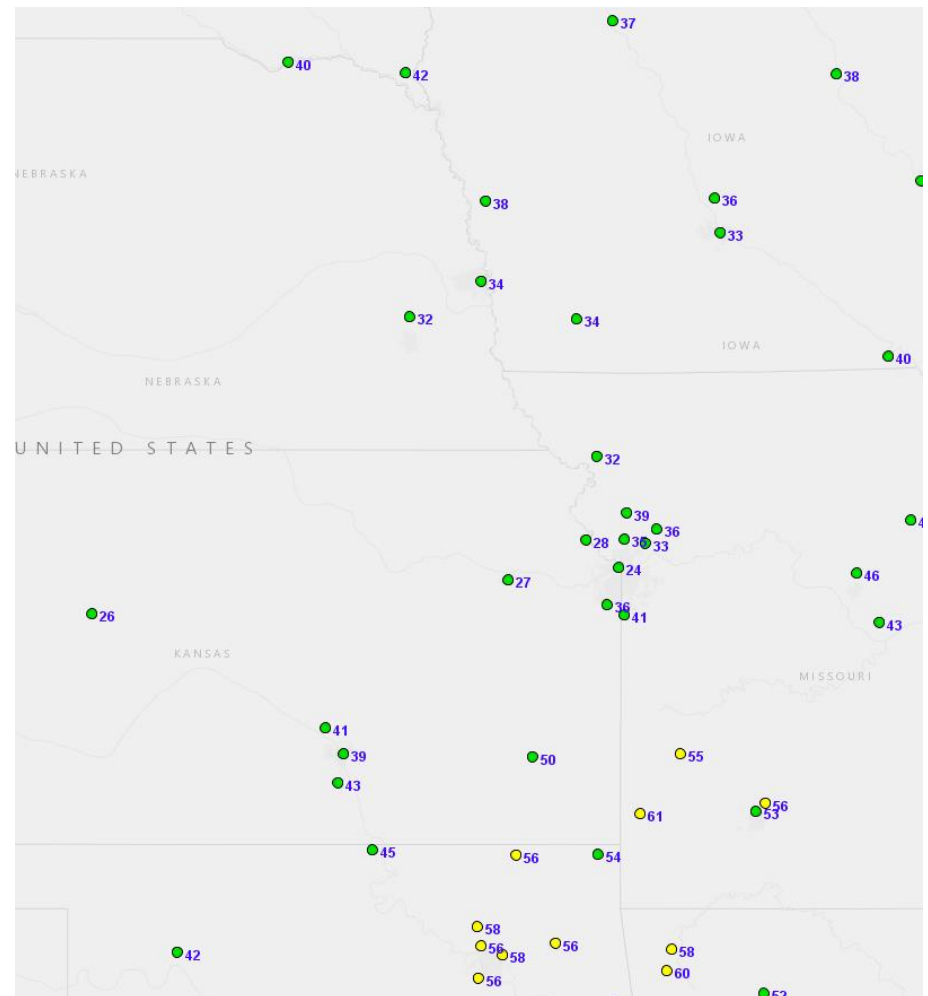


Thursday, March 28, 2019

PM2.5 (24-hour average)



Ozone (8-hour average maximum)





## Fires and Smoke

Moderate prescribed fire activity was observed last Friday (March 22) across the Flint Hills and adjacent regions ahead of the next rainfall. Winds were light and somewhat variable, which likely lead to localized smoke impacts. Rain showers and cloudy skies on Saturday (March 23) inhibited any rangeland burning. While precipitation lingered in the northern Flint Hills the clouds began to break in the south which lead to some prescribed burning on Sunday (March 24).

Cool conditions likely limited prescribed burning on Monday (March 25), but several burns were observed across the Flint Hills. Northeast east winds switched to south winds by Tuesday, combined with sunny skies led to likely the busiest prescribed burn day of the year thus far on Tuesday (March 26) – the transitioning winds and eventual straight south winds led to smoke impacts being observed throughout the Flint Hills and locations northward Tuesday and Wednesday (March 27).

Winds increased dramatically on Wednesday with gusts upwards of 45 mph. This led to an increased fire danger risk and inhibited most prescribed burn activity. Cloudy skies with occasional rain showers and thunderstorms on Thursday (March 28) kept prescribed fires from occurring once again.

*Daily Fires and Smoke Analysis provided by NOAA Hazard Mapping System Fire and Smoke Product are provided on the following pages.*

## KSFIRE.ORG

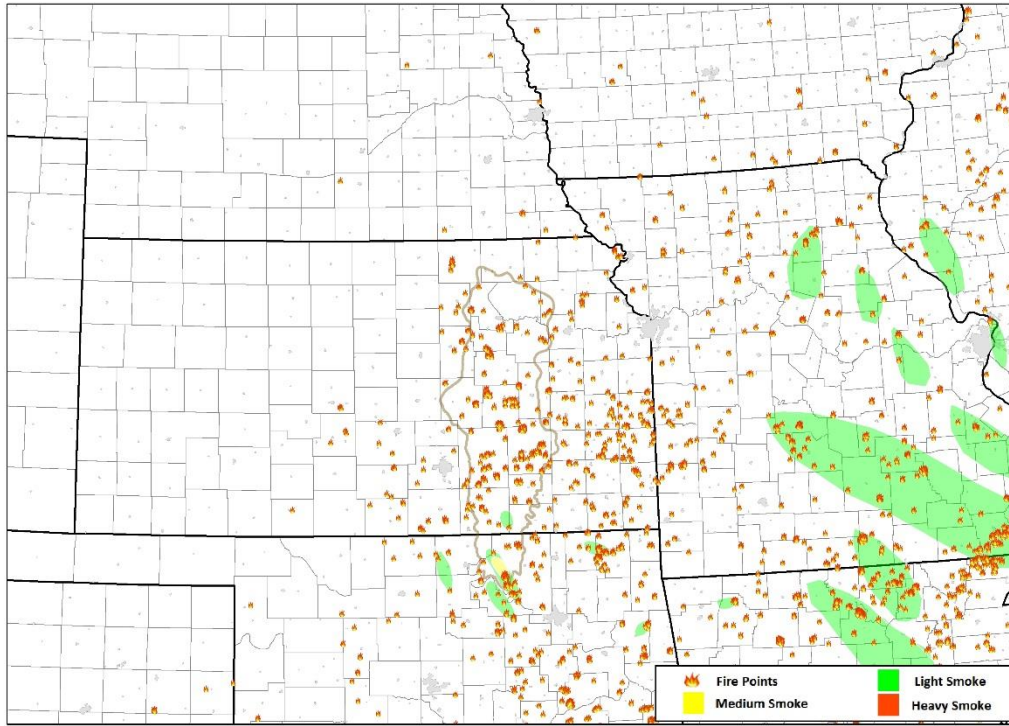


This website was developed as part of the development of the Kansas Flint Hills Smoke Management Plan. Kansas State University hosts the webpage and it includes important information for ranchers and others who might be interested in the Flint Hills. It provides training, regulations, policies, publications,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

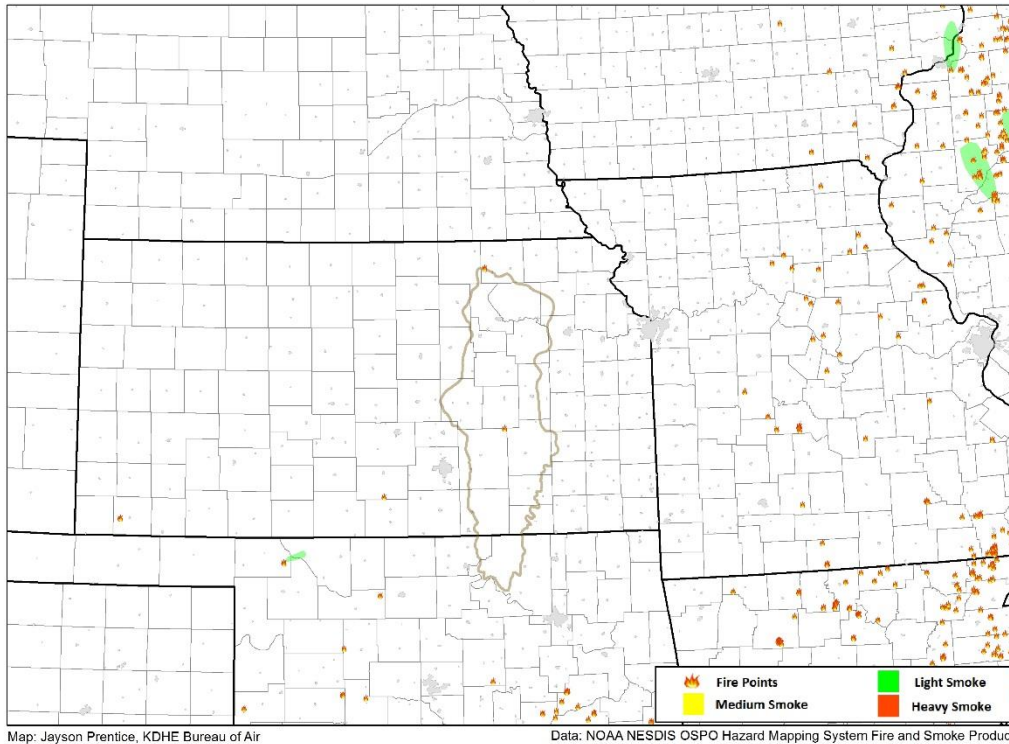
# Flint Hills Prescribed Fire Update



## HMS Fire & Smoke Analysis March 22, 2019



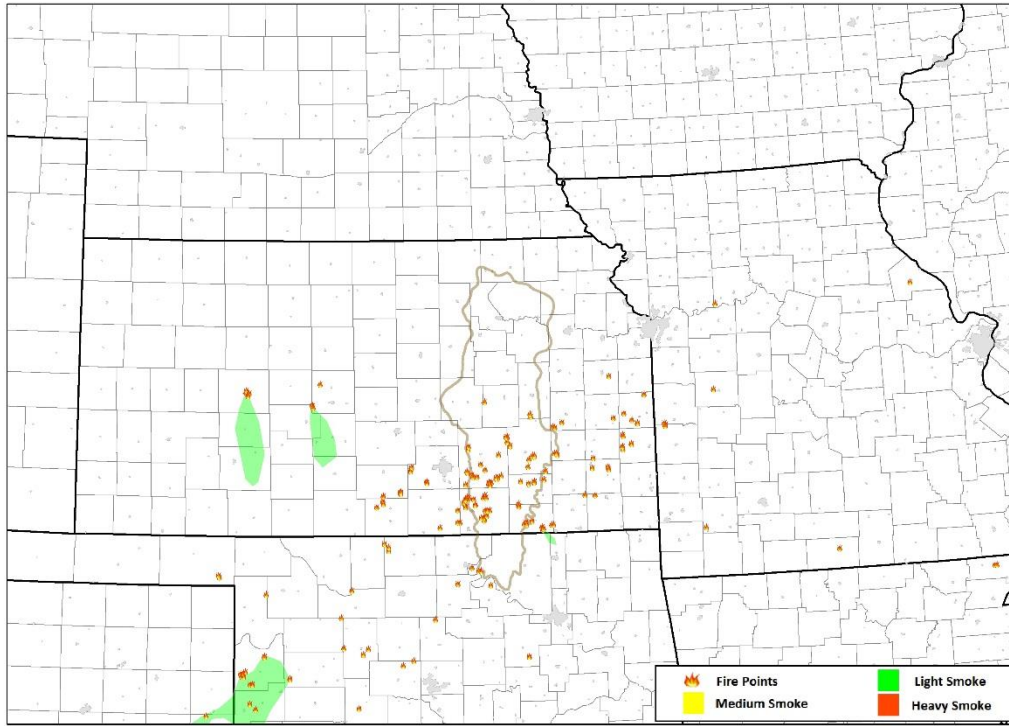
## HMS Fire & Smoke Analysis March 23, 2019



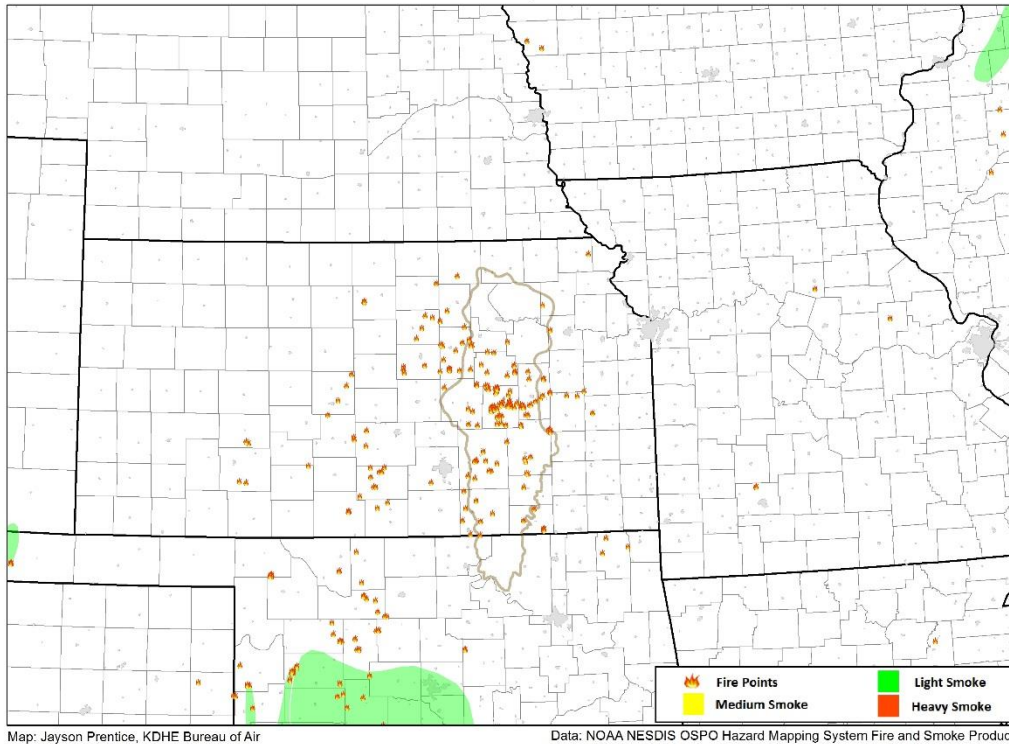
# Flint Hills Prescribed Fire Update



## HMS Fire & Smoke Analysis March 24, 2019



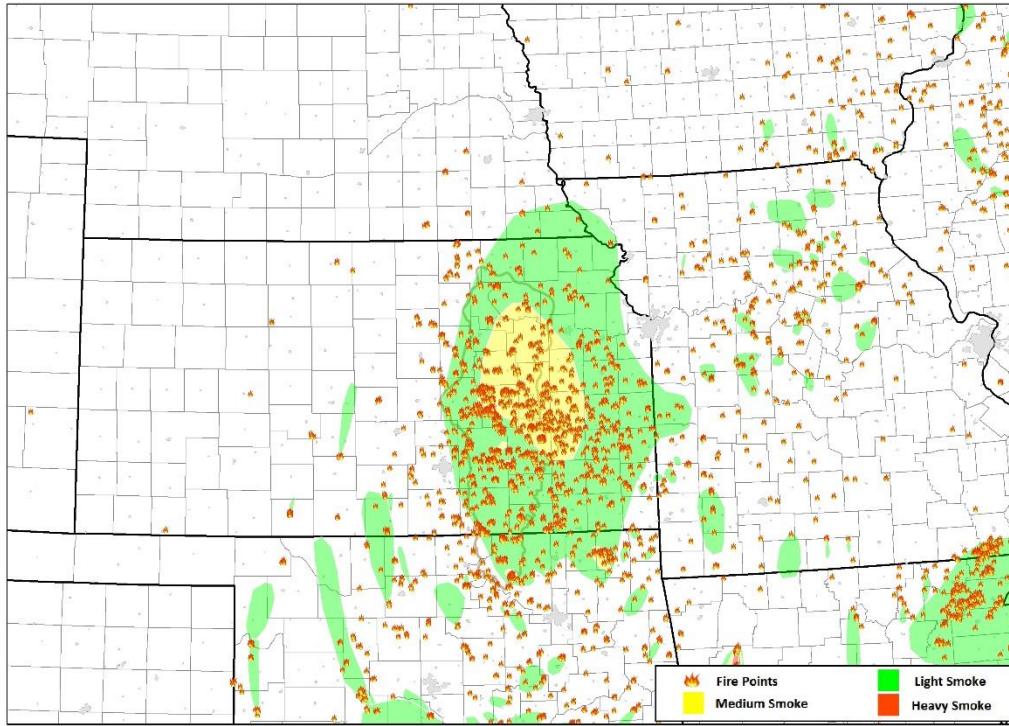
## HMS Fire & Smoke Analysis March 25, 2019



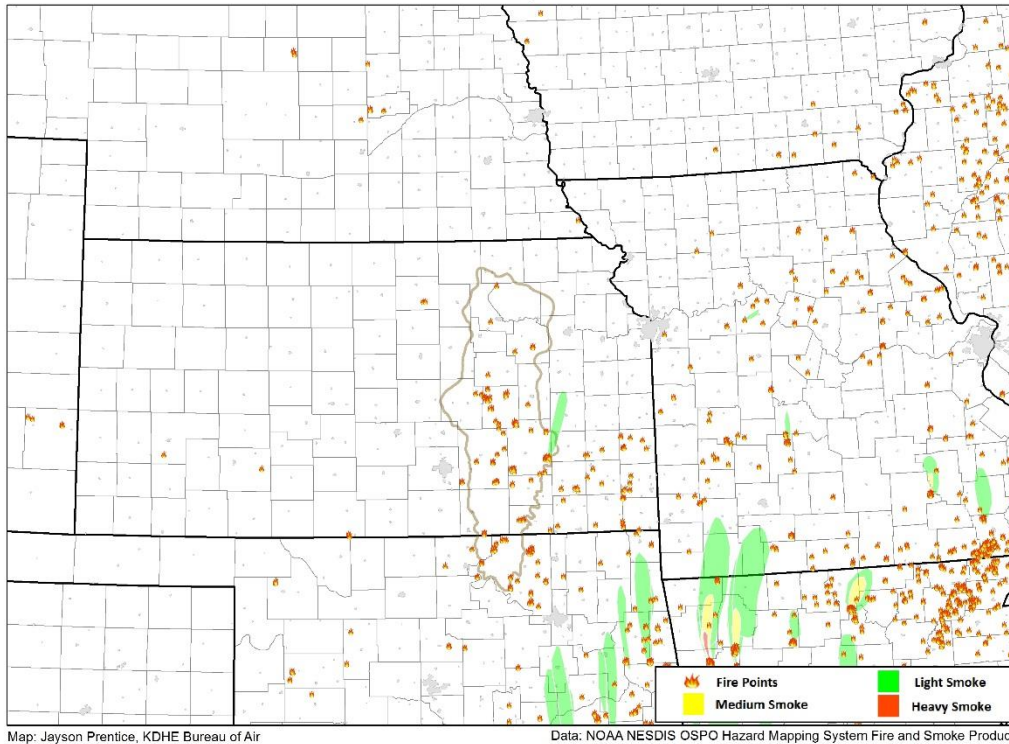
# Flint Hills Prescribed Fire Update



## HMS Fire & Smoke Analysis March 26, 2019



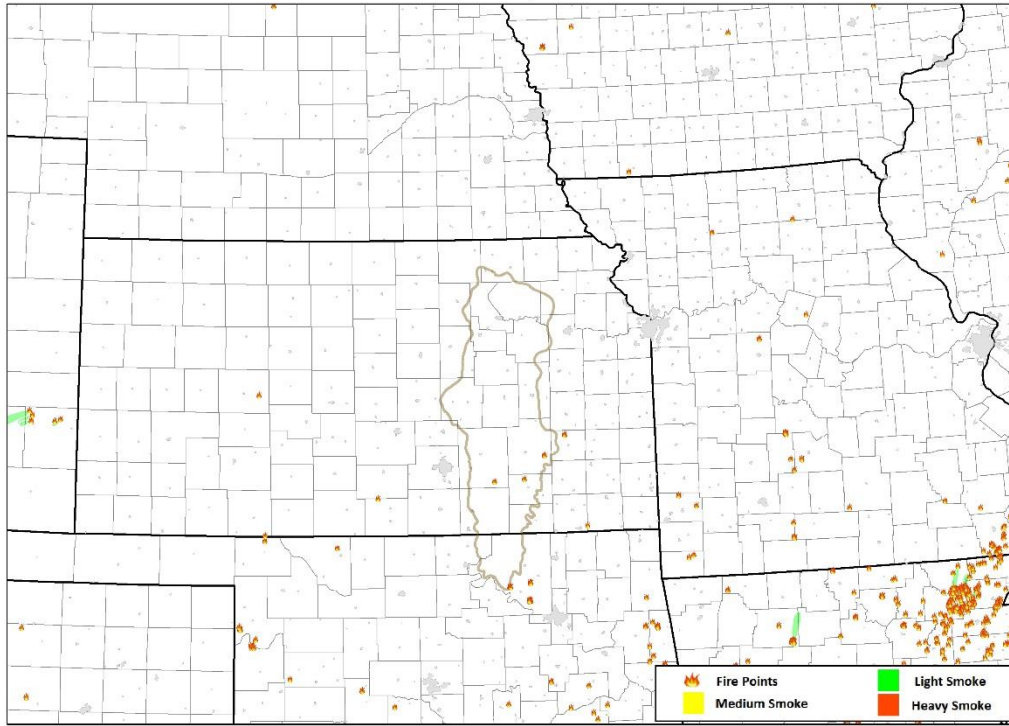
## HMS Fire & Smoke Analysis March 27, 2019



# Flint Hills Prescribed Fire Update



## HMS Fire & Smoke Analysis March 28, 2019

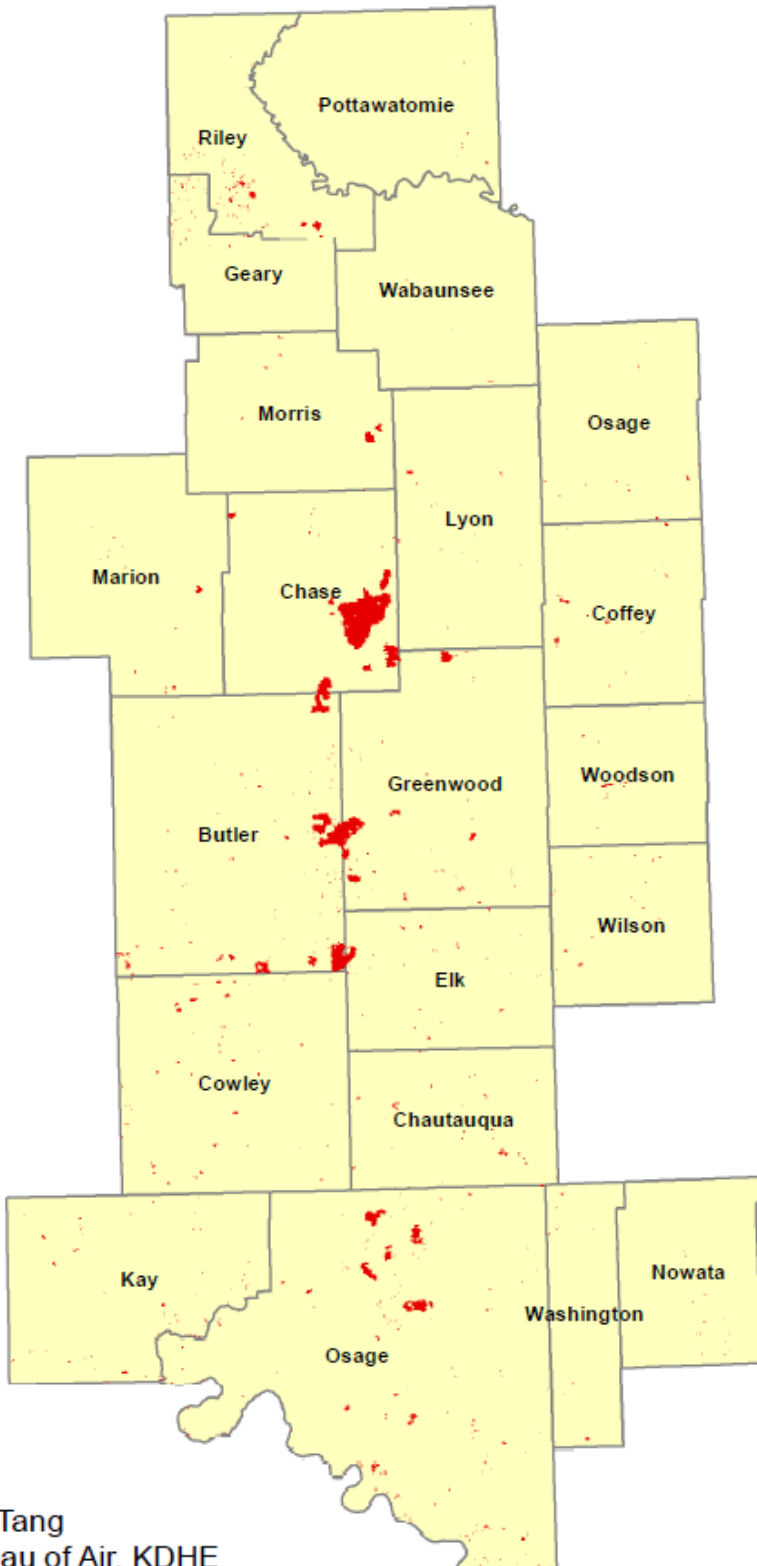




# Flint Hills Prescribed Fire Update



## Flint Hills Acreage Burned (March 15 - March 21, 2019)



<u>Counties</u>	<u>Acres Burned</u>
<b>Butler</b>	21,313
<b>Chase</b>	33,484
<b>Chautauqua</b>	1,467
<b>Coffey</b>	1,189
<b>Cowley</b>	2,687
<b>Elk</b>	2,533
<b>Geary</b>	680
<b>Greenwood</b>	10,456
<b>Lyon</b>	417
<b>Marion</b>	973
<b>Morris</b>	1,884
<b>Osage (KS)</b>	432
<b>Pottawatomie</b>	386
<b>Riley</b>	3,212
<b>Wabaunsee</b>	139
<b>Wilson</b>	525
<b>Woodson</b>	556
<b>Nowata (OK)</b>	247
<b>Osage (OK)</b>	15,830
<b>Washington (OK)</b>	340
<b>Kay (OK)</b>	1,776
<b>Total</b>	<b>100,526</b>
<i>* Denotes county was partly or completely covered by clouds during latest analysis.</i>	

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Bureau of Air, KDHE

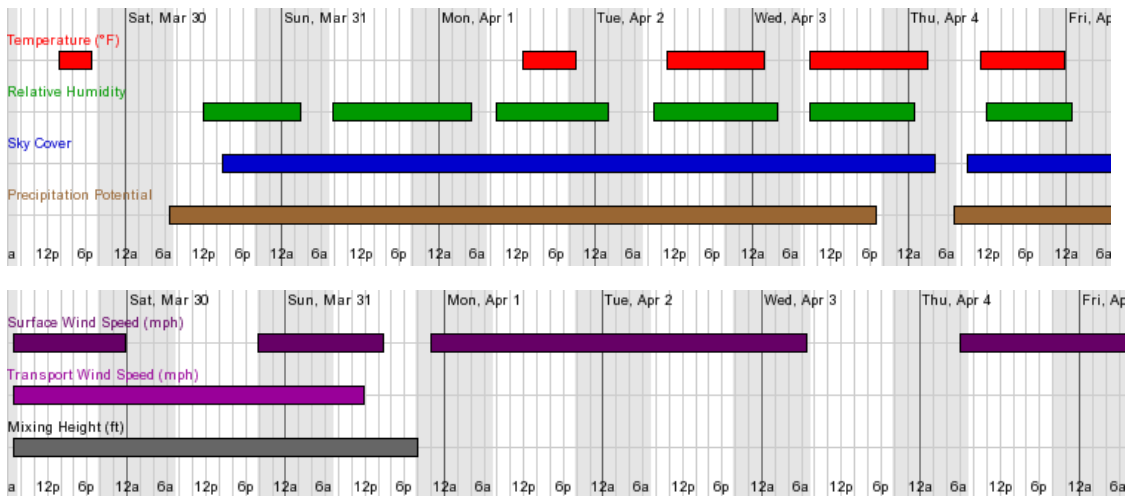


## Upcoming Look at Fires and Smoke

Areas of rain and otherwise cloudy skies will likely inhibit prescribed fire activity for today (Friday, March 29). While the precipitation ends for the weekend temperatures look to remain on the cold side, likely remaining below 50 degrees for the duration of the weekend. Warmer conditions return for Monday under light southwest winds, however recent rainfall may preclude many from access necessary to conduct a prescribed burn. Another good weather day for prescribed burning appears possible on Tuesday with mostly sunny skies, temperatures in the 60s, and a southwest wind – still could see limited burning due to wet conditions.

Winds increase for Wednesday with gusts upwards of 25 mph possible, and the next chance for precipitation enters the picture for Wednesday evening into Thursday. Locations that remain dry could see prescribed fire activity Thursday as winds decrease but temperatures remain seasonable.

### 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 29, 2019.*

For more information, contact:

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