

Flint Hills Prescribed Fire Update

March 6, 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.

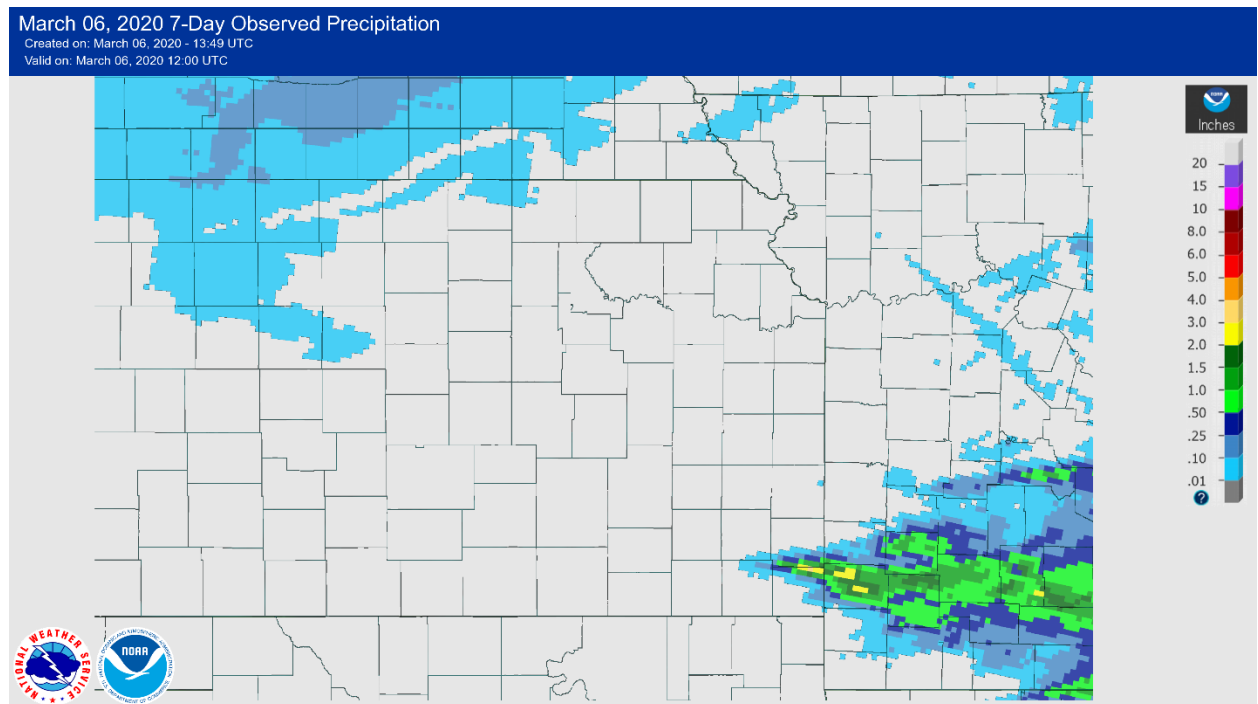




Meteorology

Dry conditions were observed over the last week with the last period of light precipitation occurring last Thursday (February 27) across the region. Temperatures have remained above normal throughout the past week with daily highs in the 50s and 60s for most. Throughout this week conditions have dried, including in the atmosphere, with relative humidity levels each afternoon falling below 30% which has prompted some fire danger concerns. Nearly the entire region was under a Red Flag Warning on Thursday (March 5) due to high winds and low relative humidity, and several wildfires were reported. Winds have varied in direction throughout the past week thanks to a couple of weak fronts with daily winds coming from all directions except for east. Tuesday and Wednesday (March 3-4) saw winds remain generally below 20 mph, while the remainder of the week frequently saw sustained winds and especially gusts above 20 mph.

Precipitation



NOAA/NWS Observed Total Precipitation for February 28 – March 5, 2020.



Air Quality Data

Air quality data for the period of February 28 – March 5, 2020:

Ozone: Preliminary data indicates no exceedances of the NAAQS daily 8-hour average maximum of 70 ppb.

PM_{2.5}: Preliminary data indicates no exceedance of the NAAQS daily 24-hour average maximum of 35 $\mu\text{g}/\text{m}^3$.

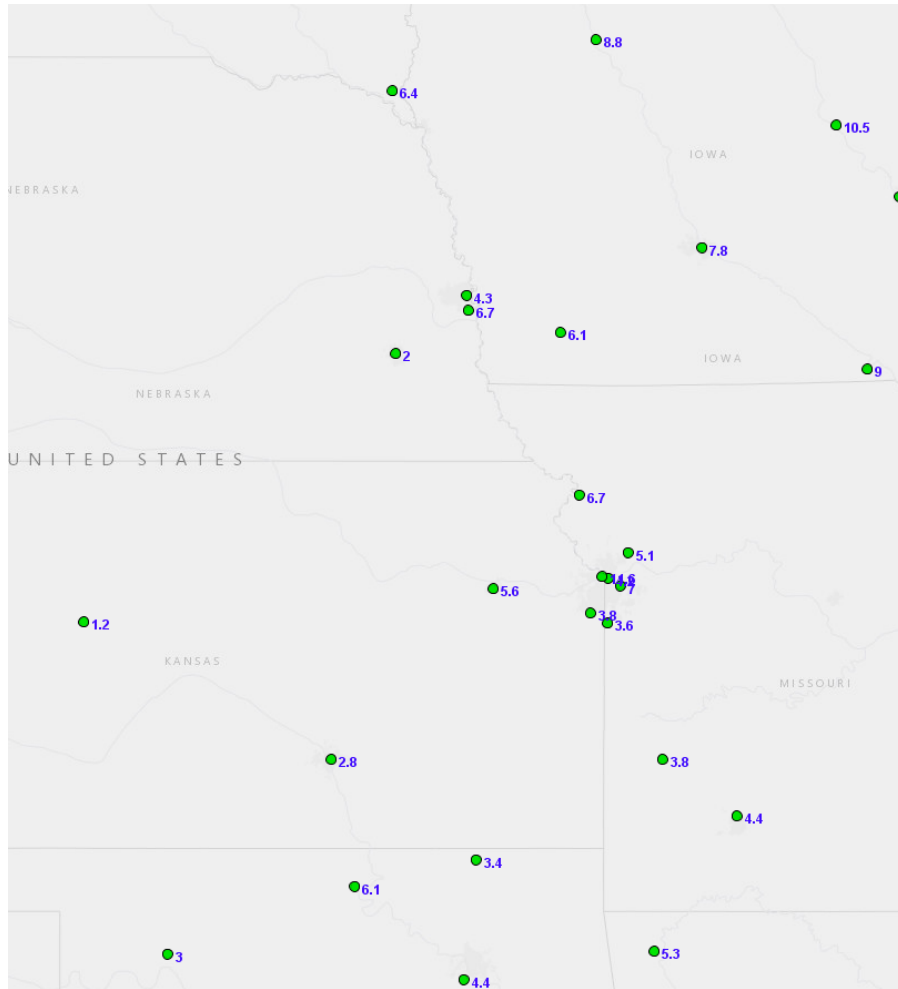
Air quality images on the following pages for each day show preliminary data, courtesy Air Now Tech.

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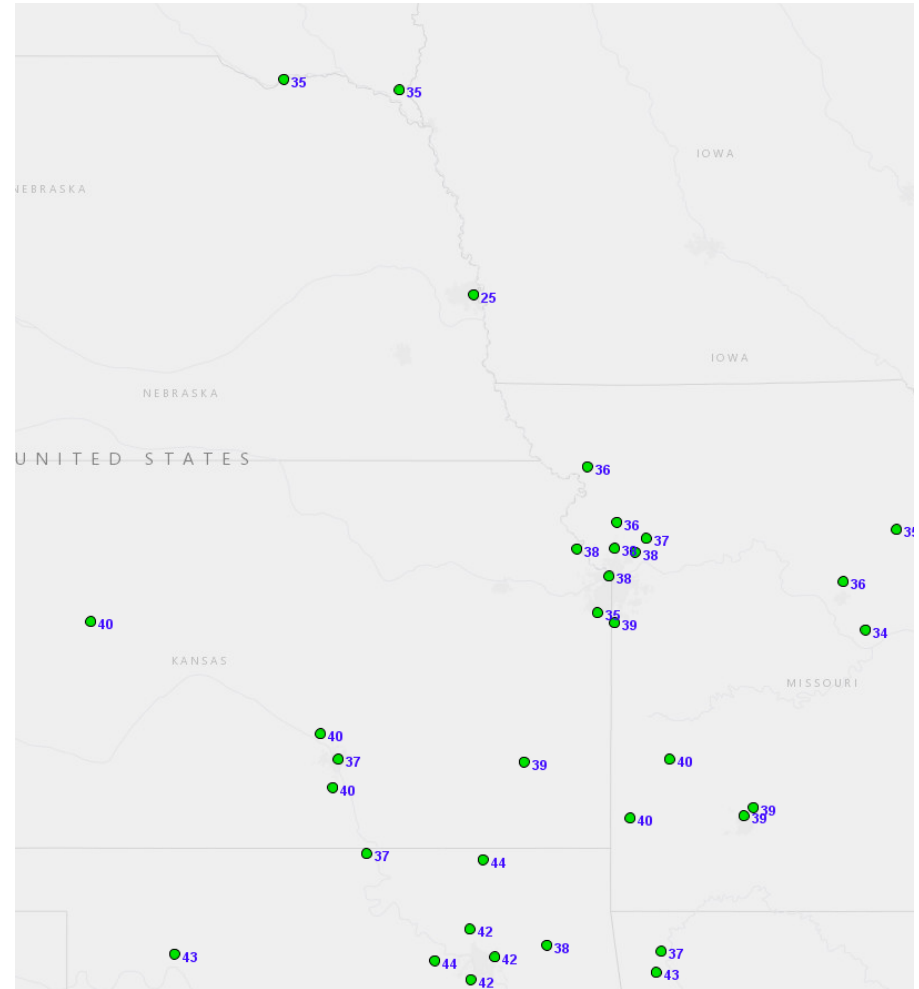


Friday, February 28, 2020

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

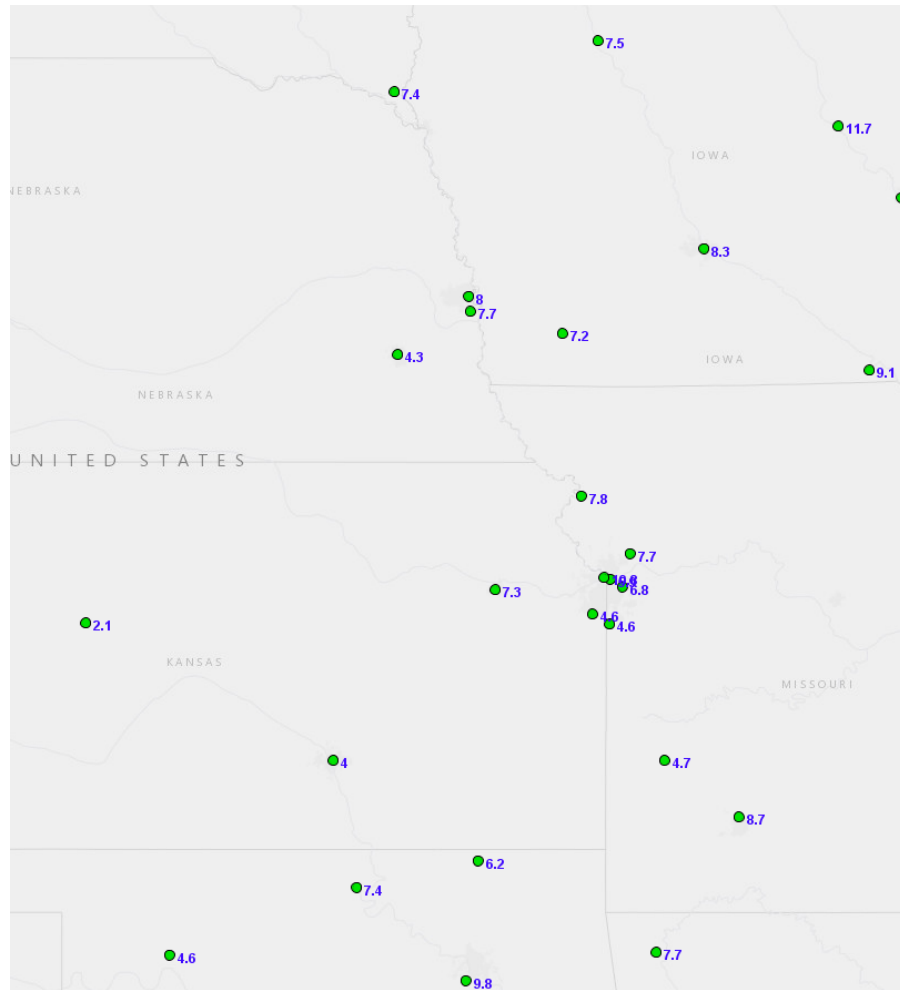


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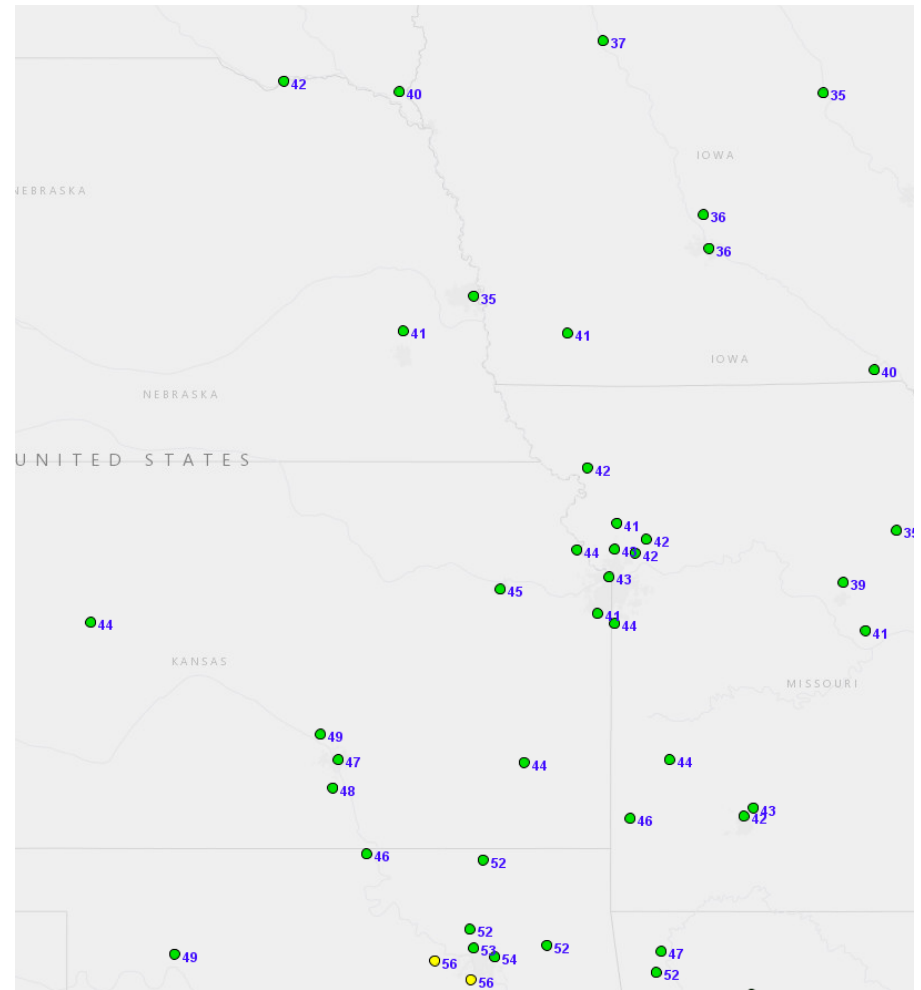


Saturday, February 29, 2020

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

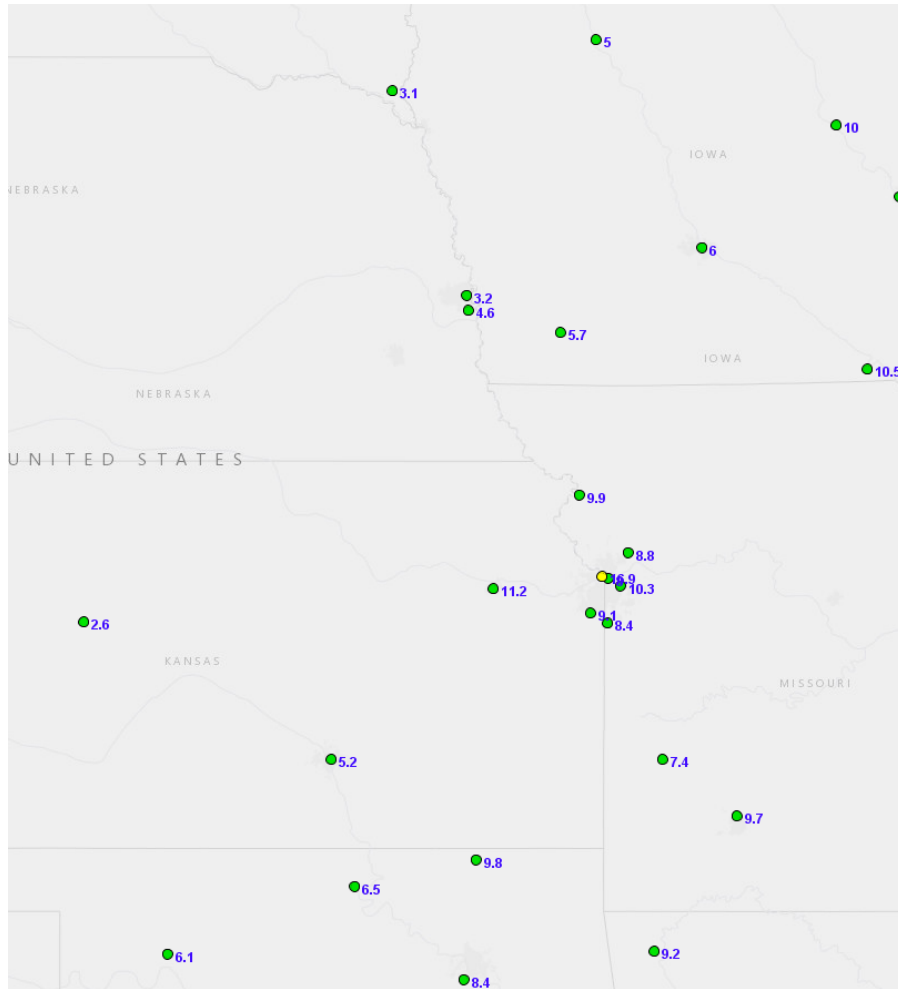


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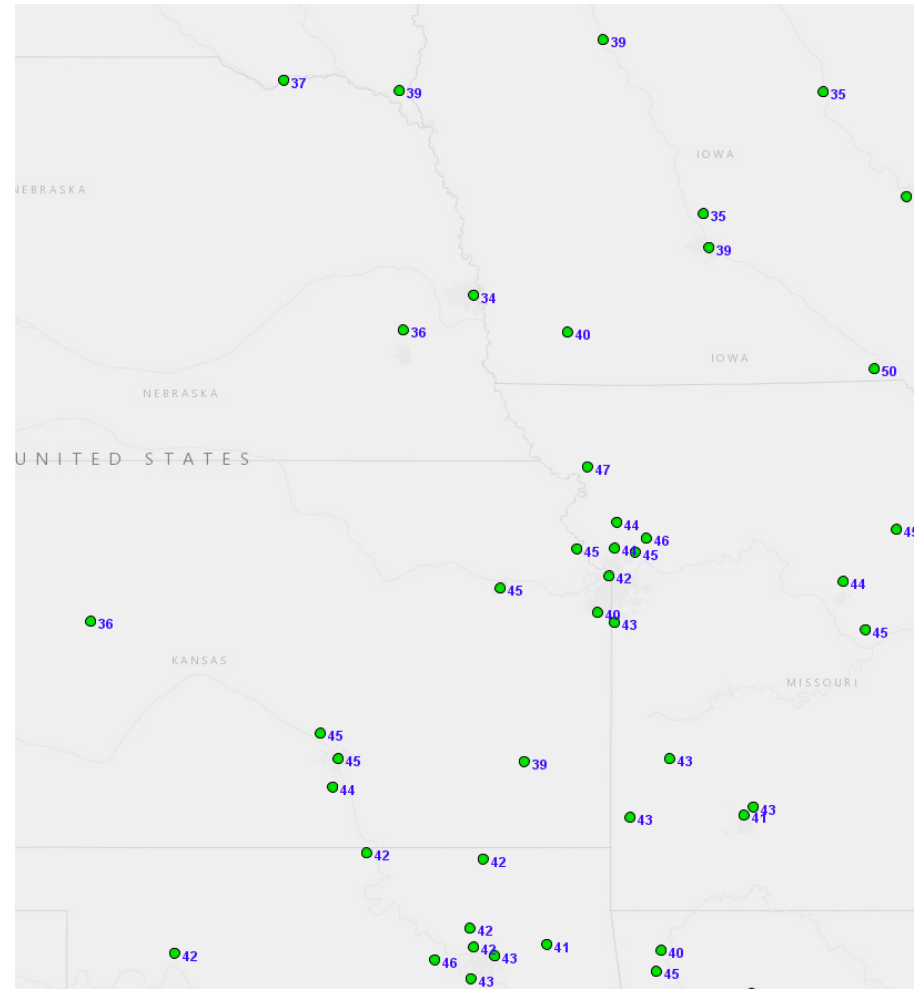


Sunday, March 1, 2020

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

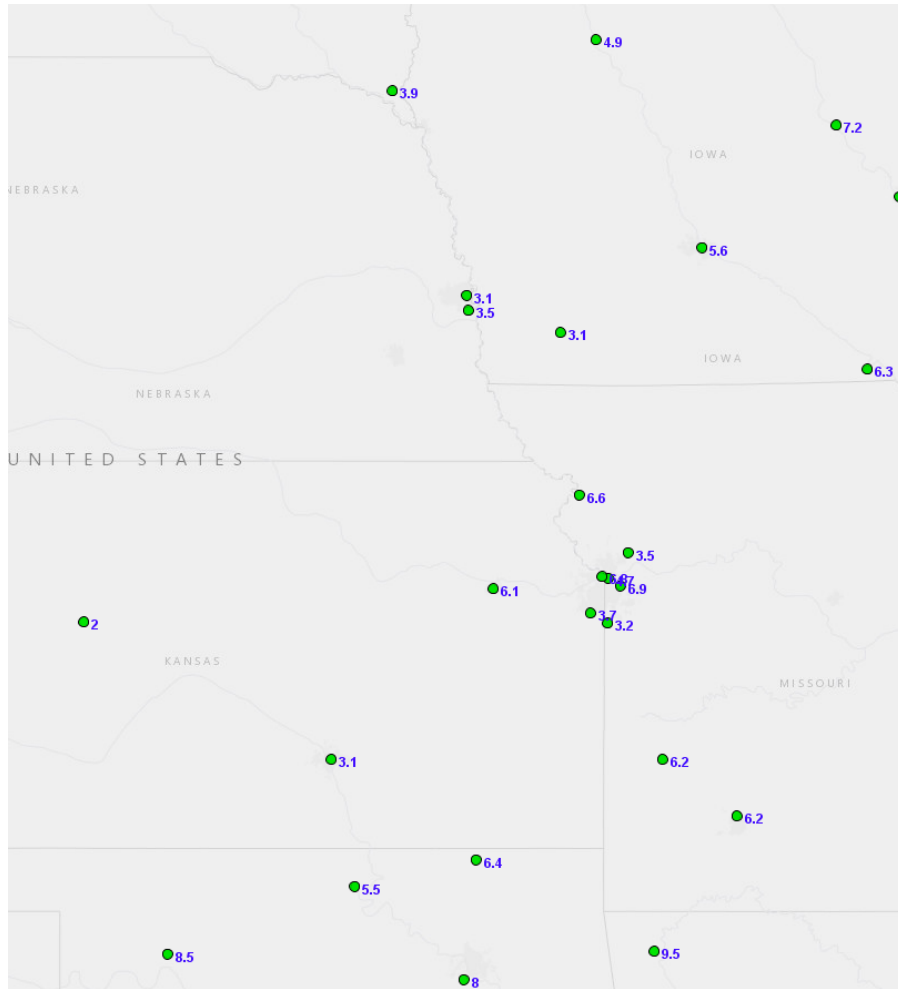


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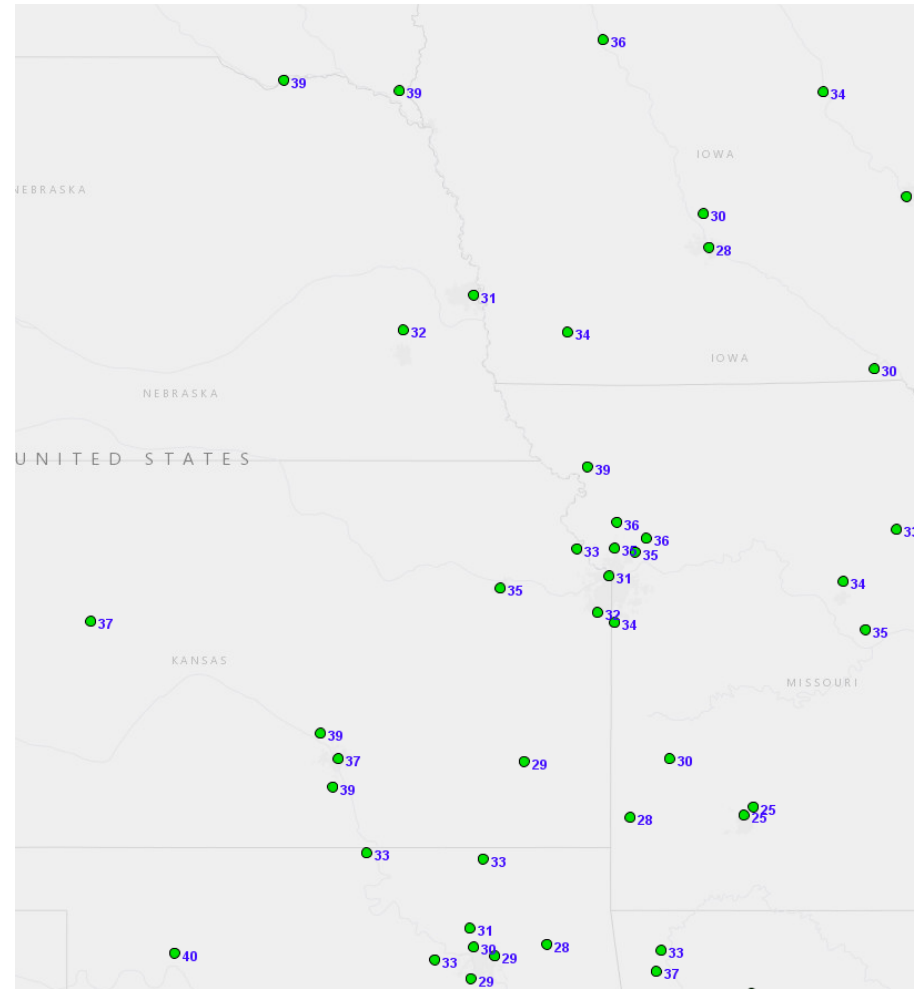


Monday, March 2, 2020

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

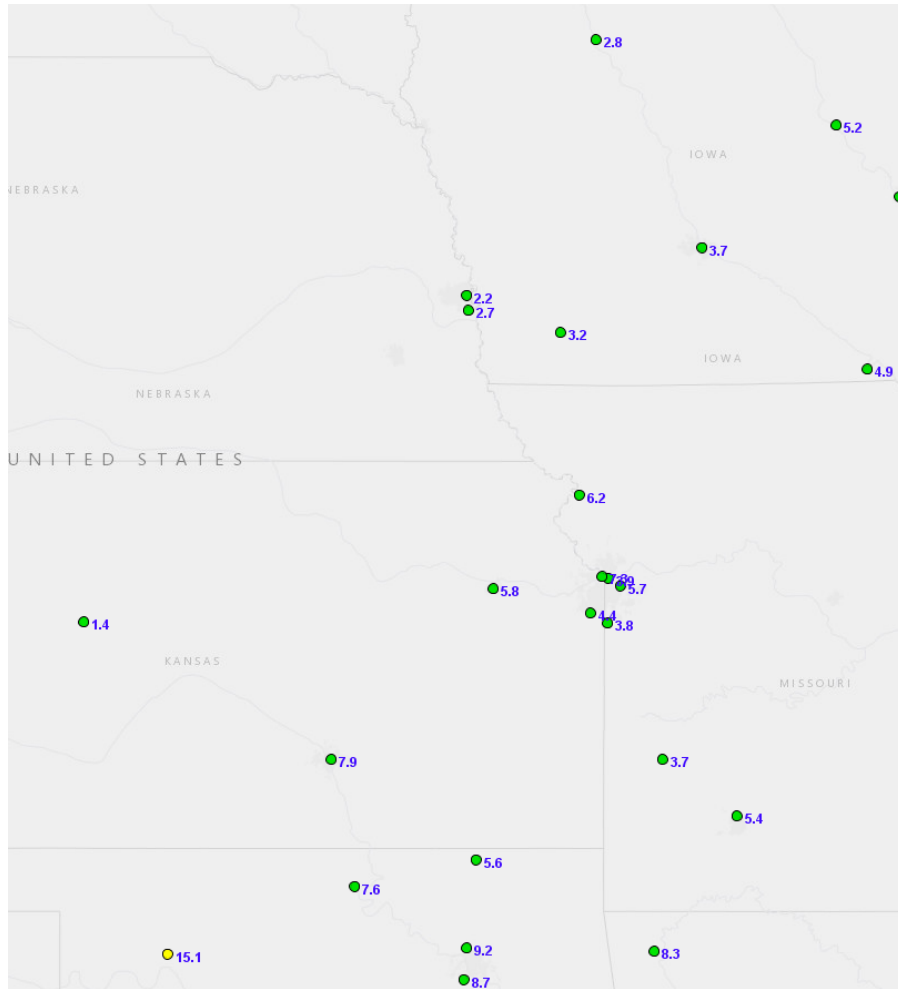


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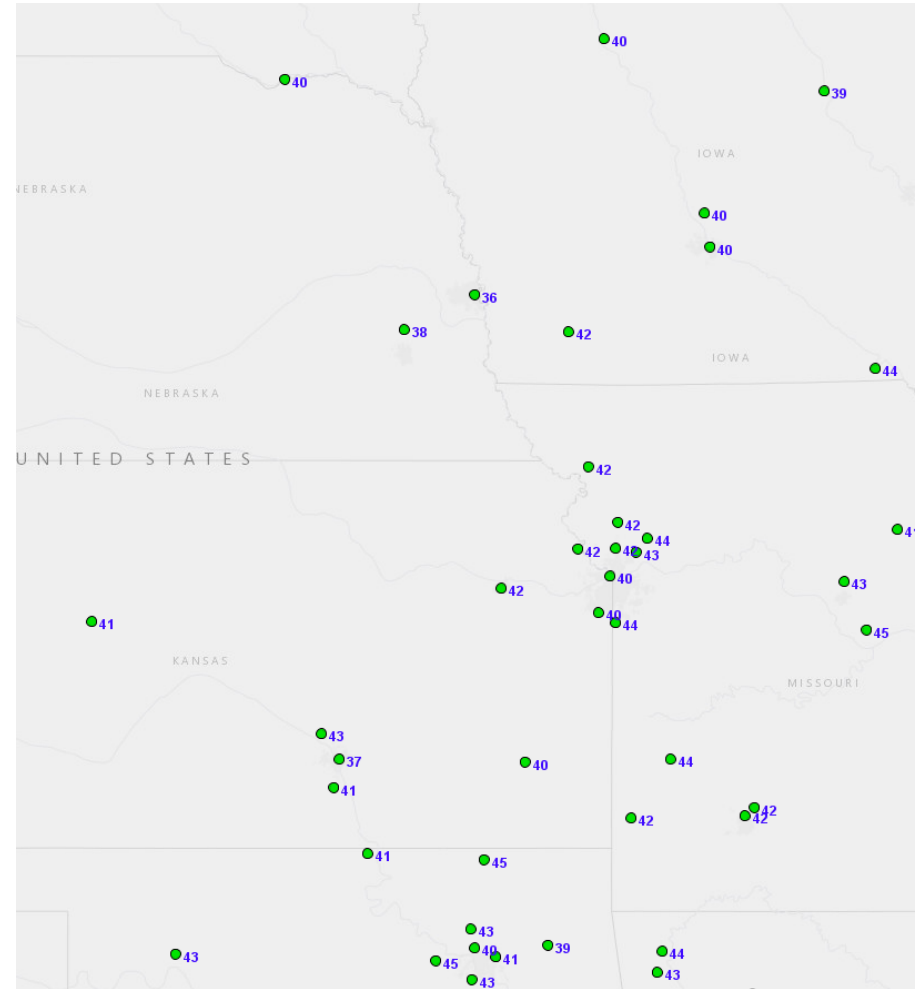


Tuesday, March 3, 2020

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

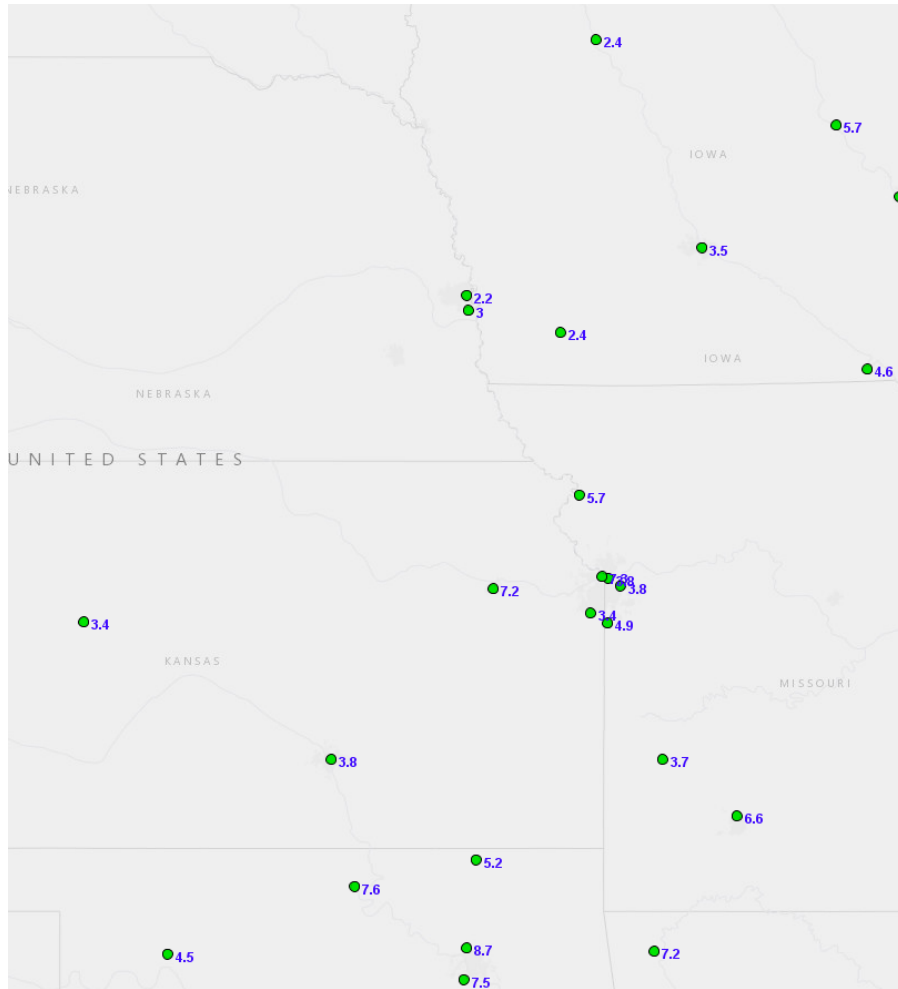


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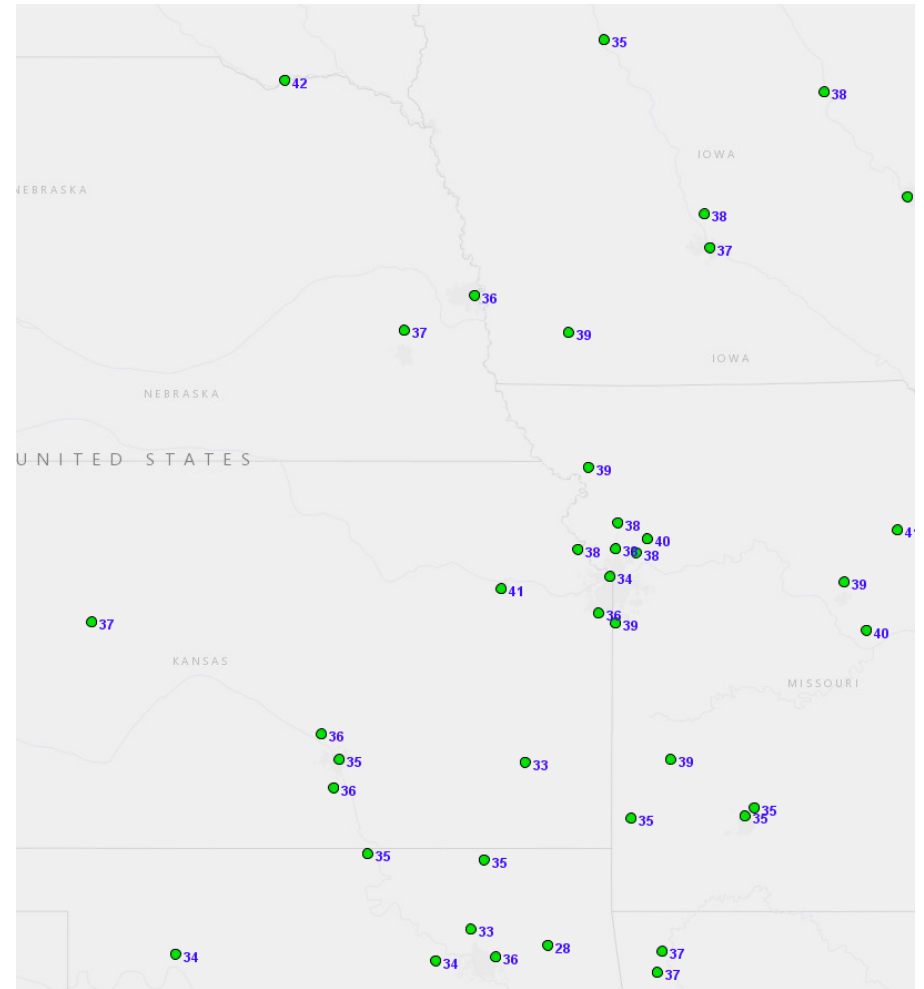


Wednesday, March 4, 2020

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

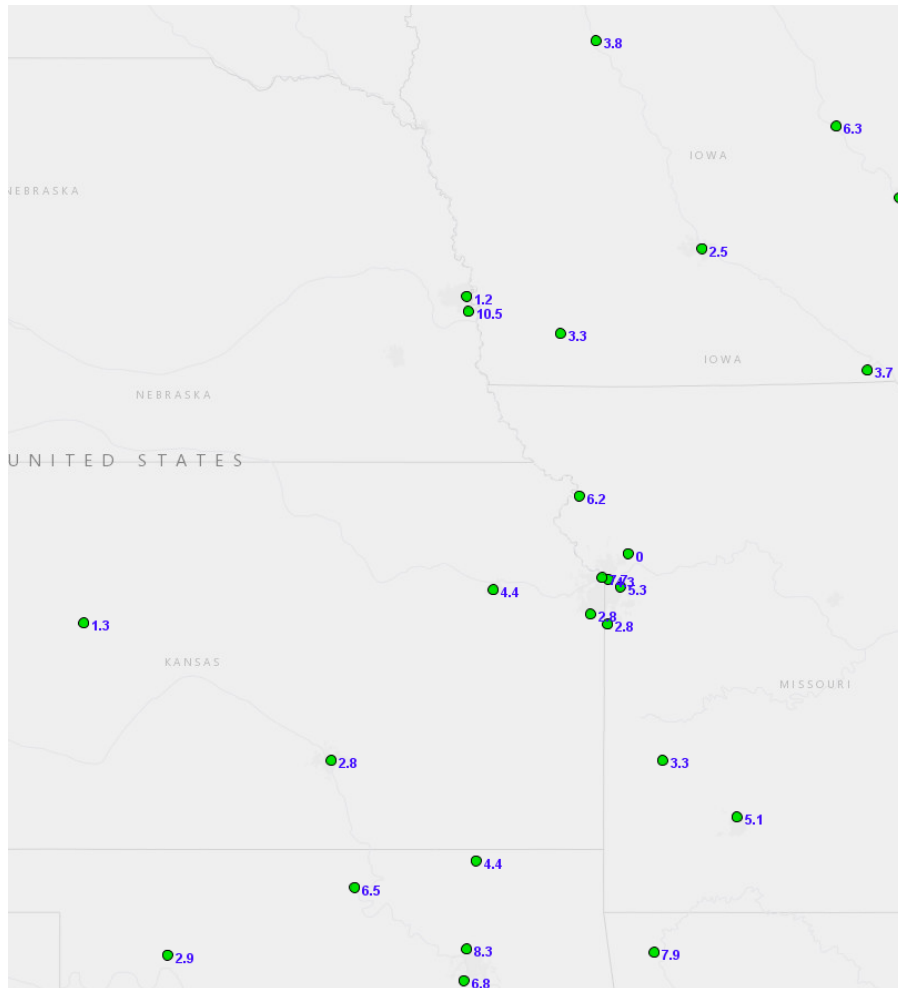


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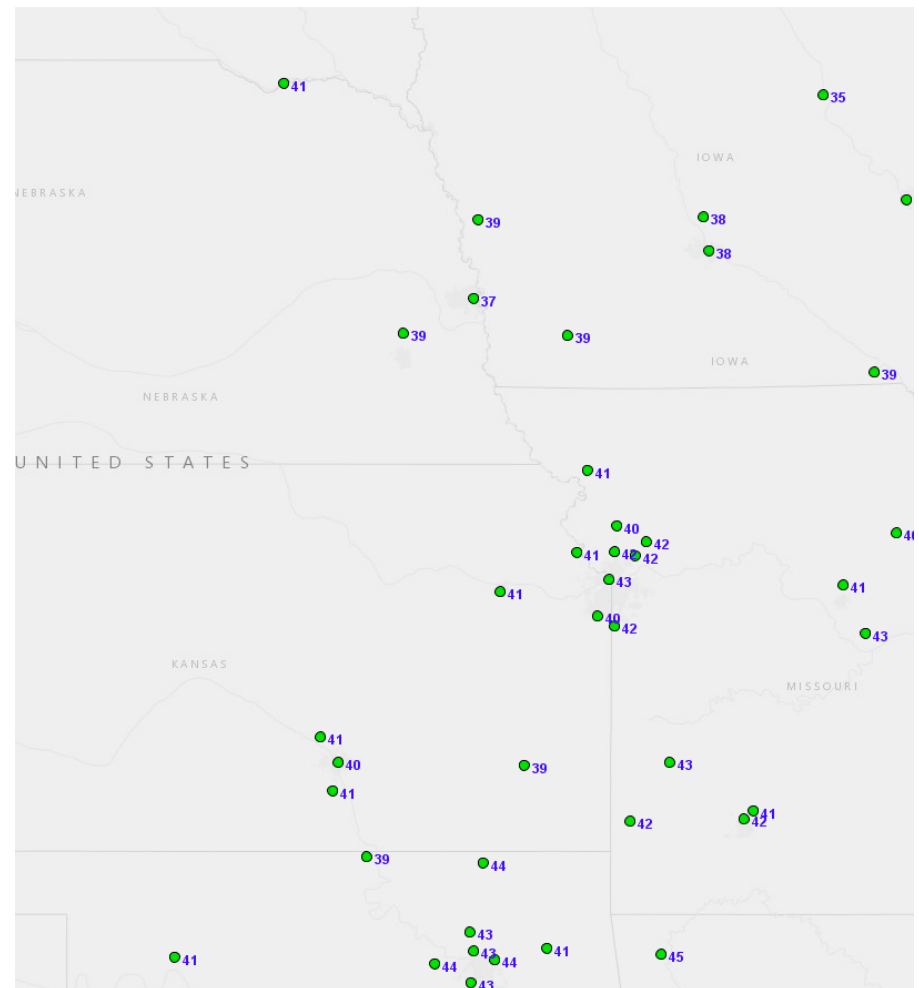


Thursday, March 5, 2020

PM2.5 (24-hour average)



Ozone (8-hour average maximum)





Fires and Smoke

With temperatures warming, an increase in fire activity began on Friday (February 28) despite breezy northwest winds. The breezy winds continued Saturday (February 29) which likely inhibited burning for much of Kansas while lighter winds allowed for burning across much of Missouri and Arkansas. A decrease in wind speeds on Sunday (March 1), especially northern Kansas, allowed for an increase in fire activity once again.

Wind speeds decreased later Monday (March 2) and remained less than 15 mph on Tuesday (March 3) which allowed for the busiest prescribed fire day of 2020 across Kansas. Winds were west-southwest under primarily clear skies, which combined with good transport winds kept smoke impacts to a minimum with ample dispersion.

Winds began to increase on Wednesday (March 4), but clear skies and warm temperatures allowed for ample prescribed burning across northeast Kansas and adjacent areas to the northeast. Once again smoke dispersion was very good and only minimal impacts were observed by air quality monitors.

Northwest winds of 10-20 mph with gusts exceeding 35 mph were observed on Thursday (March 5) with Red Flag Warnings issued due to extreme fire danger. Fire observed (mapped) were either conducted very early, prior to winds increasing, or were wildfires during the afternoon hours.

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

KSFIRE.ORG

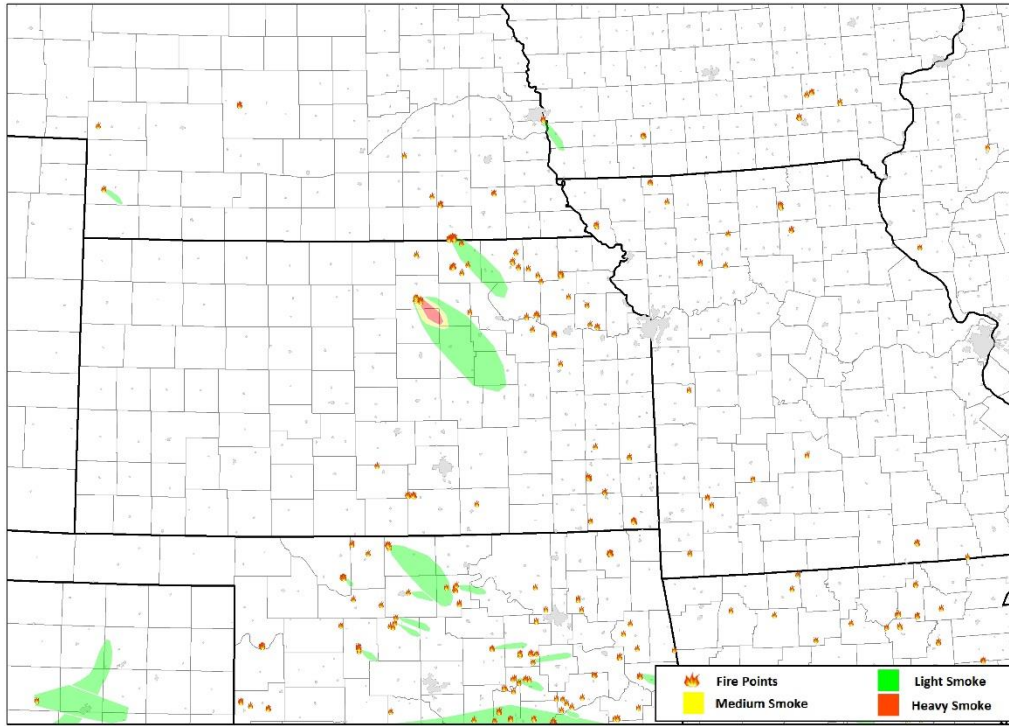


This website was developed as part of the development of the Kansas Flint Hills Smoke Management Plan. Kansas State University hosts the webpage and it includes important information for ranchers and others who might be interested in the Flint Hills. It provides training, regulations, policies, publications,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

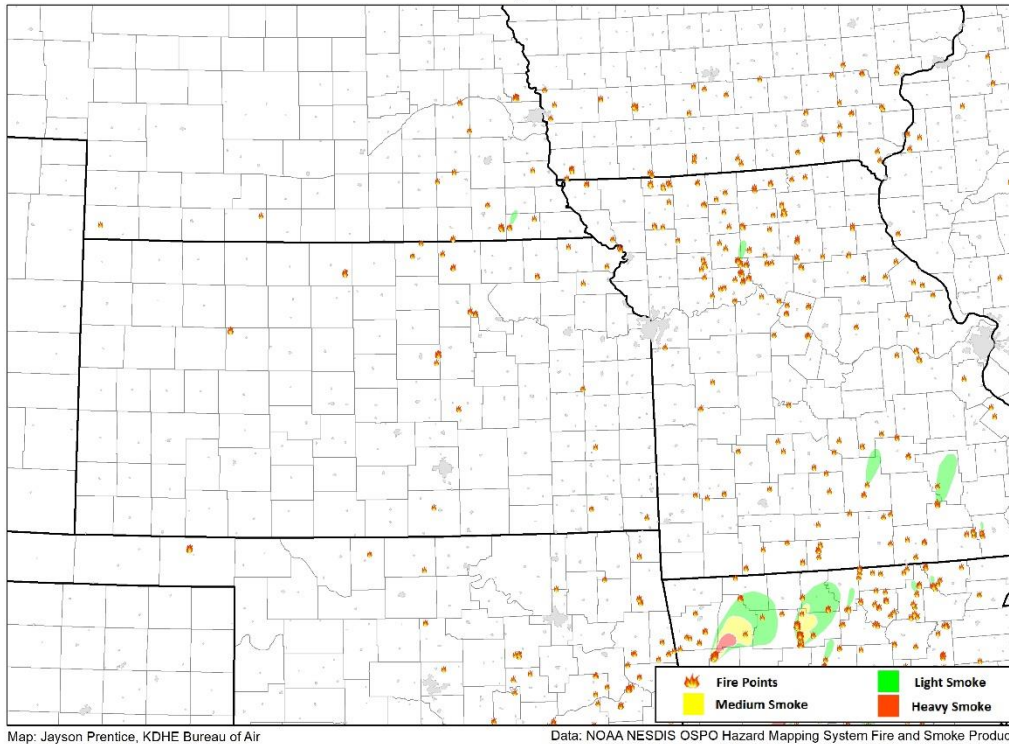
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HMS Fire & Smoke Analysis February 28, 2020



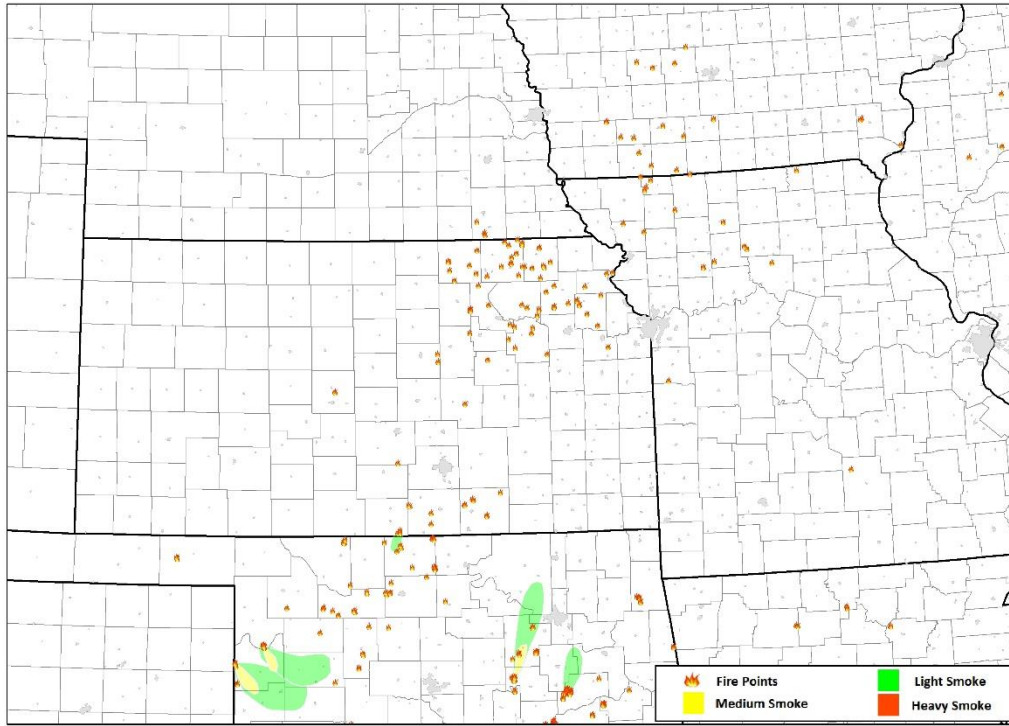
HMS Fire & Smoke Analysis February 29, 2020



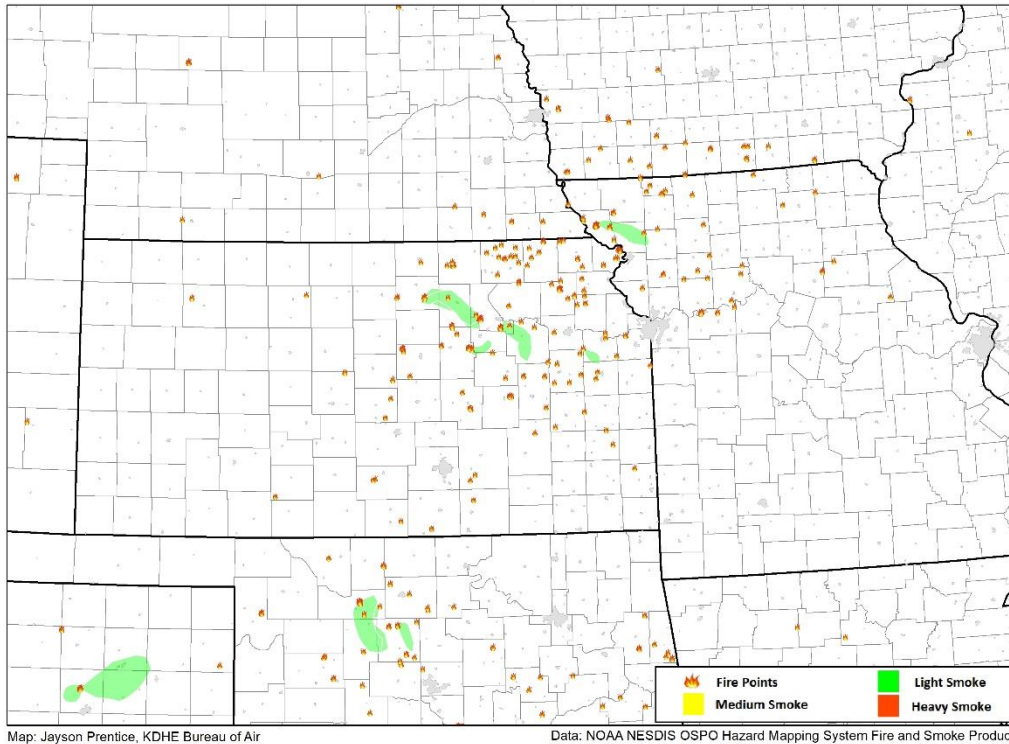
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HMS Fire & Smoke Analysis March 1, 2020



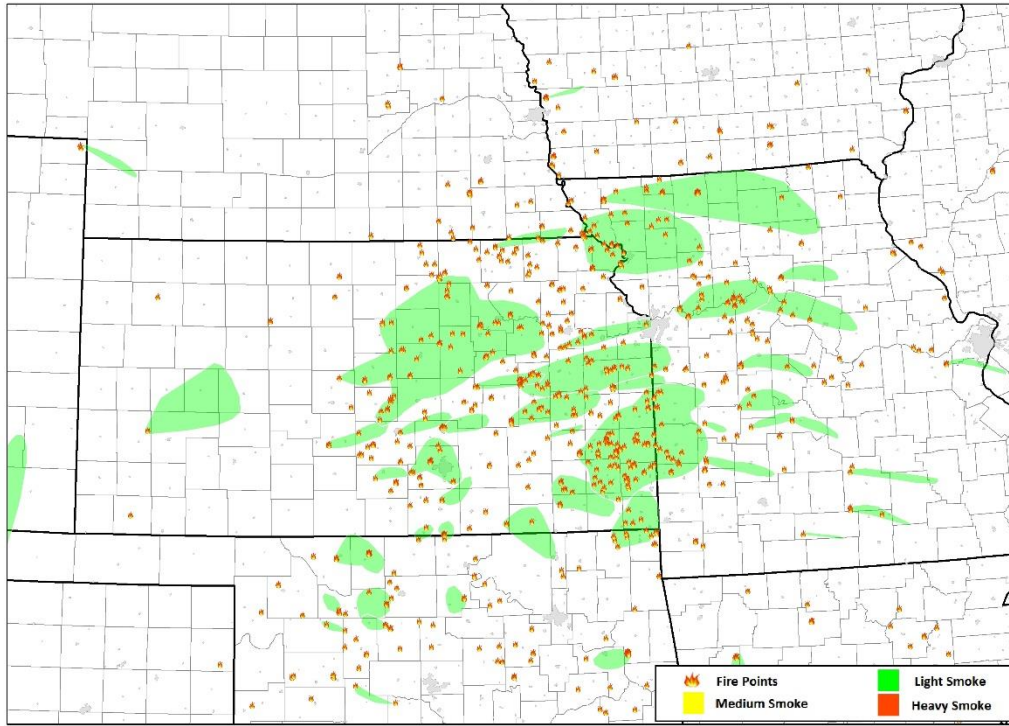
HMS Fire & Smoke Analysis March 02, 2020



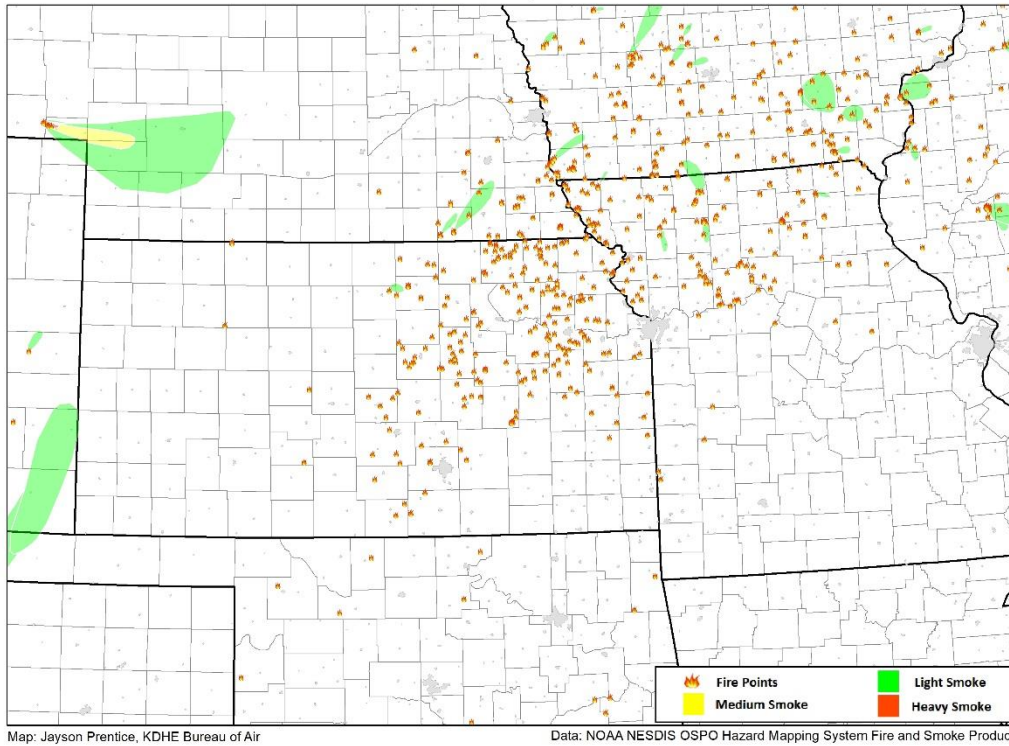
Flint Hills Prescribed Fire Update



HMS Fire & Smoke Analysis March 03, 2020



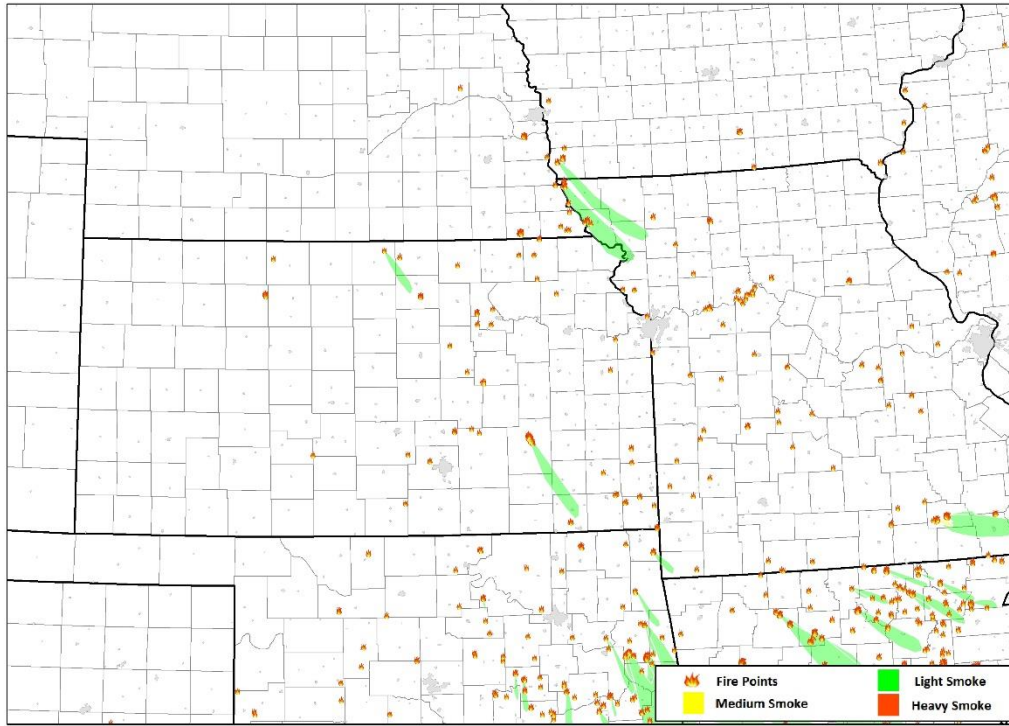
HMS Fire & Smoke Analysis March 04, 2020



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HMS Fire & Smoke Analysis March 05, 2020



Map: Jayson Prentice, KDHE Bureau of Air

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



Flint Hills Acreage Burned

Flint Hills acreage burned map is not yet available for 2020. This map and acreage estimation will be provided as soon as available and will also be included on the Flint Hills Smoke Management Facebook page.

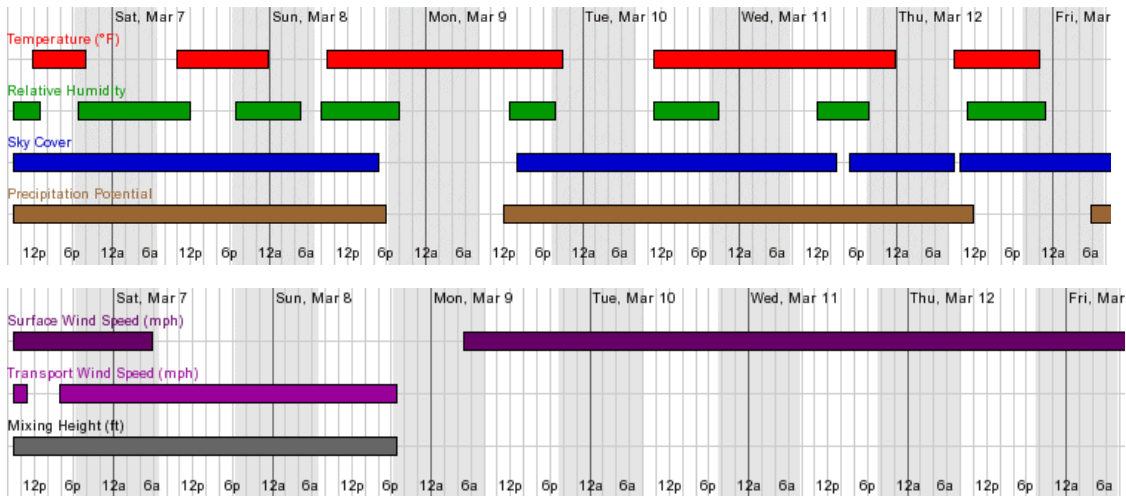
<u>Counties</u>	<u>Acres Burned</u>	
Butler		
Chase		
Chautauqua		
Coffey		
Cowley		
Elk		
Geary		
Greenwood		
Lyon		
Marion		
Morris		
Osage (KS)		
Pottawatomie		
Riley		
Wabaunsee		
Wilson		
Woodson		
Nowata (OK)		
Osage (OK)		
Washington (OK)		
Kay (OK)		
Total		
<i>* Denotes county was partly or completely covered by clouds during latest analysis.</i>		



Upcoming Look at Fires and Smoke

Above normal temperatures will likely continue for much of next week with daily high temperatures in the upper 50s to perhaps lower 70s across the Flint Hills. Relative humidity will once again drop below 30% for most areas today (Friday, March 6) and has prompted continued burn bans in many counties. Wind speeds are expected to increase for Saturday and Sunday with fire danger once again in the very high range – likely inhibiting burning for most. Rain showers are likely Sunday night into Monday, but otherwise reasonable temperatures and winds late Monday through Tuesday. Wednesday through Thursday will bring in bouts of clouds and chances of rain, but continued warm temperatures and reasonable relative humidity levels.

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: 9am March 6, 2020.

For more information, contact:

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