

Flint Hills Prescribed Fire Update

April 26, 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.

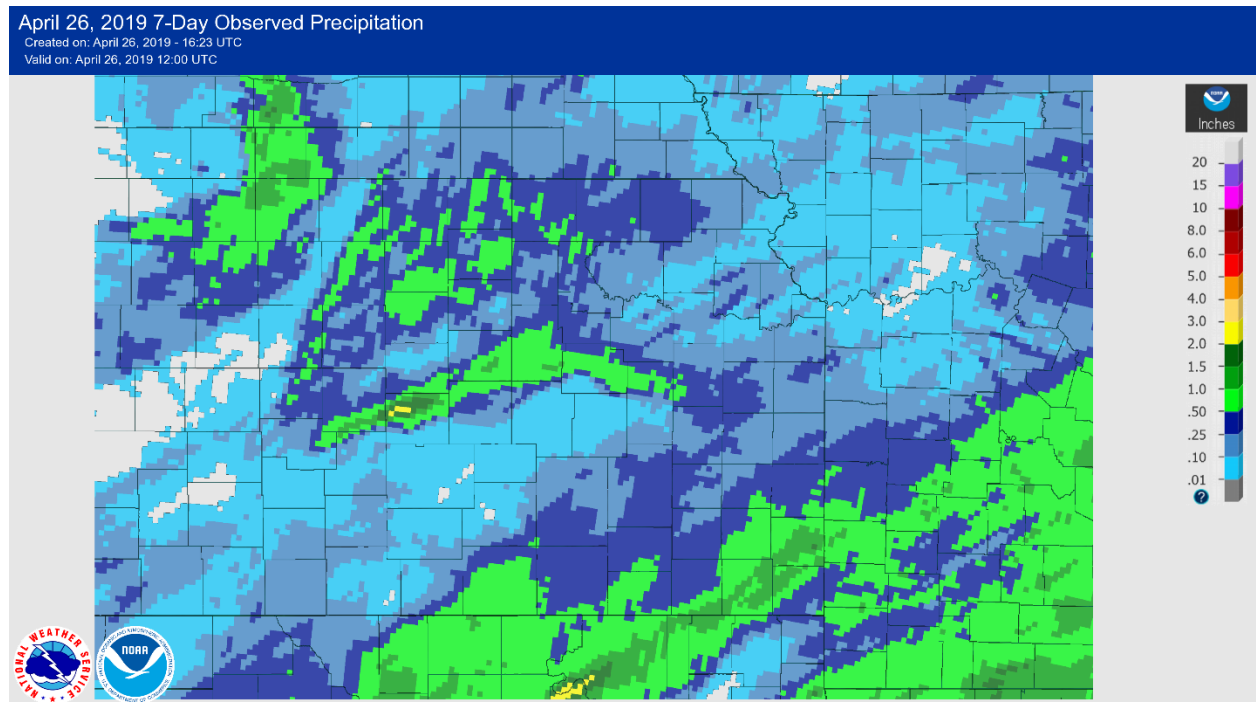




Meteorology

Cooler temperatures were recorded last Friday (April 19) under a breezy north wind with highs only in the 60s for much of the Flint Hills region. Temperatures began their warm-up on Saturday (April 20) as winds shifted to the south and highs approached 80 degrees. South winds increased on Sunday (April 21) with gusts of 30-45 mph measured across the Flint Hills. Temperatures on Sunday pushed into the 80s with the strong south wind. The next storm system and frontal boundary arrived on Monday (April 22) as temperatures struggled to reach 70 degrees and cloud cover began to move in. Scattered showers moved across the area on Tuesday (April 23) with precipitation amounts generally less than a half-inch for most of the Flint Hills. Peaks of sun were seen on Wednesday (April 24) as winds briefly became southerly and temperatures warmed back into the mid 60s to lower 70s. Another cold front pushed through on Thursday (April 25) limiting temperatures to near 70 degrees and bringing a strong north wind for the afternoon hours for much of the Flint Hills.

Precipitation

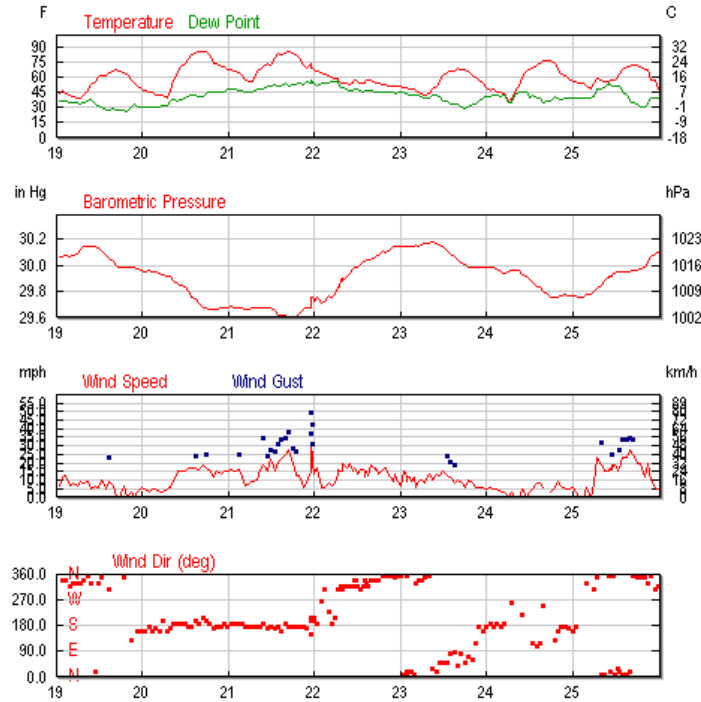


NOAA/NWS Observed Total Precipitation for April 19-25, 2019.

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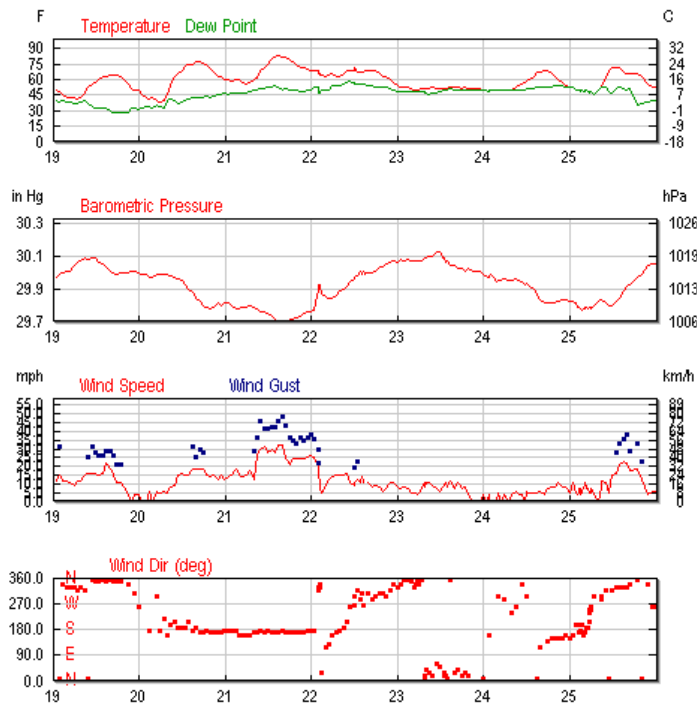


Lincoln, NE



April 19-25, 2019 Observed Weather from KLNK. Graphic: Weather Underground, Inc.

Emporia, KS



April 19-25, 2019 Observed Weather from KEMP. Graphic: Weather Underground, Inc.



Air Quality Data

Air quality data for the period of April 19-25, 2019:

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 $\mu\text{g}/\text{m}^3$.

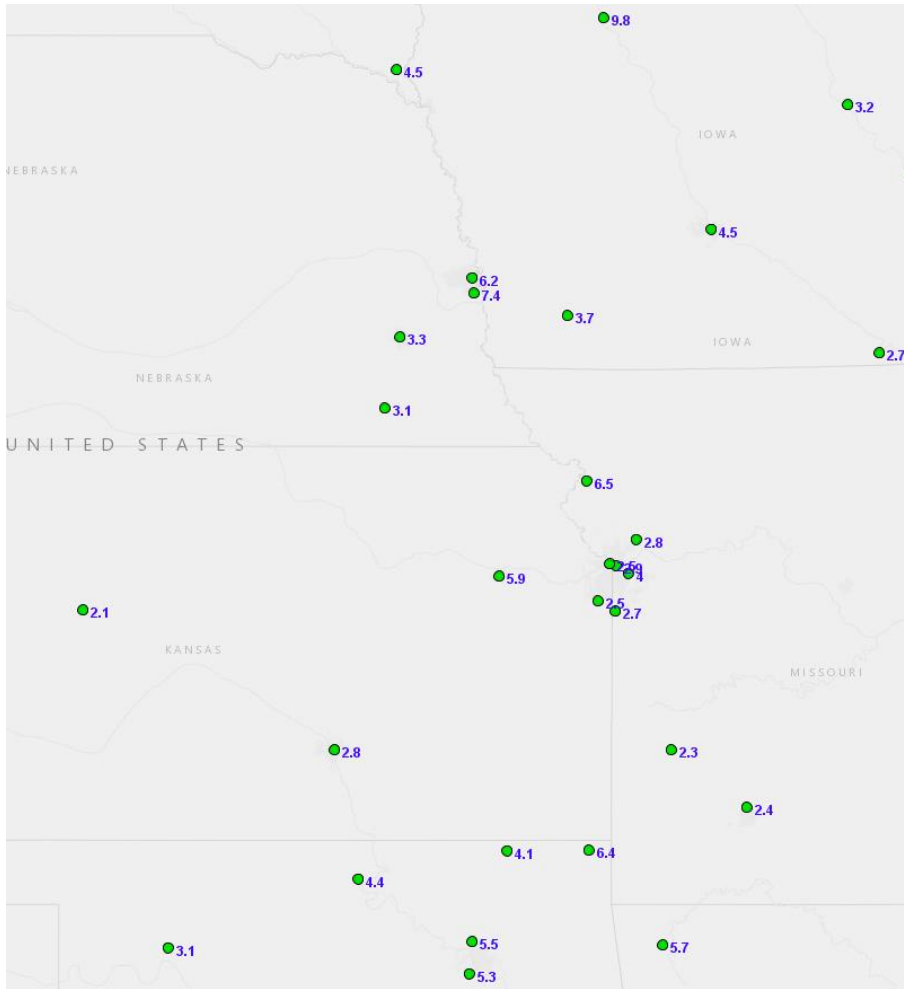
Air quality images on the following pages for each day show preliminary data, courtesy Air Now Tech.

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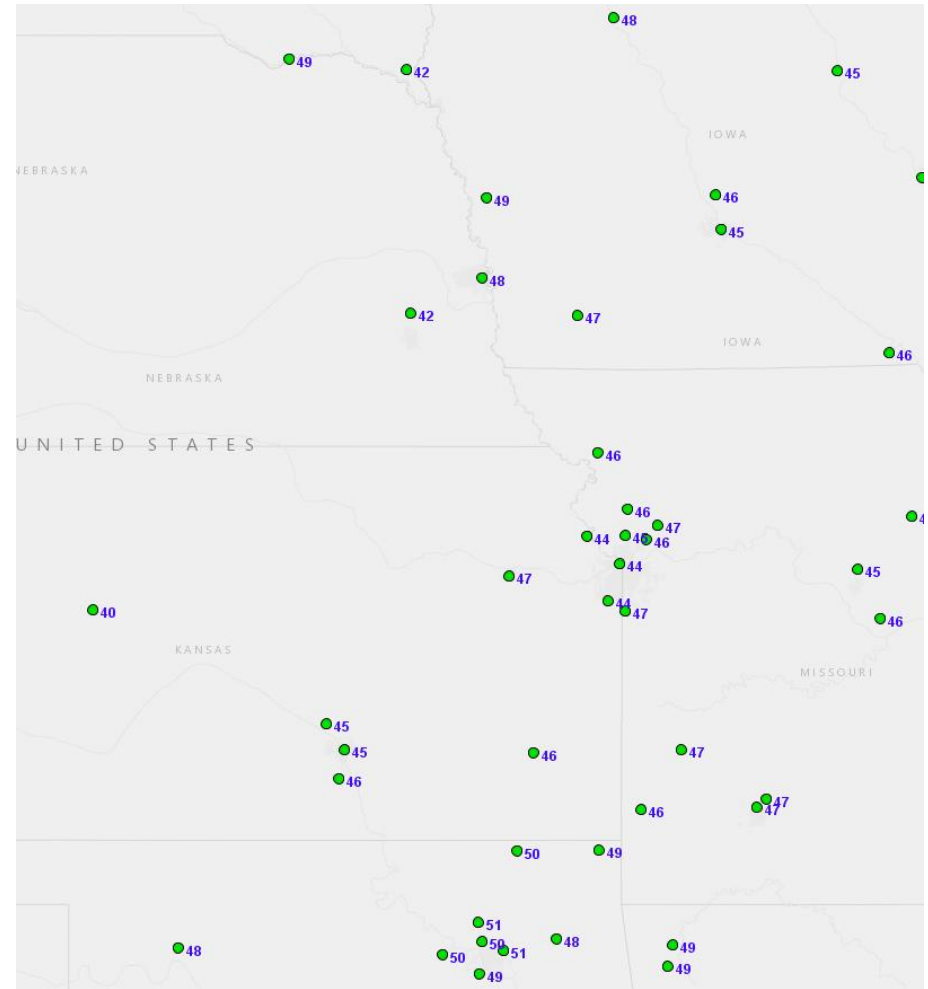


Friday, April 19, 2019

PM2.5 (24-hour average)



Ozone (8-hour average maximum)



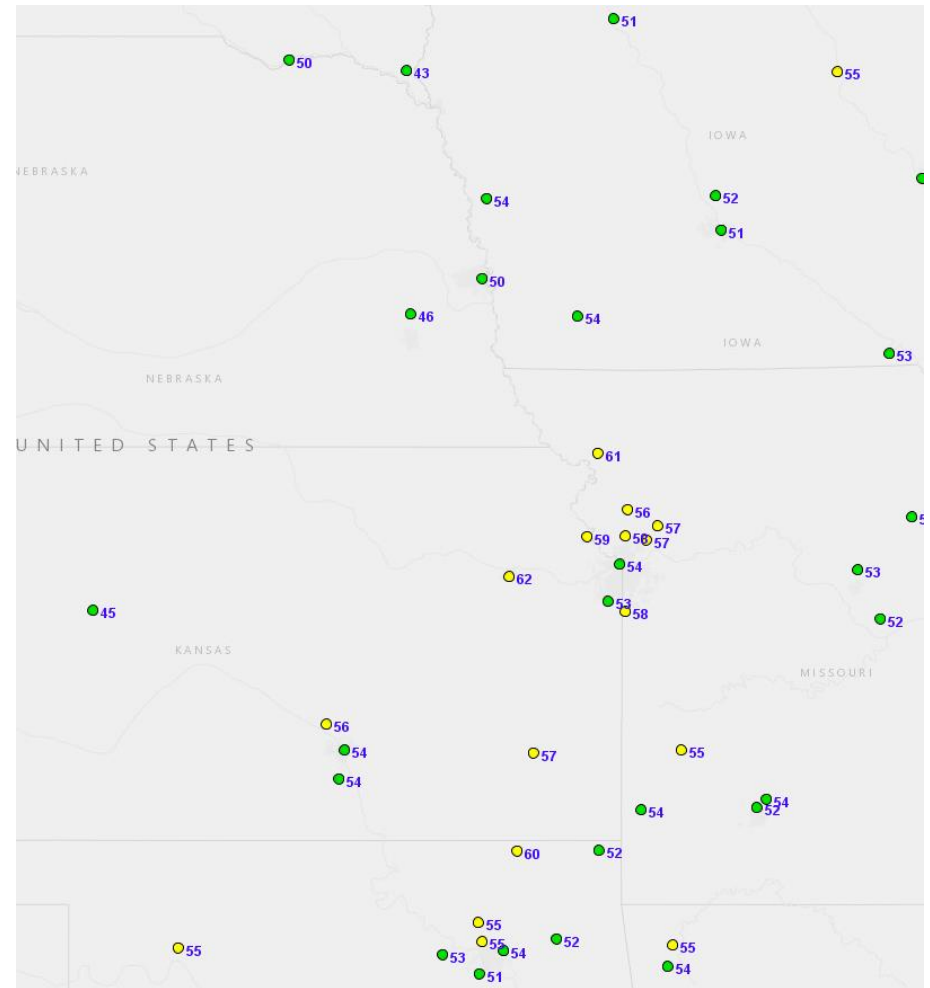
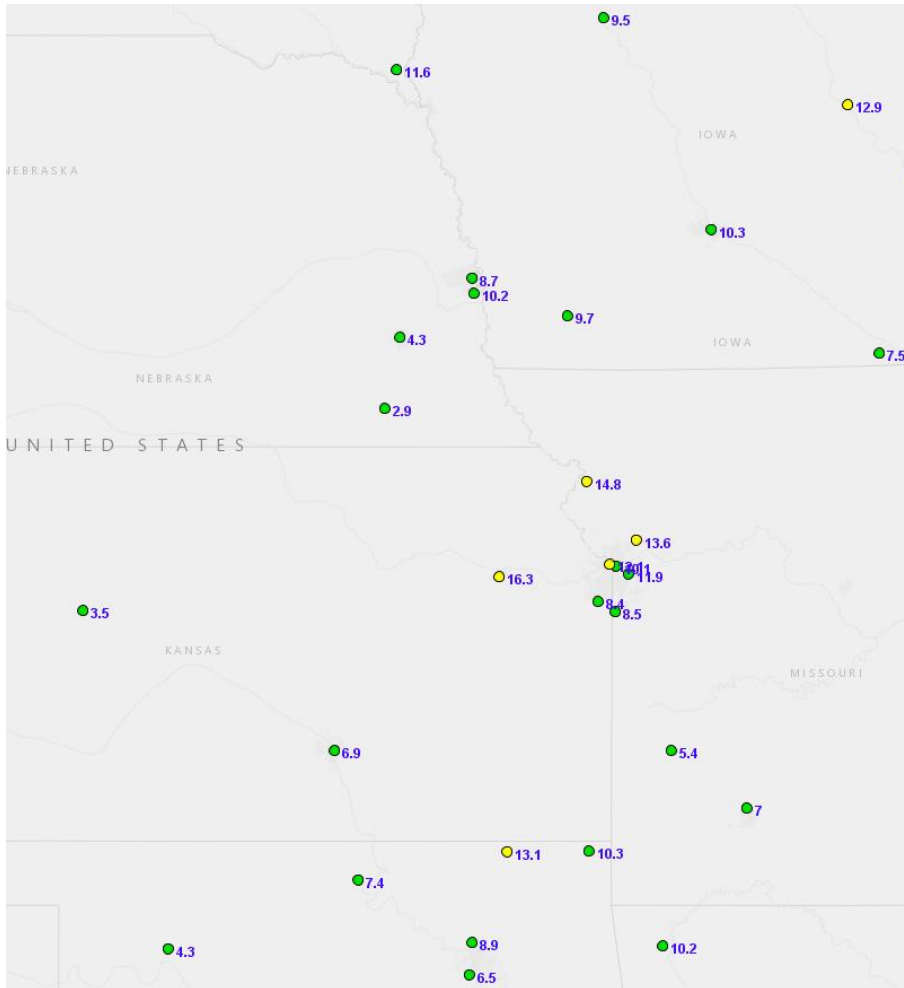
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Saturday, April 20, 2019

PM2.5 (24-hour average)

Ozone (8-hour average maximum)

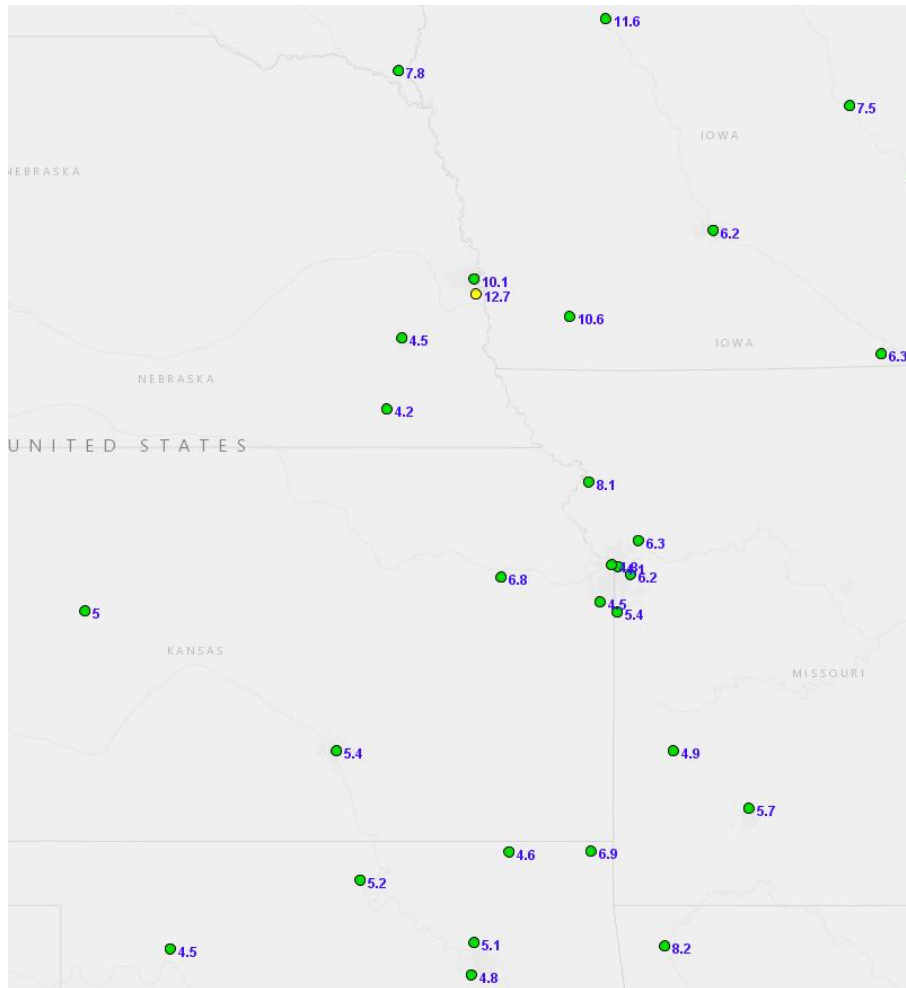


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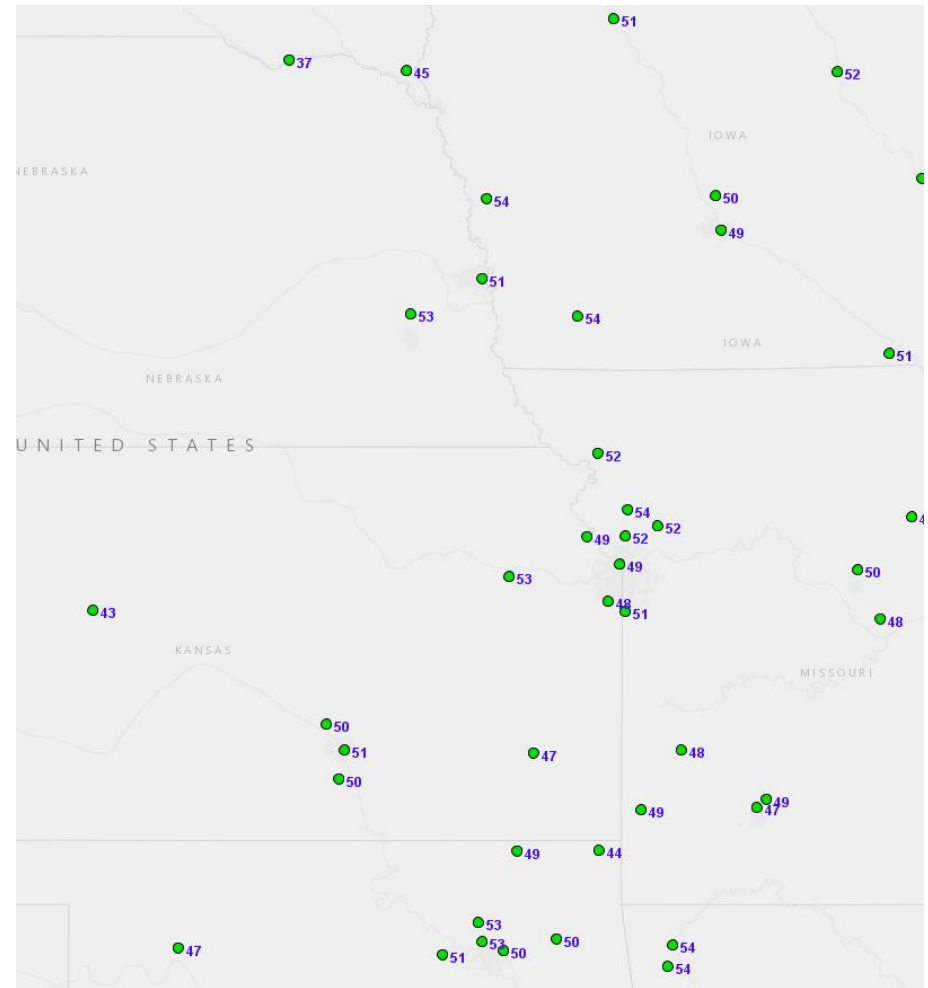


Sunday, April 21, 2019

PM2.5 (24-hour average)



Ozone (8-hour average maximum)



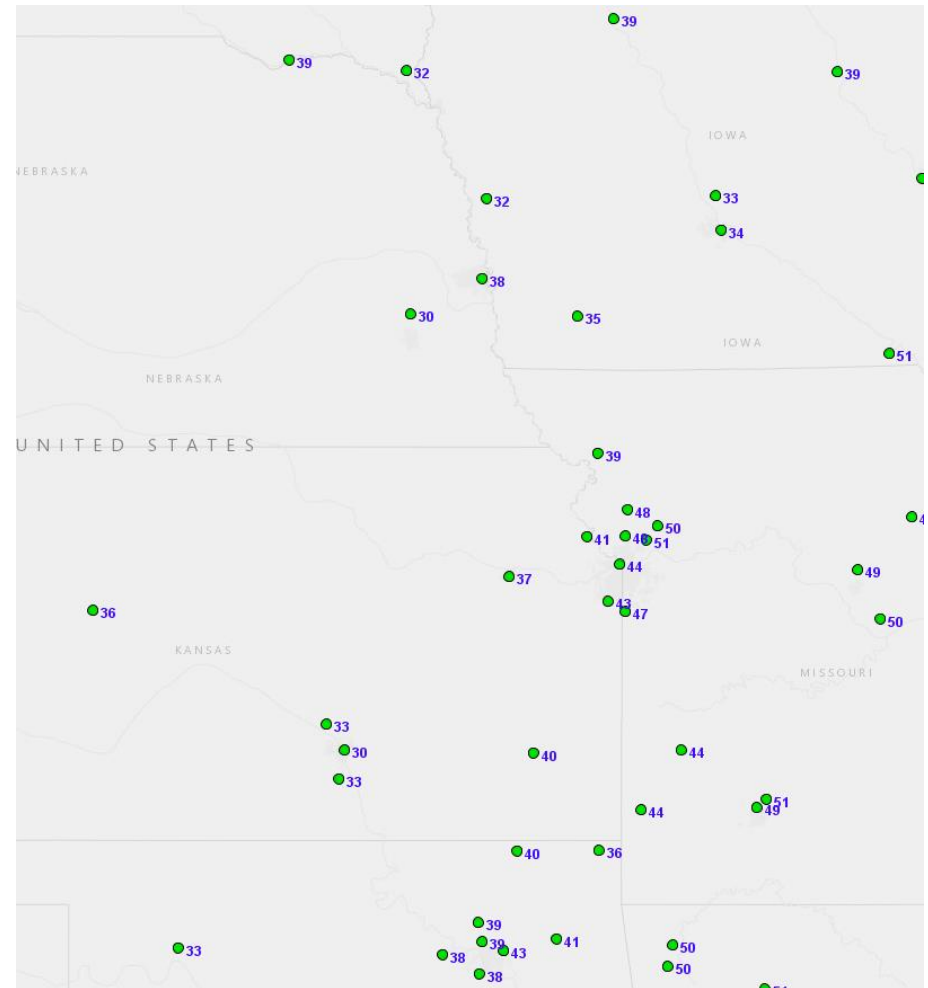
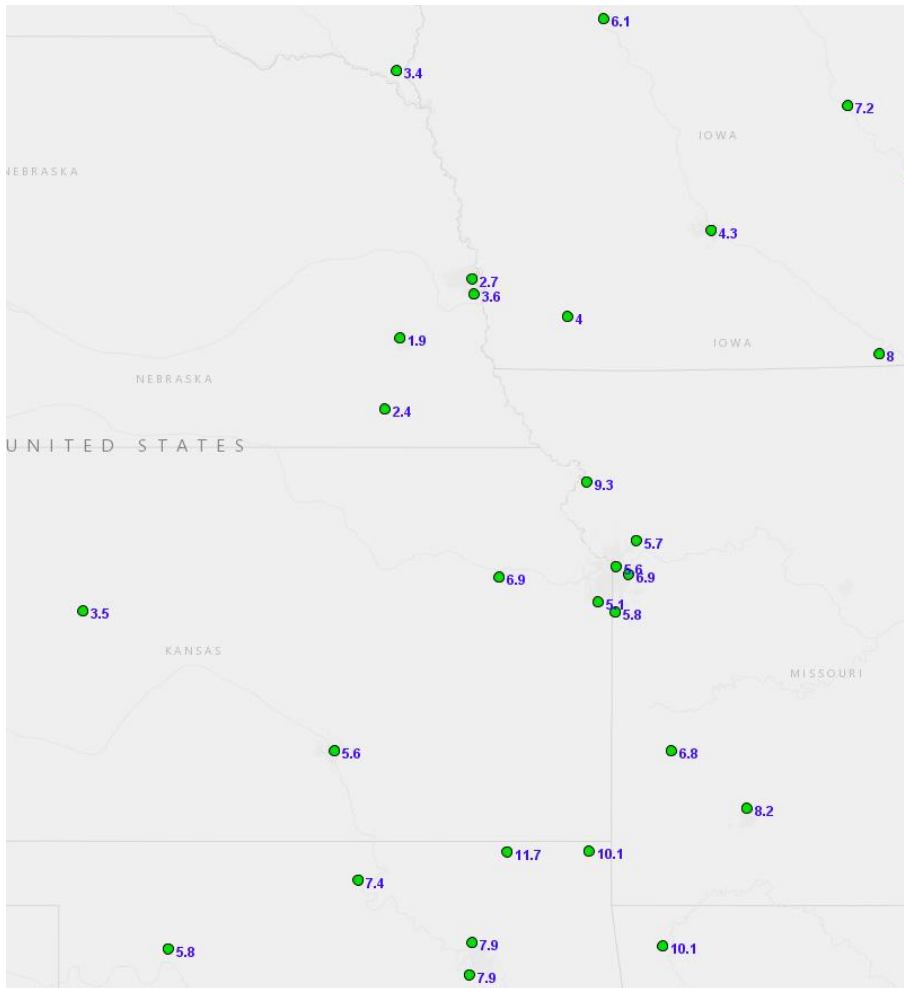
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Monday, April 22, 2019

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



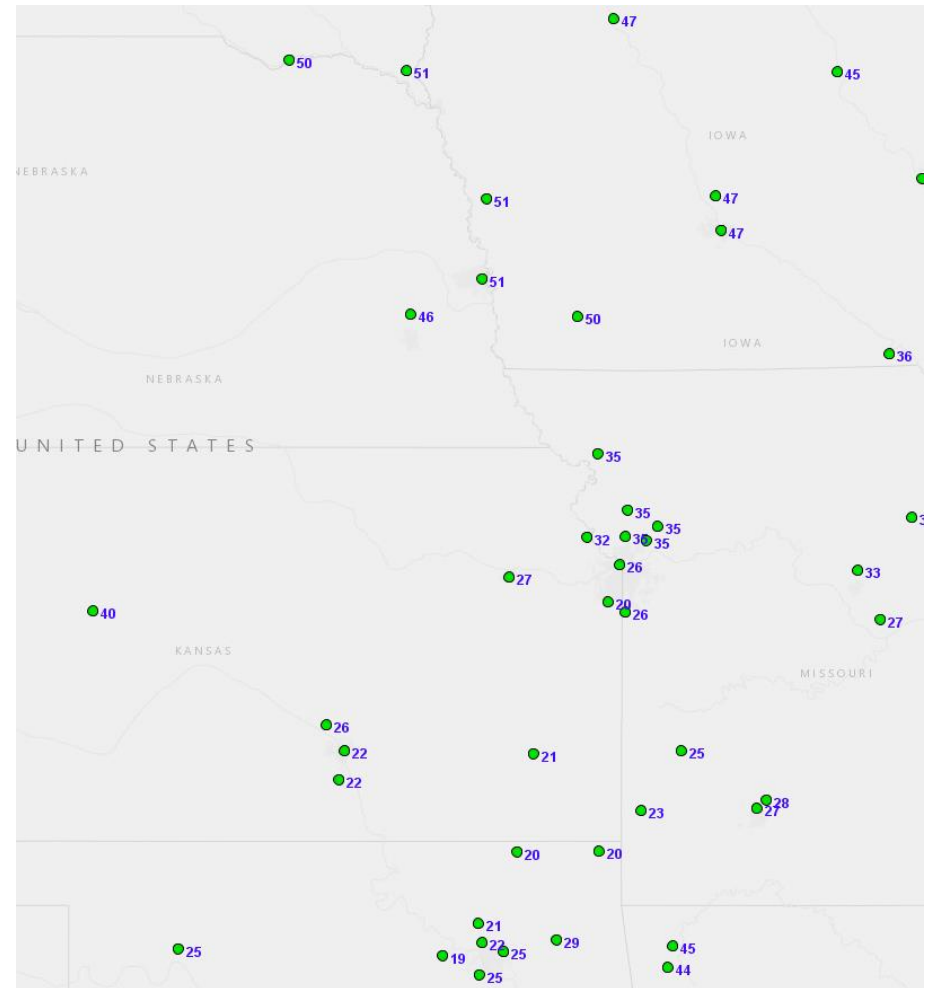
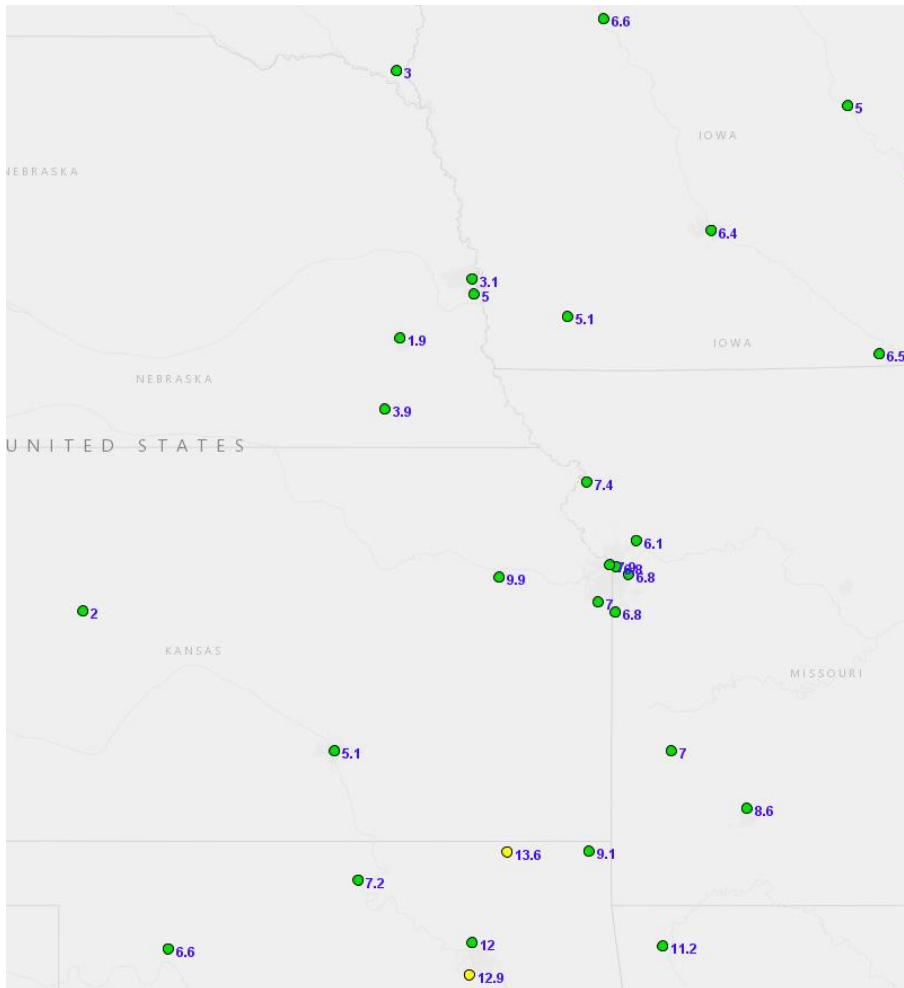
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Tuesday, April 23, 2019

PM2.5 (24-hour average)

Ozone (8-hour average maximum)

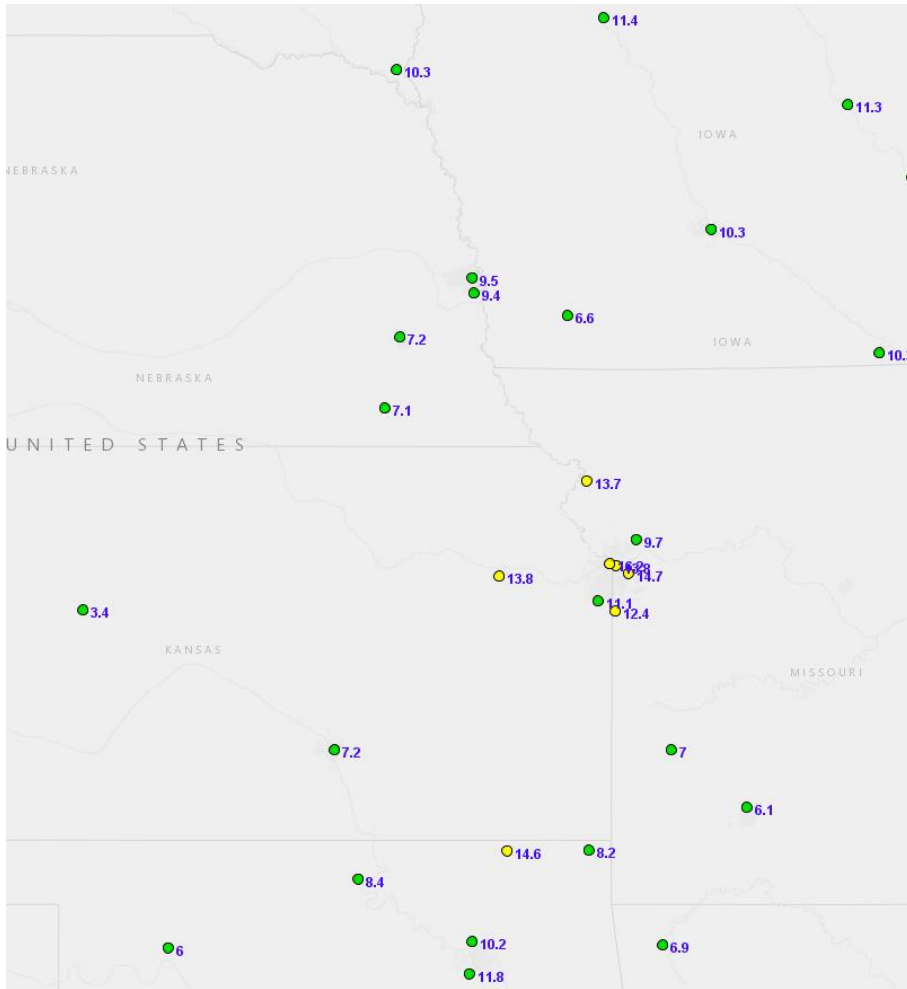


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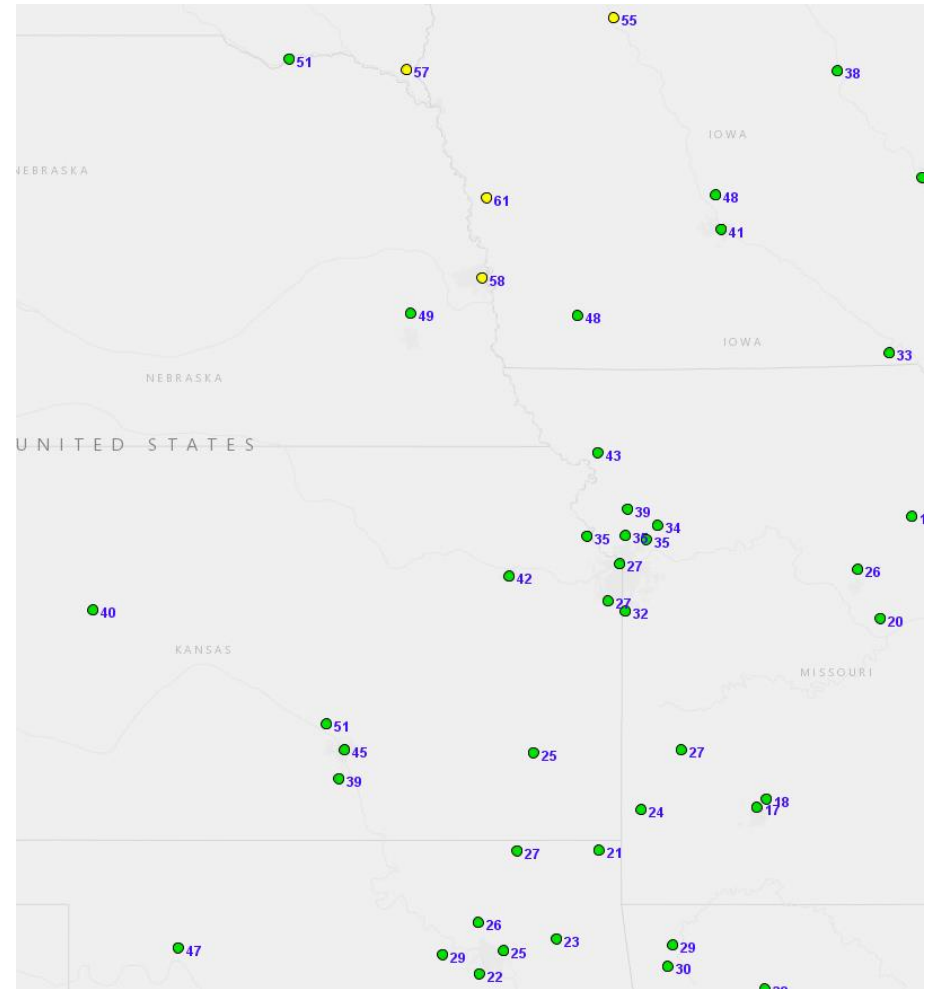


Wednesday, April 24, 2019

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

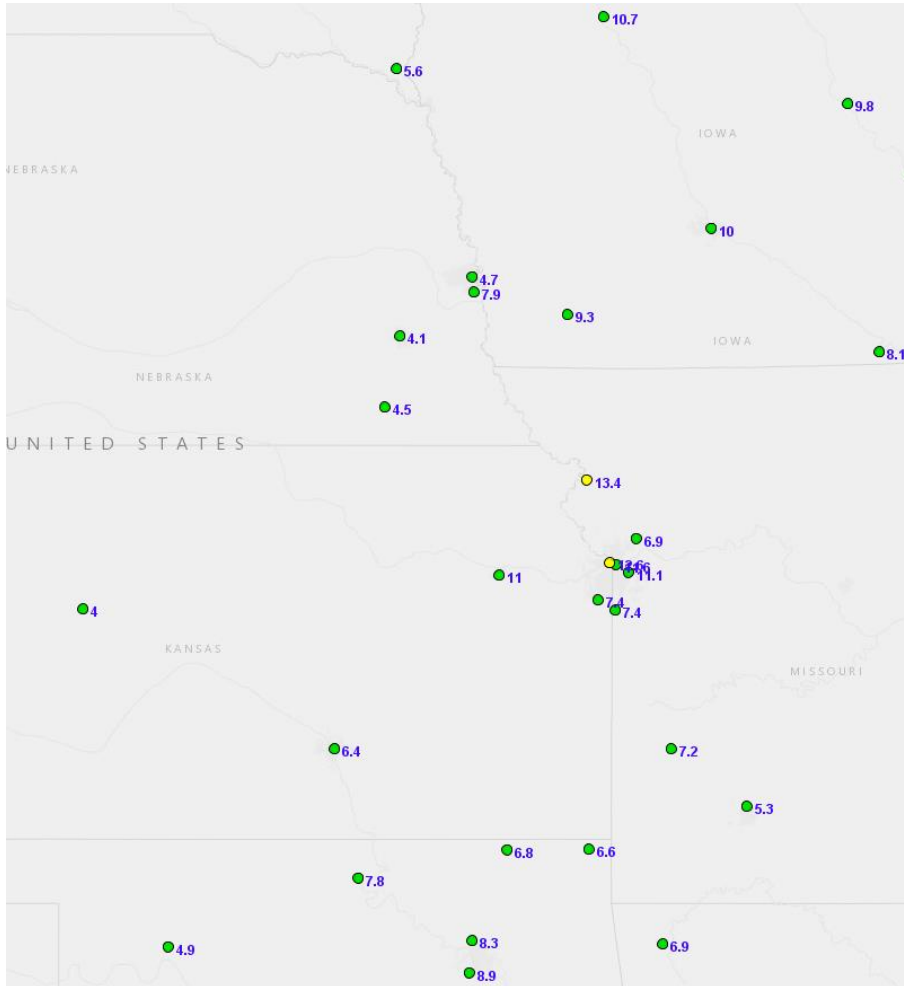


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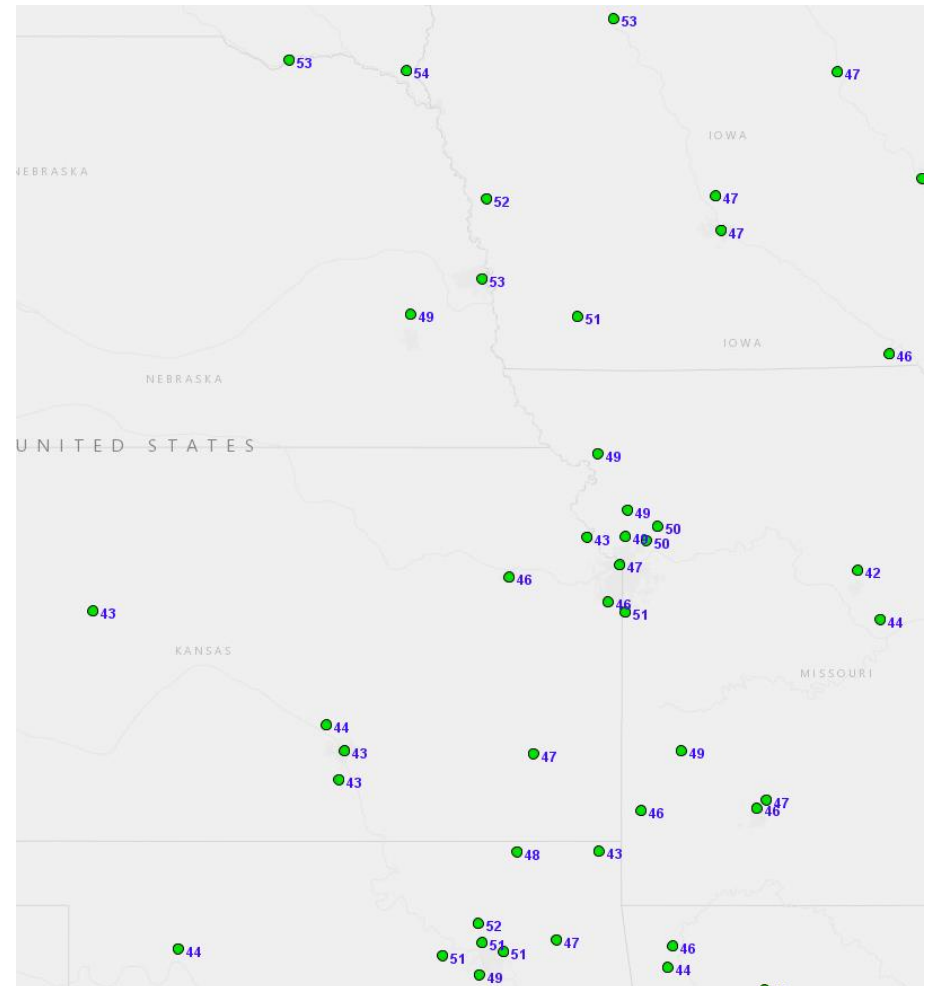


Thursday, April 25, 2019

PM2.5 (24-hour average)



Ozone (8-hour average maximum)





Fires and Smoke

Fire activity was observed throughout the region last Friday (April 19) with a moderate north wind pushing smoke to the south and east. Region-wide fire activity continued Saturday (April 20) with moderate burning within the Flint Hills. Smoke was pushed to the northeast with impacts seen throughout the Flint Hills region, and downwind over Kansas City, St. Joseph, and adjacent areas. While air quality values were elevated, they remained below air quality standards.

Minimal fire activity was observed on Sunday (April 21) with breezy to windy conditions across the area. Wind shifts and the potential for precipitation precluded any significant fire activity on Monday (April 22). Scattered rain showers, cloud cover, and cooler temperatures led to no burning on Tuesday (April 23) across the Flint Hills. Scattered fire activity returned on Wednesday (April 24) behind a cold front, although strong north winds during the afternoon likely precluded additional activity. Strong north winds and cloud cover likely limited fire activity on Thursday (April 25) for much of the region with only light fire activity observed. Smoke impacts for Sunday-Thursday were likely localized, only seen in the vicinity of fires, with good mixing most days and overall limited fire activity.

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

KSFIRE.ORG

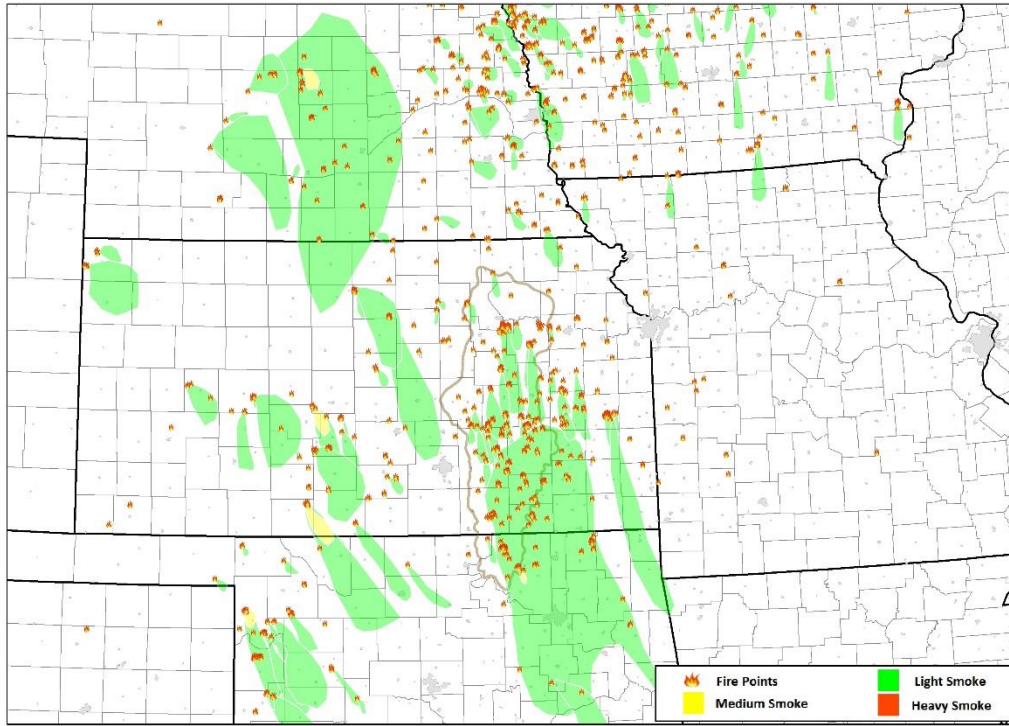


This website was developed as part of the development of the Kansas Flint Hills Smoke Management Plan. Kansas State University hosts the webpage and it includes important information for ranchers and others who might be interested in the Flint Hills. It provides training, regulations, policies, publications,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

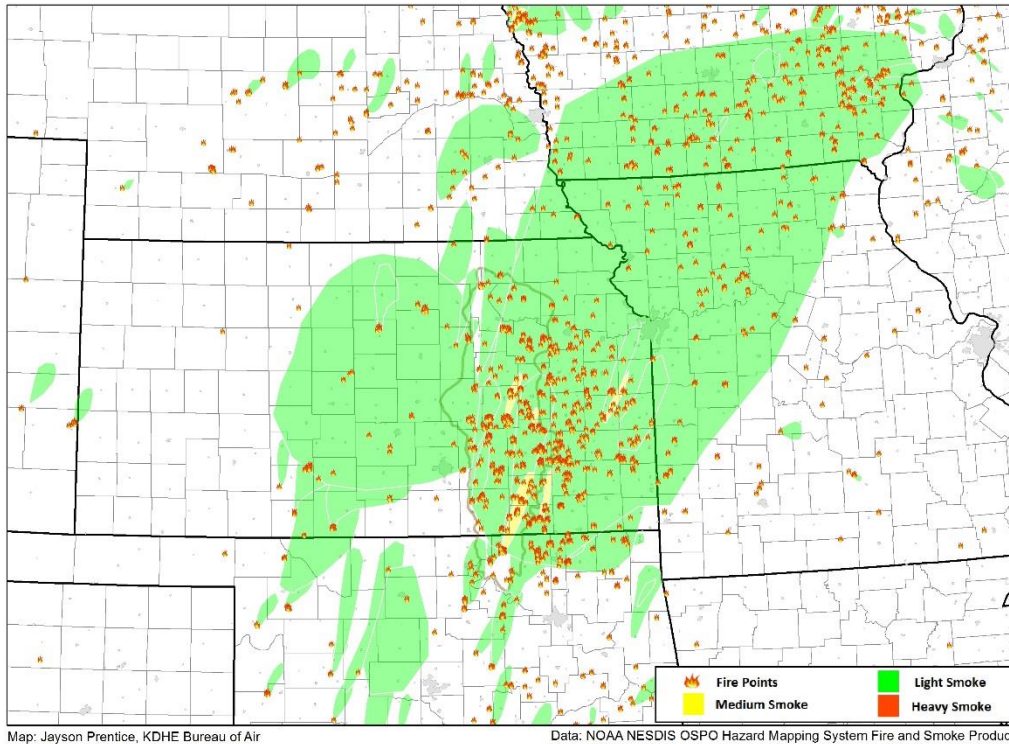
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HMS Fire & Smoke Analysis April 19, 2019



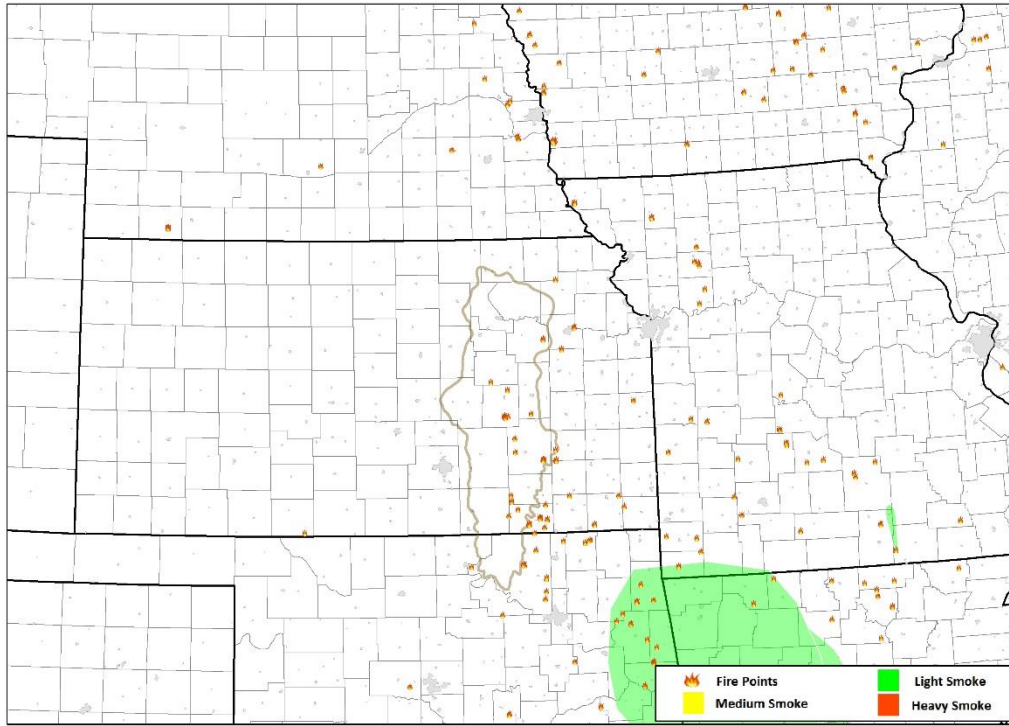
HMS Fire & Smoke Analysis April 20, 2019



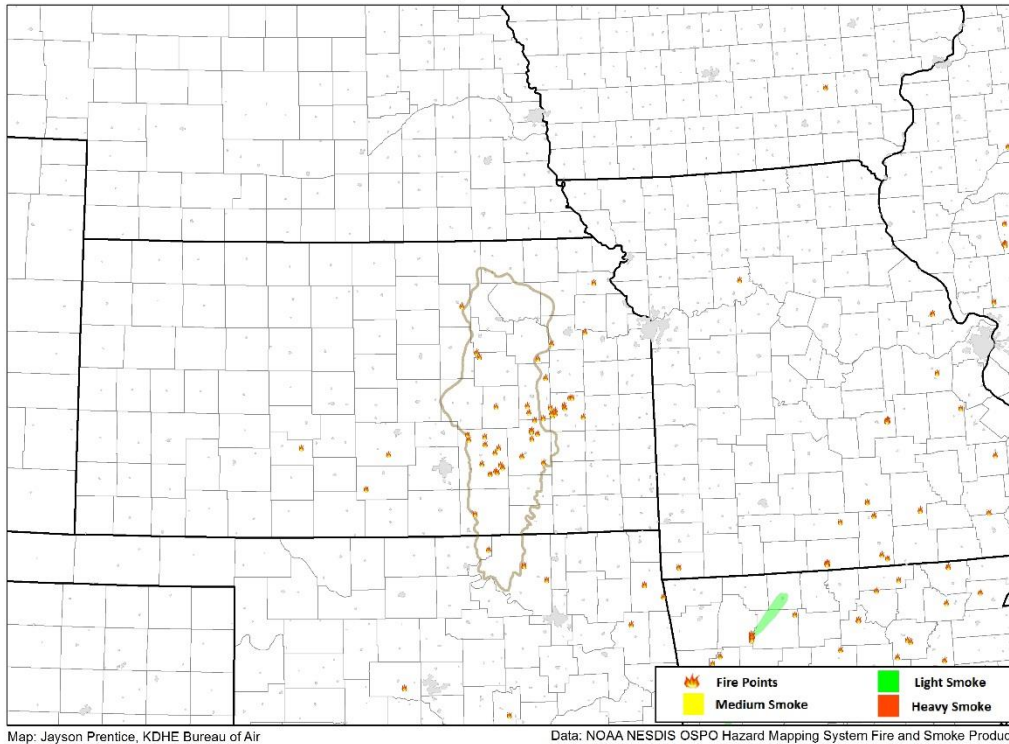
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HMS Fire & Smoke Analysis April 21, 2019



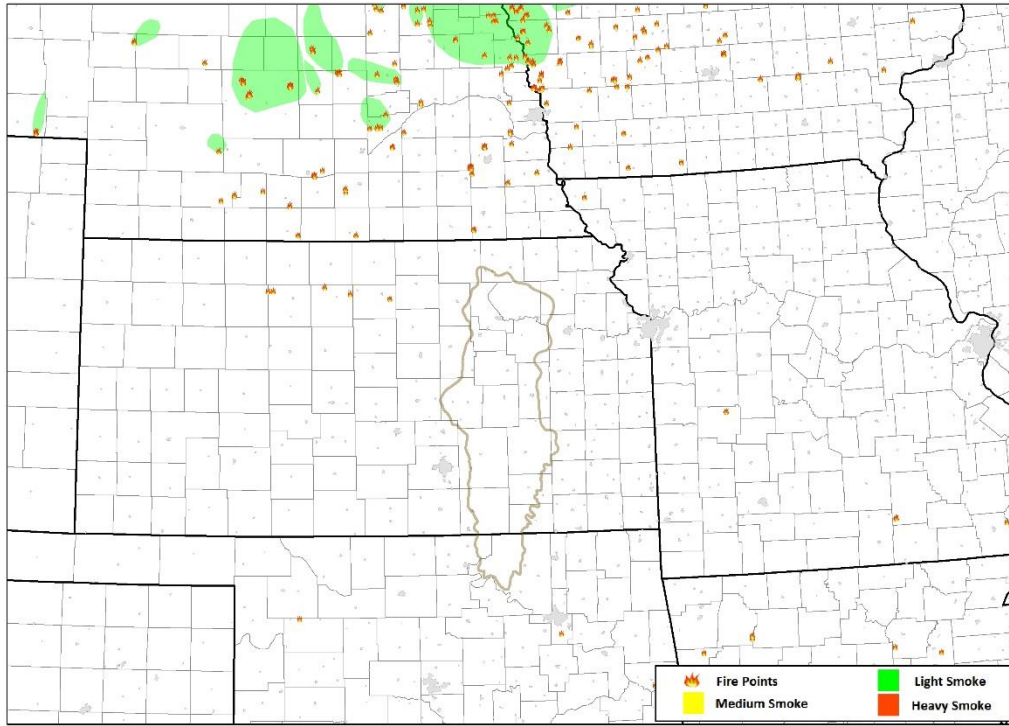
HMS Fire & Smoke Analysis April 22, 2019



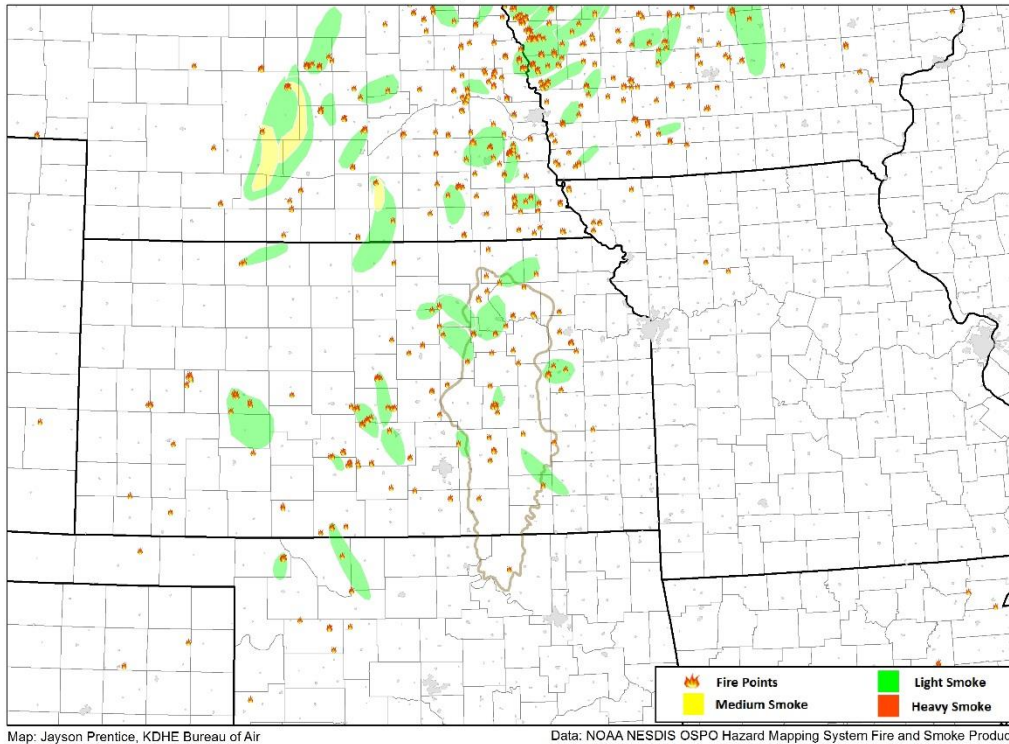
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HMS Fire & Smoke Analysis April 23, 2019



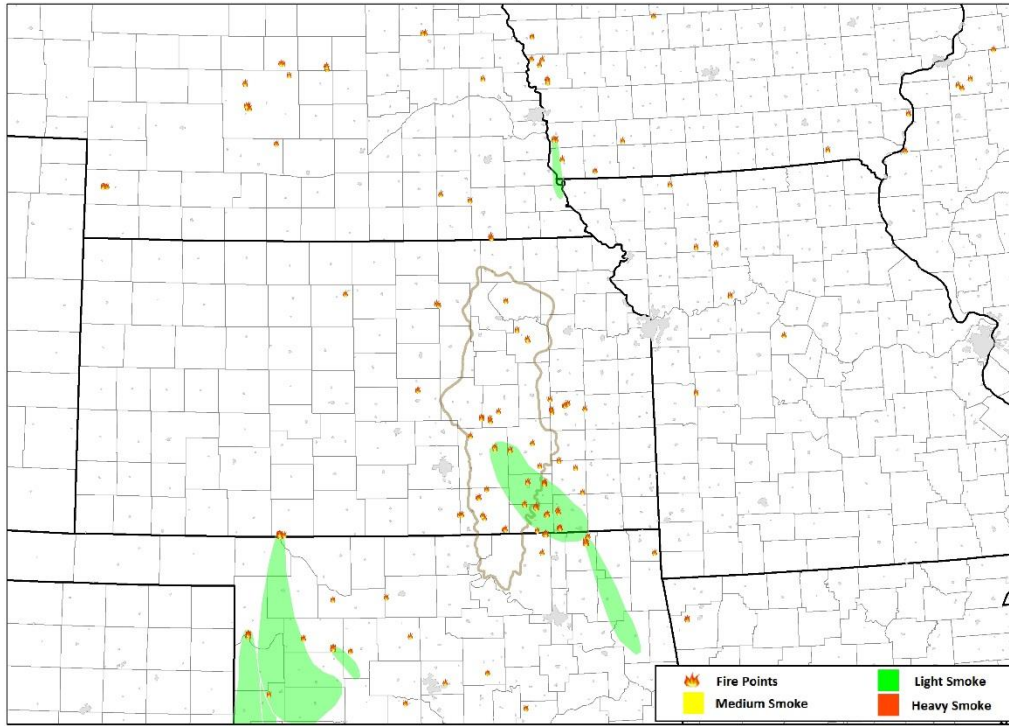
HMS Fire & Smoke Analysis April 24, 2019



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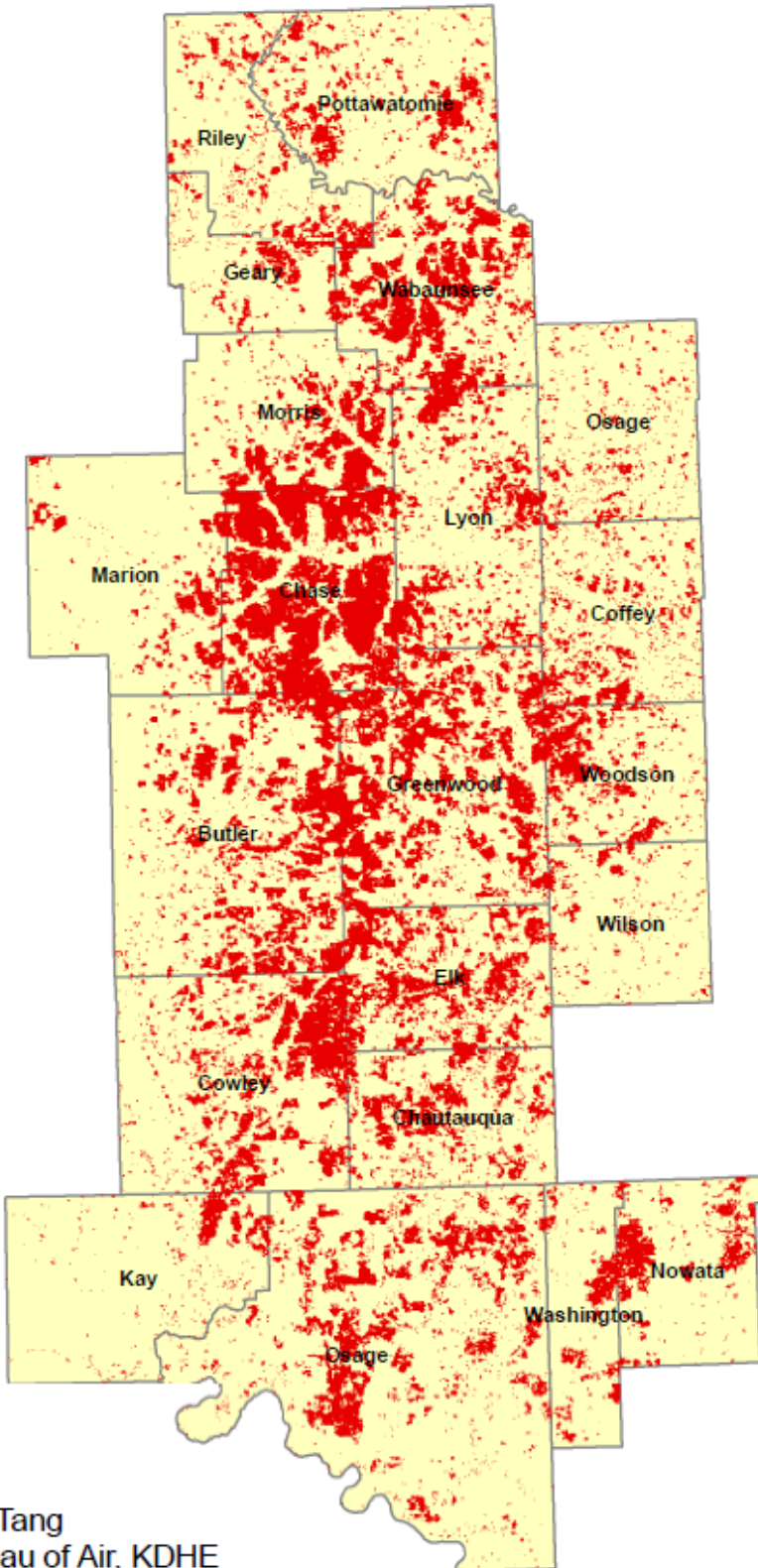


HMS Fire & Smoke Analysis April 25, 2019





Flint Hills Acreage Burned (March 15 – April 20, 2019)



<u>Counties</u>	<u>Acres Burned</u>	
Butler	230,152	
Chase	317,011	
Chautauqua	99,292	
Coffey	66,920	
Cowley	181,163	
Elk	149,424	
Geary	37,144	
Greenwood	286,091	
Lyon	120,204	
Marion	51,044	
Morris	105,732	
Osage (KS)	39,522	
Pottawatomie	80,681	
Riley	54,071	
Wabaunsee	182,352	
Wilson	24,896	
Woodson	72,033	
Nowata (OK)	59,785	
Osage (OK)	233,689	
Washington (OK)	34,333	
Kay (OK)	34,920	
Total	2,460,459	
* Denotes county was partly or completely covered by clouds during latest analysis.		

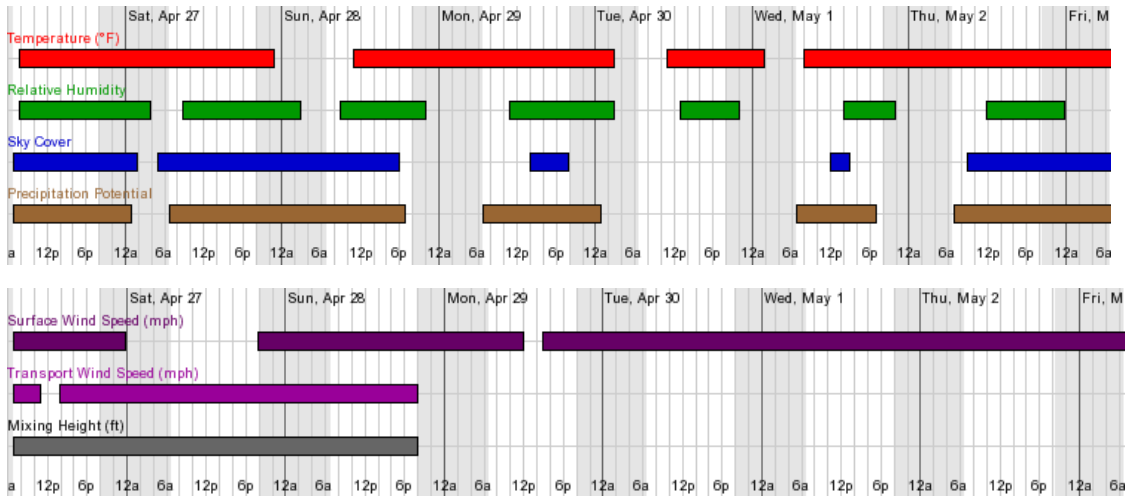
Yao Tang
Bureau of Air, KDHE



Upcoming Look at Fires and Smoke

A good warm-up is anticipated today (April 26) as winds shift back to the south for many this afternoon. Wind speeds will remain light, but the shift in the winds will limit transport overall and may keep smoke impacts rather localized. Scattered rain showers or thunderstorms early Saturday (April 27) will preclude otherwise breezy conditions during the daytime on Saturday. Look for cool temperatures on Sunday (April 28) with heavy morning dew or frost possible. Another round of showers or thunderstorms is possible Sunday night into Monday (April 29) with breezy conditions possible Monday afternoon. Cooler temperatures on Tuesday (April 30) to end the month. Another chance of rain comes into the picture for Wednesday (May 1) into Thursday (May 2) under otherwise warmer temperatures.

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 26, 2019.

For more information, contact:

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