

Flint Hills Prescribed Fire Update

April 5, 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.

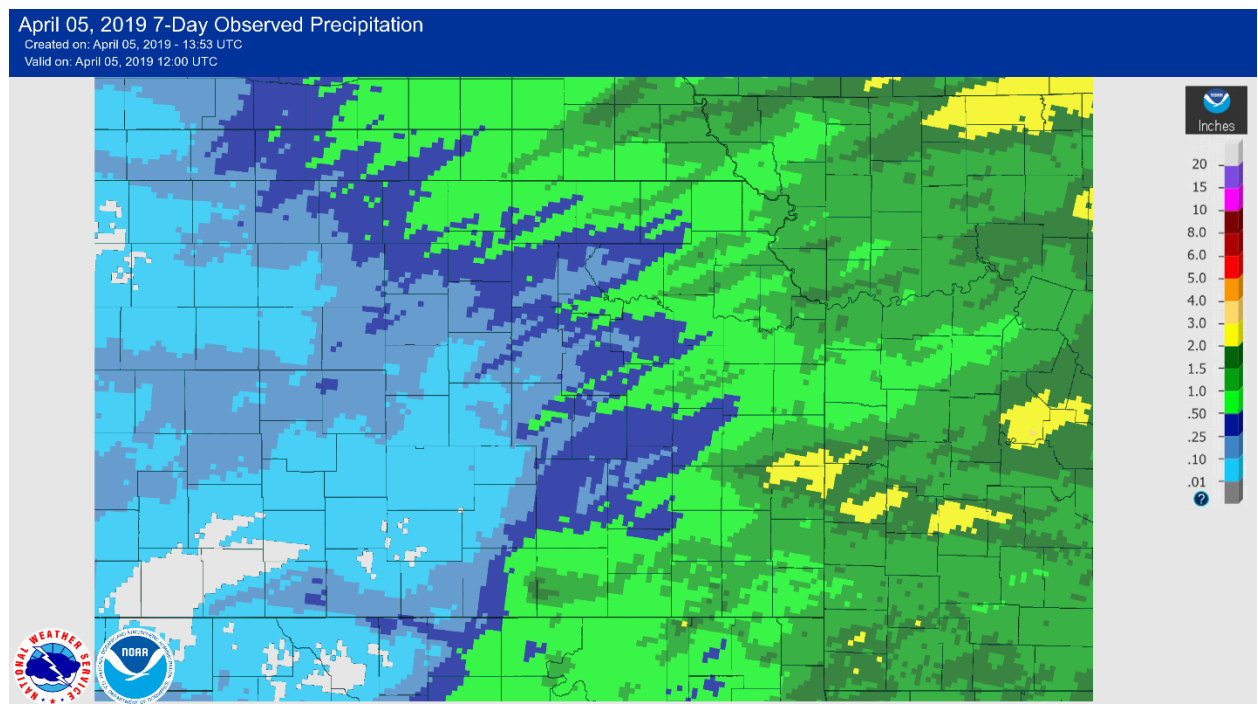




Meteorology

Cloudy skies and periods of showers and thunderstorms were observed across the Flint Hills last Friday (March 29) and Saturday (March 30), especially for the northern Flint Hills where rainfall amounts were more than an inch in many places. Lingering rain and drizzle occurred early Sunday (March 31) before sunny skies returned, temperatures remained cool with highs in the 40s for many, but winds remained light at less than 10 mph. Sunny skies continued Monday (April 1) with temperatures in the 50s and south winds 10-25 mph. Winds became variable at less than 10 mph on Tuesday (April 2) with temperatures once again in the 50s under sunny skies. Conditions warmed for Wednesday (April 3) with highs in the 60s and southeast winds 10-25 mph with gusts up to 35 mph. Winds calmed for Thursday (April 4), but skies were mostly cloudy with periods of showers for eastern Kansas early. Clearing did occur by late Thursday as winds remained calm and temperatures hovered near 60 degrees.

Precipitation

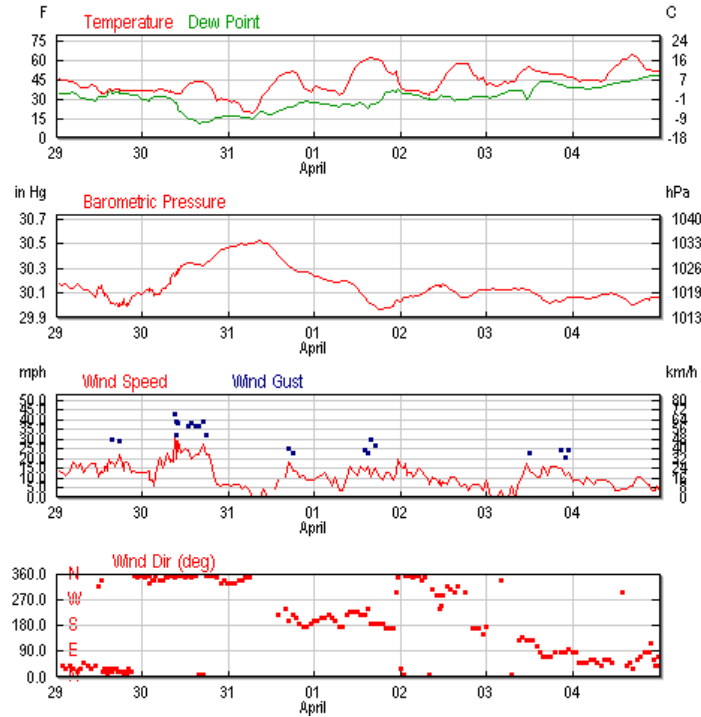


NOAA/NWS Observed Total Precipitation for March 29 – April 4, 2019.

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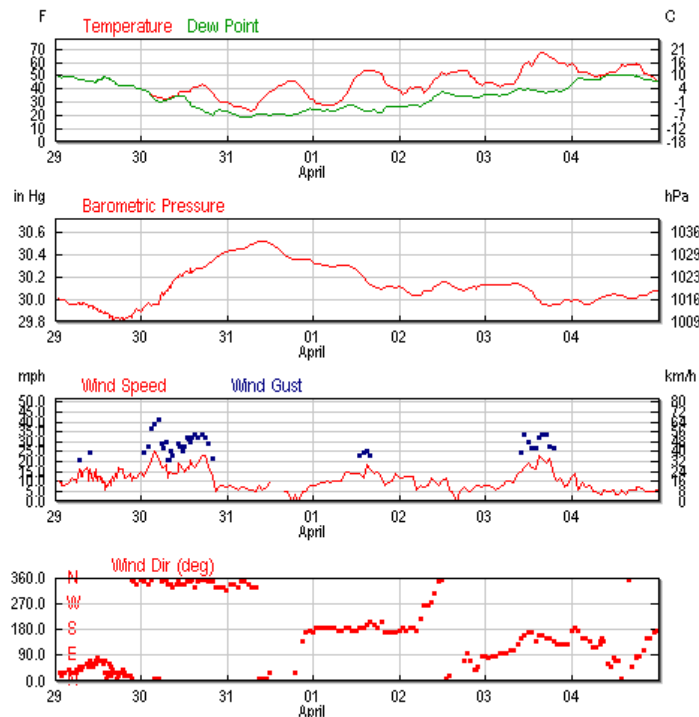


Lincoln, NE



March 29 – April 4, 2019 Observed Weather from KLNK. Graphic: Weather Underground, Inc.

Emporia, KS



March 29 – April 4, 2019 Observed Weather from KEMP. Graphic: Weather Underground, Inc.



Air Quality Data

Air quality data for the period of March 29 – April 4, 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.

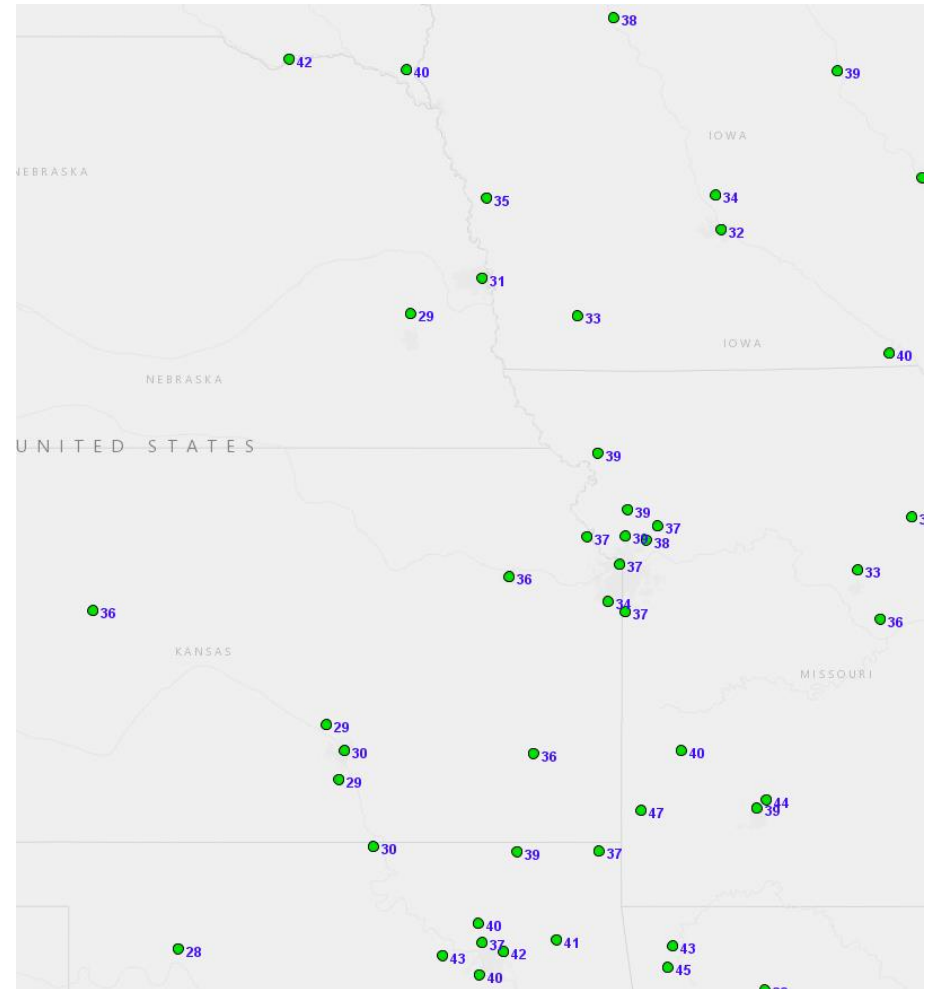
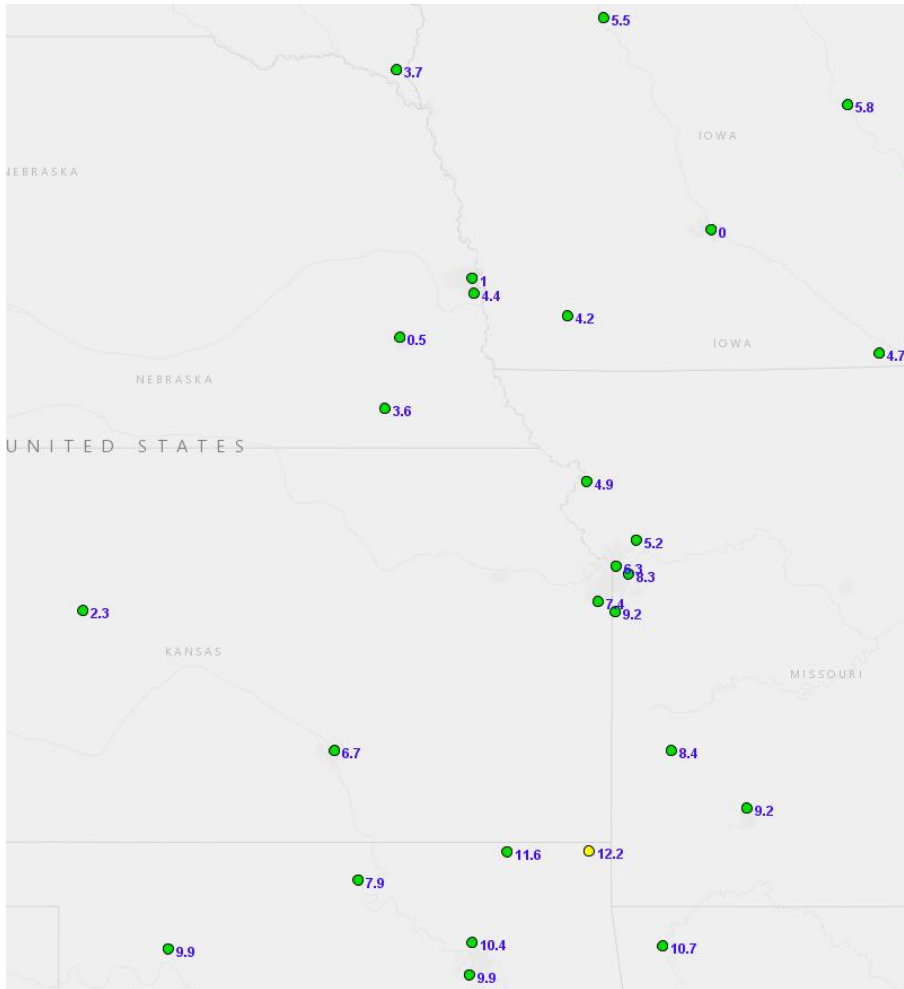
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Friday, March 29, 2019

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



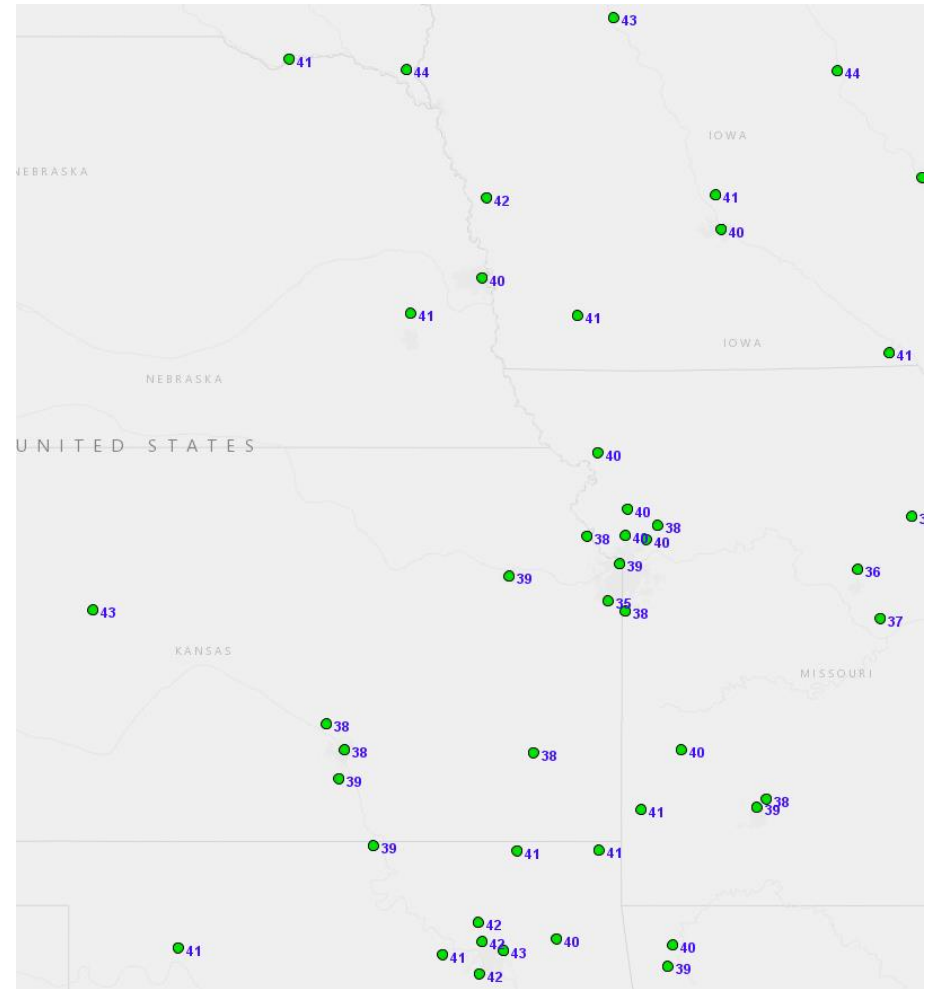
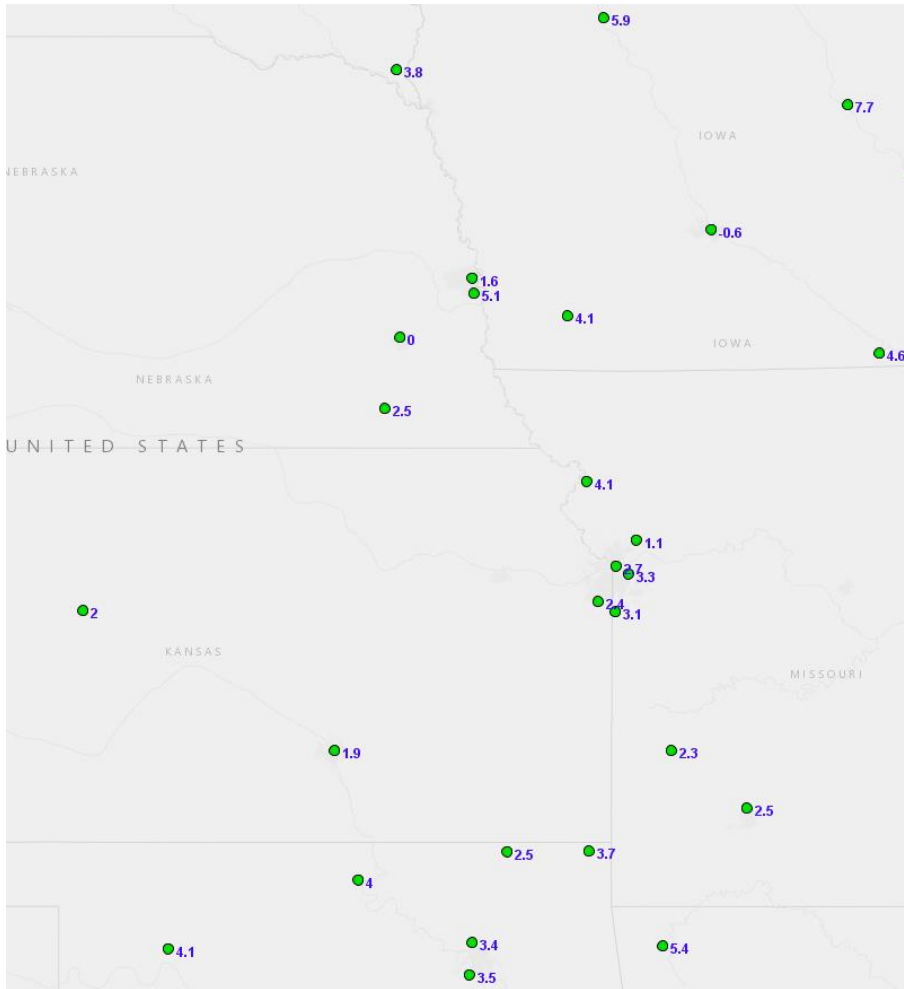
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Saturday, March 30, 2019

PM2.5 (24-hour average)

Ozone (8-hour average maximum)

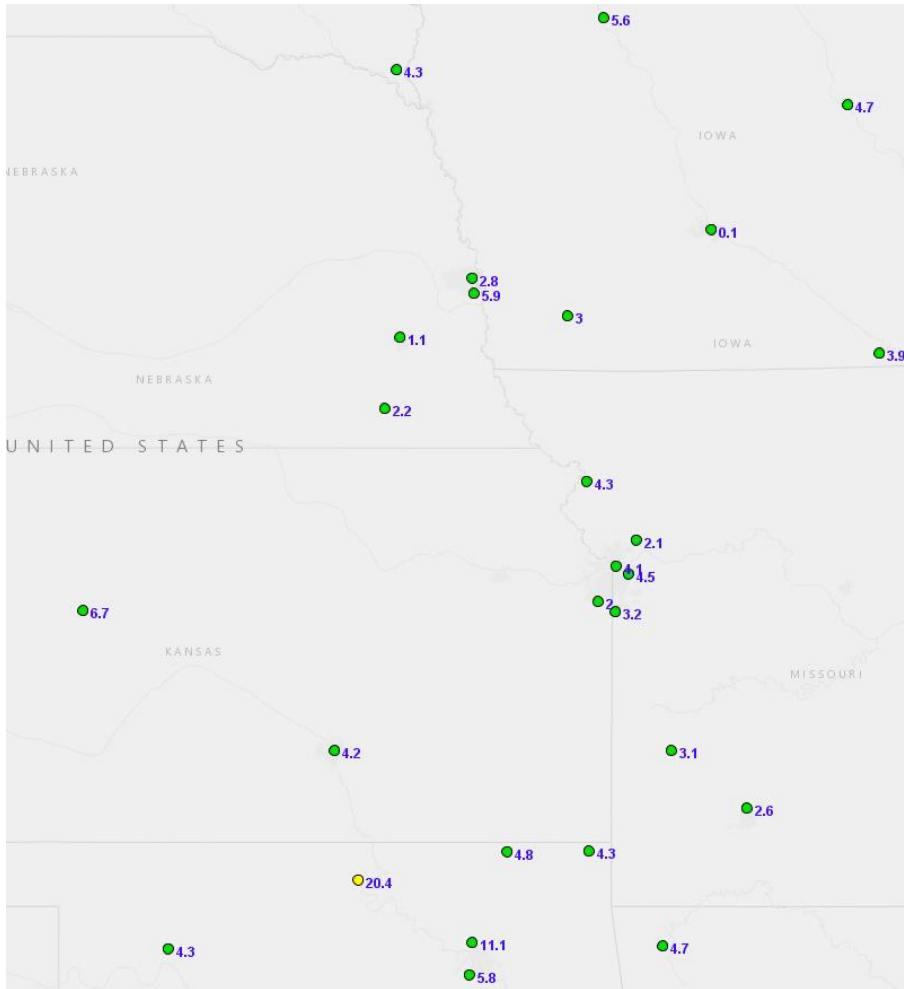


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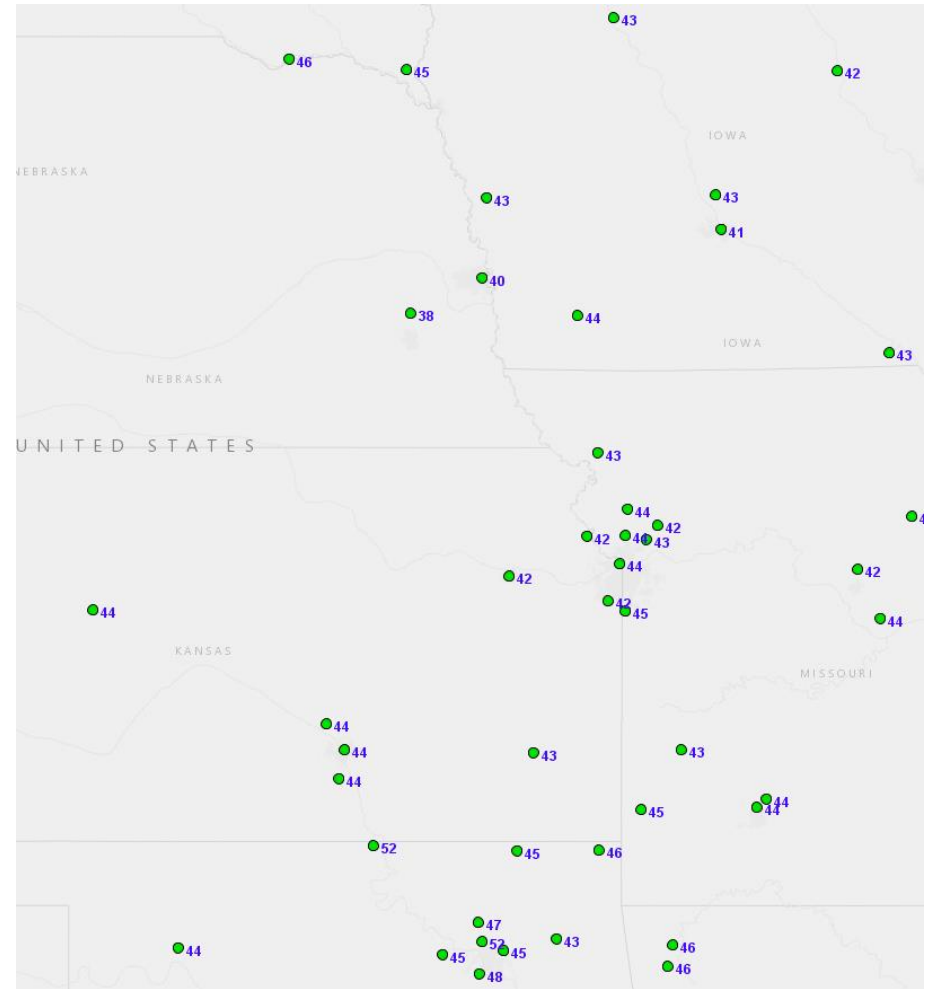


Sunday, March 31, 2019

PM2.5 (24-hour average)



Ozone (8-hour average maximum)



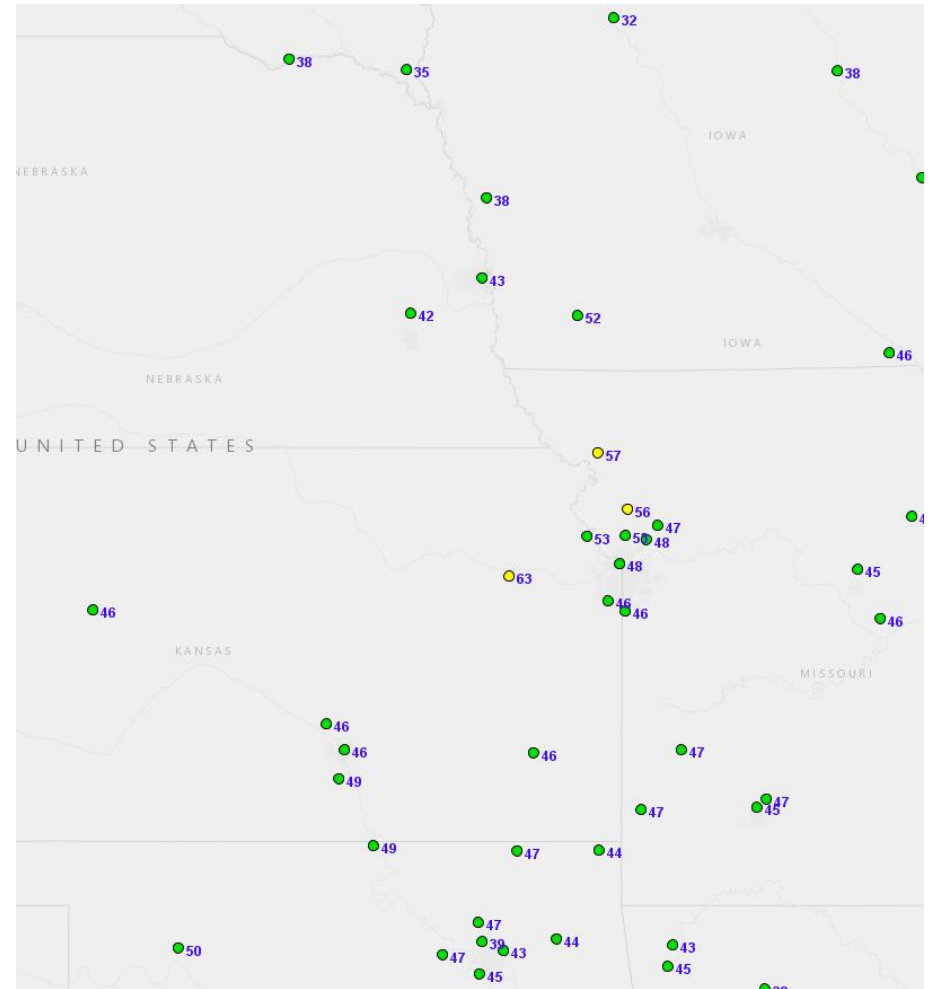
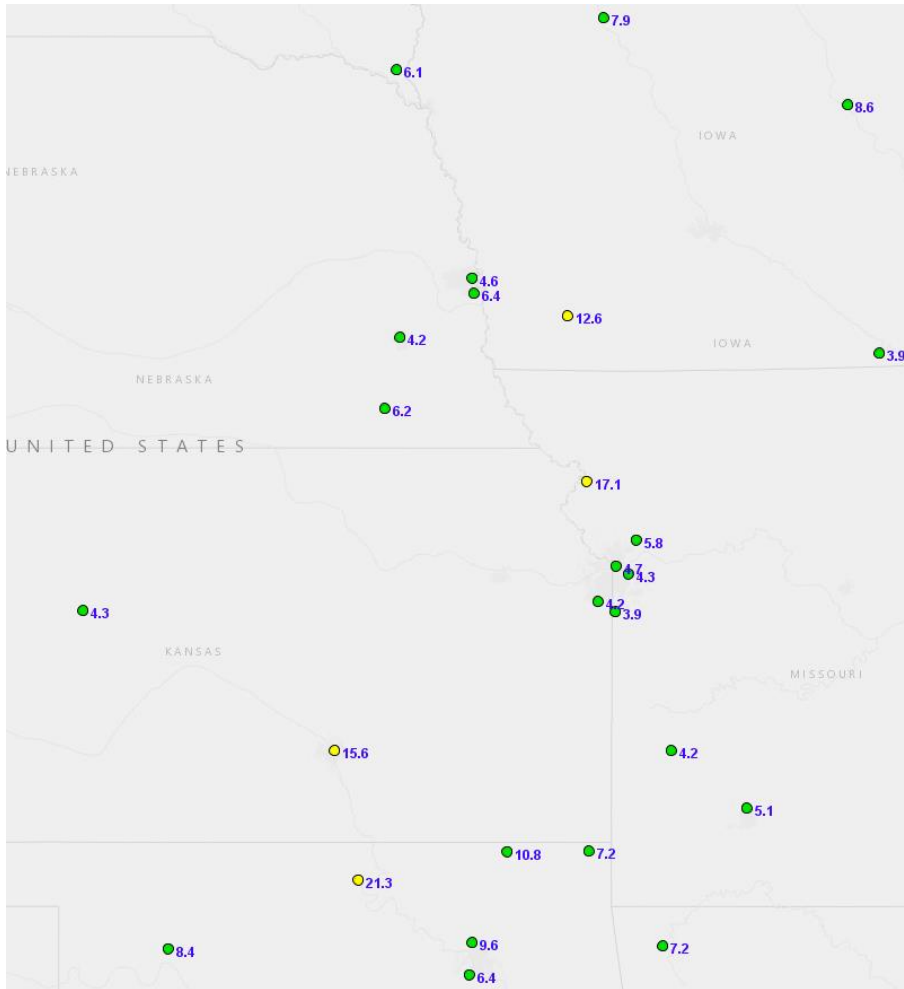
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Monday, April 1, 2019

PM2.5 (24-hour average)

Ozone (8-hour average maximum)

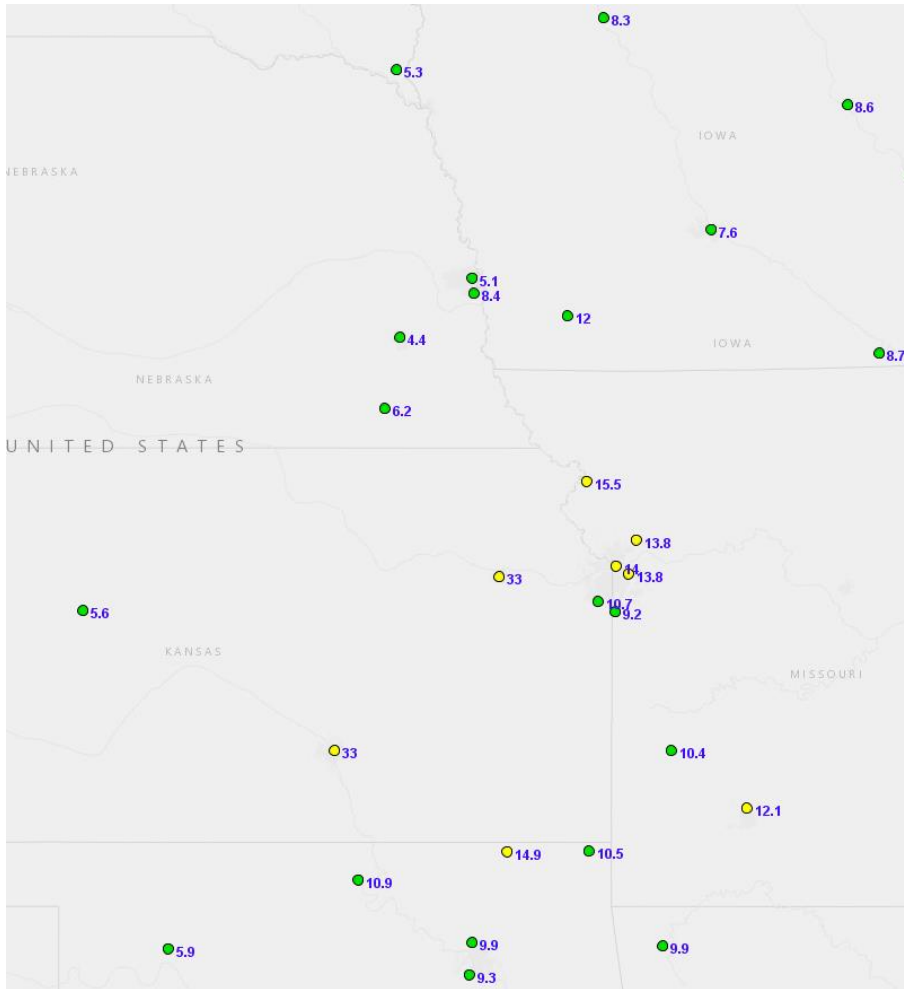


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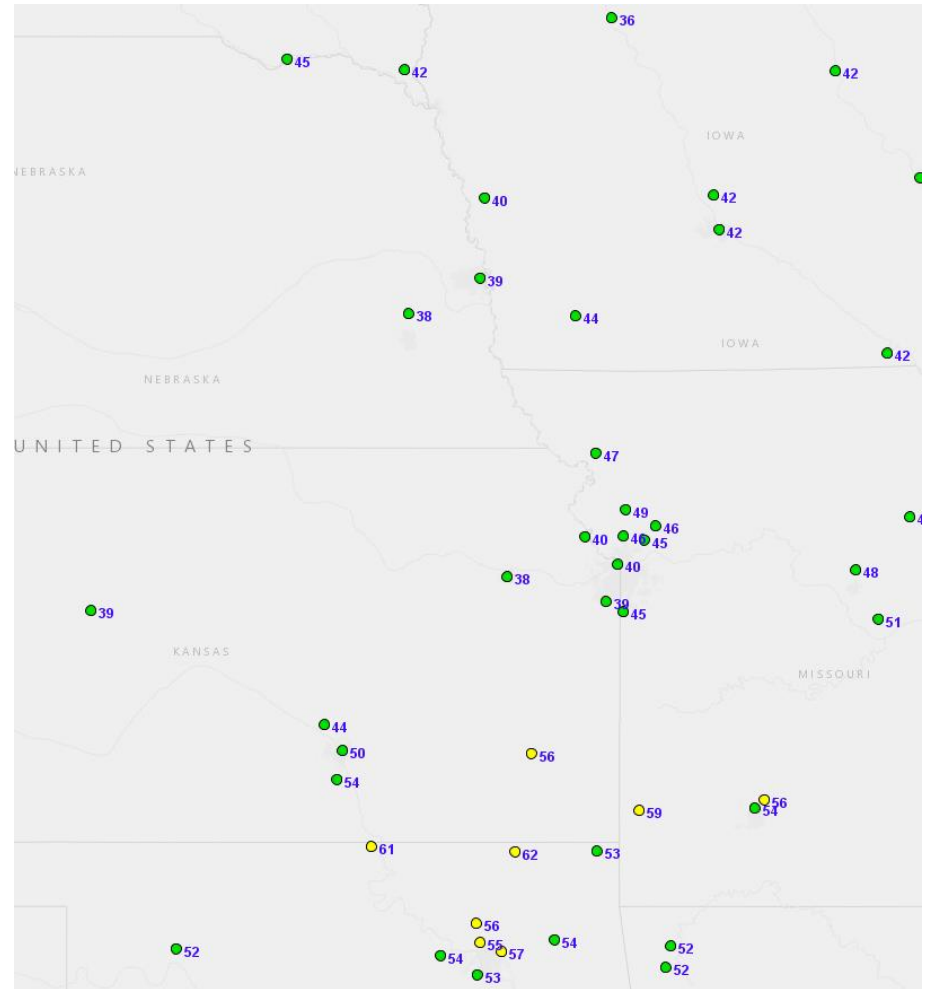


Tuesday, April 2, 2019

PM2.5 (24-hour average)



Ozone (8-hour average maximum)



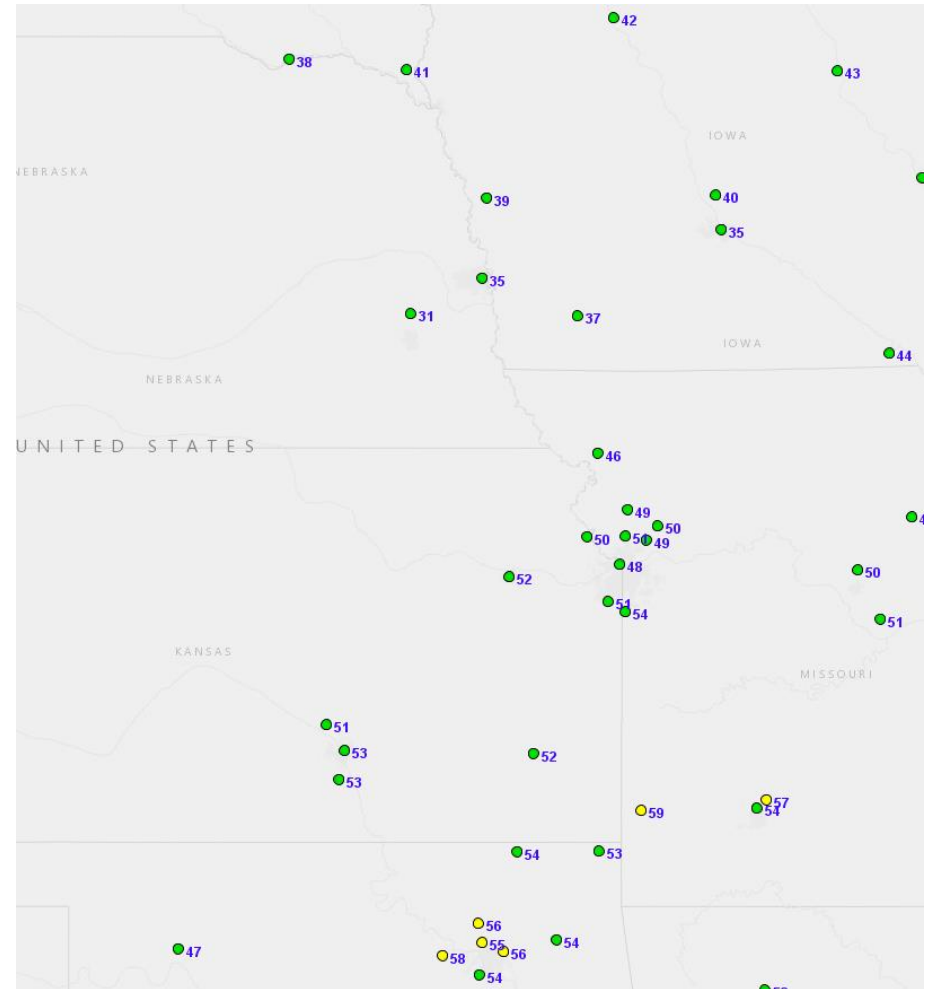
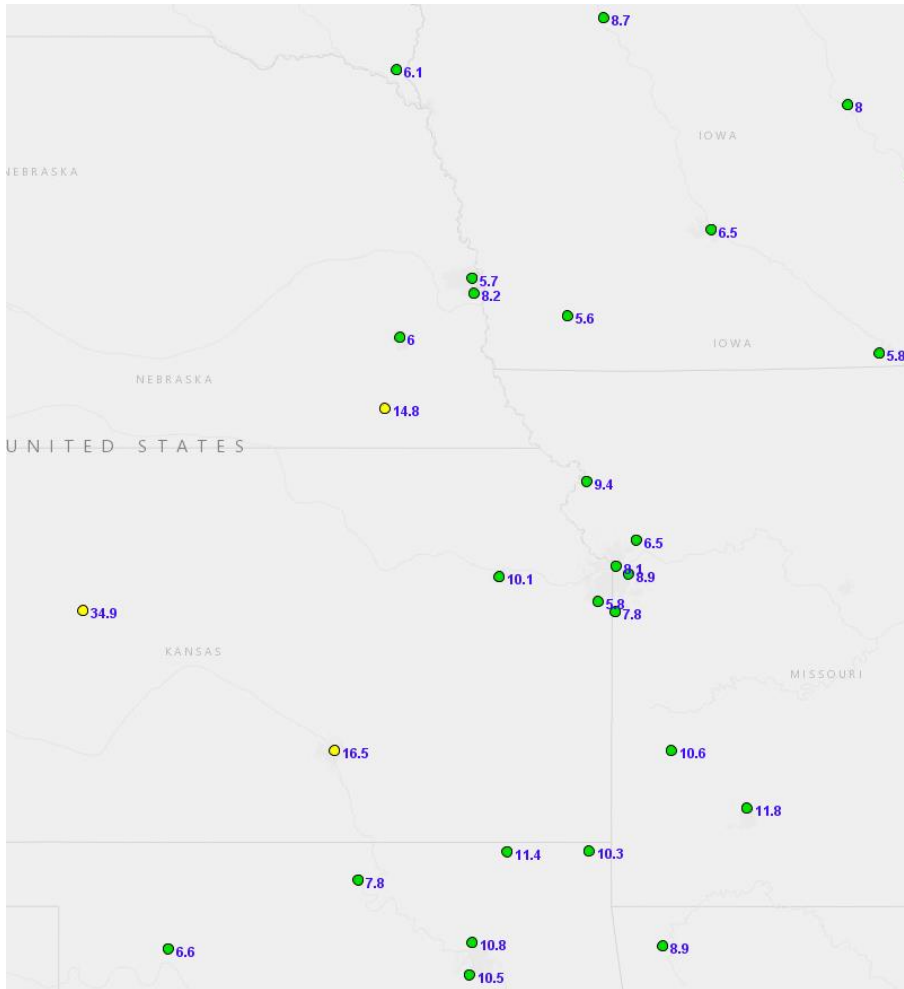
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Wednesday, April 3, 2019

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



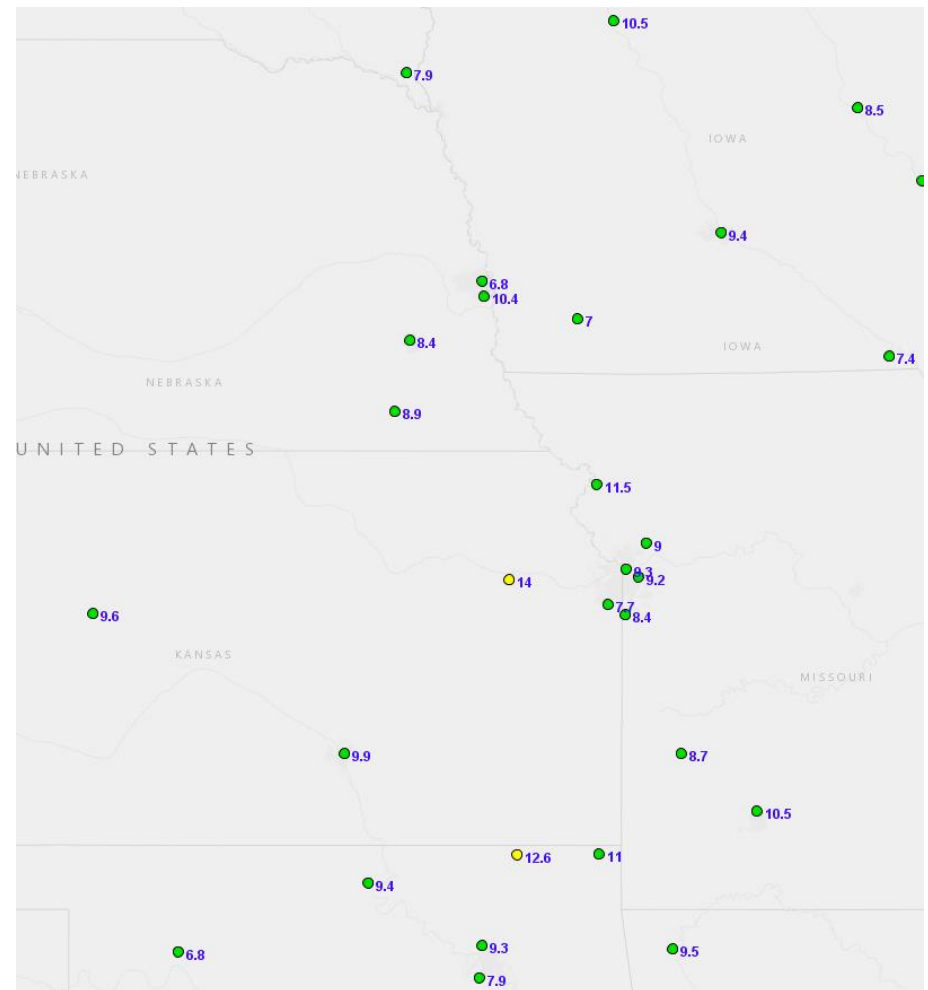
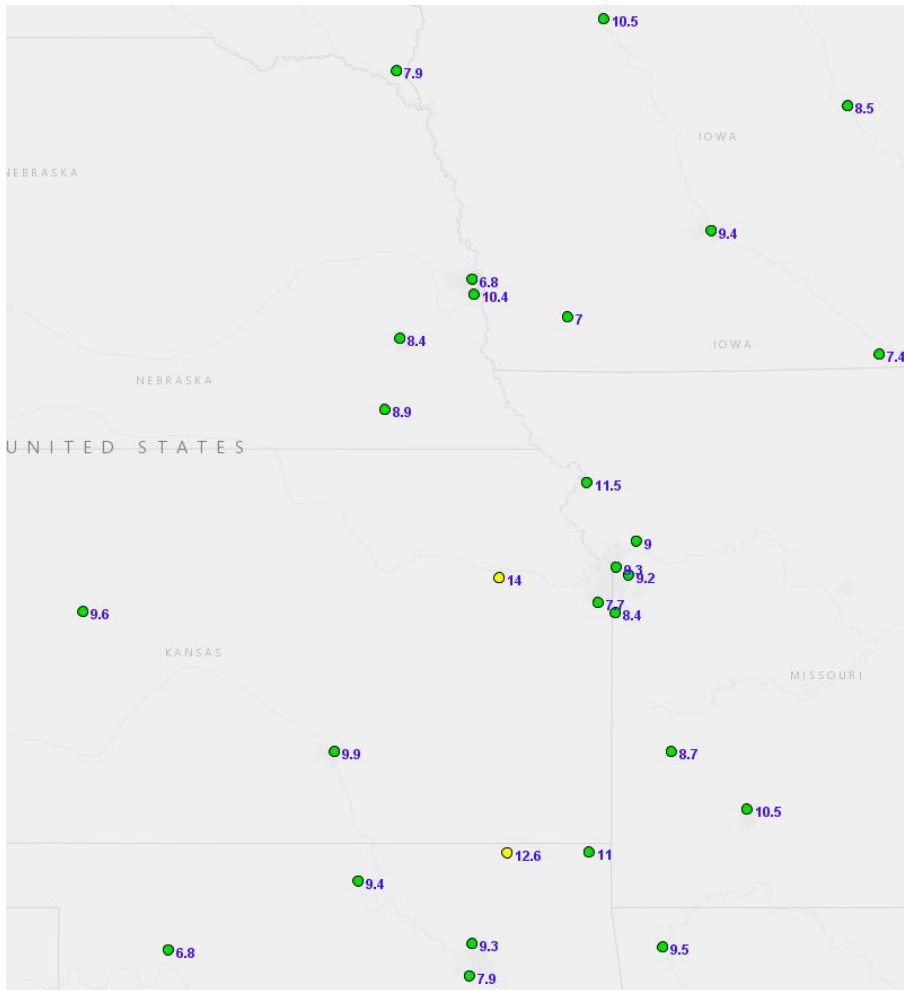
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Thursday, April 4, 2019

PM2.5 (24-hour average)

Ozone (8-hour average maximum)





Fires and Smoke

Cloudy skies and periods of rain showers and thunderstorms inhibited burning nearly entirely on Friday and Saturday (March 29-30). Skies cleared on Sunday (March 31) and despite cooler temperatures a fair amount of burning was observed. Light winds and limited mixing kept a lot of the smoke impacts local on Sunday. Temperatures warmed a bit for Monday (April 1) with winds becoming south-southwest, and a good amount of burning was observed. Smoke was widely observed across eastern Kansas with the strong winds and only partly sunny skies seemingly limited vertical mixing keeping much of the smoke near the surface. Smoke from Sunday and Monday was pushed to the east on Tuesday (April 2) as a weak cold front shifted the winds.

Additional burning on Tuesday saw smoke impacts continue within primarily the Flint Hills as winds were light and variable. Gusty winds limited burning on Wednesday (April 3) for much of the Flint Hills and cloudy skies with periods of rain also limited burning on Thursday (April 4). Smoke impacts were observed Wednesday across central and western Kansas, and likely into western and central Nebraska as winds veered from northeast, to east, then to south from Tuesday through the day on Wednesday. Any smoke impacts were limited for Thursday due to the occasional rain and limited burning.

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

KSFIRE.ORG

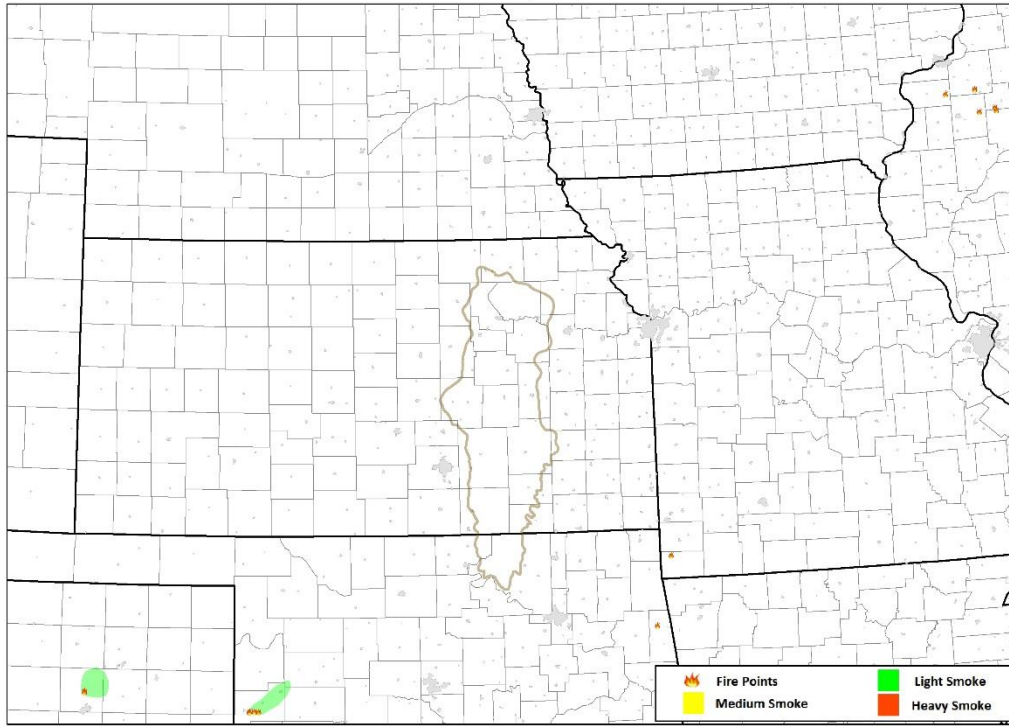


This website was developed as part of the development of the Kansas Flint Hills Smoke Management Plan. Kansas State University hosts the webpage and it includes important information for ranchers and others who might be interested in the Flint Hills. It provides training, regulations, policies, publications,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

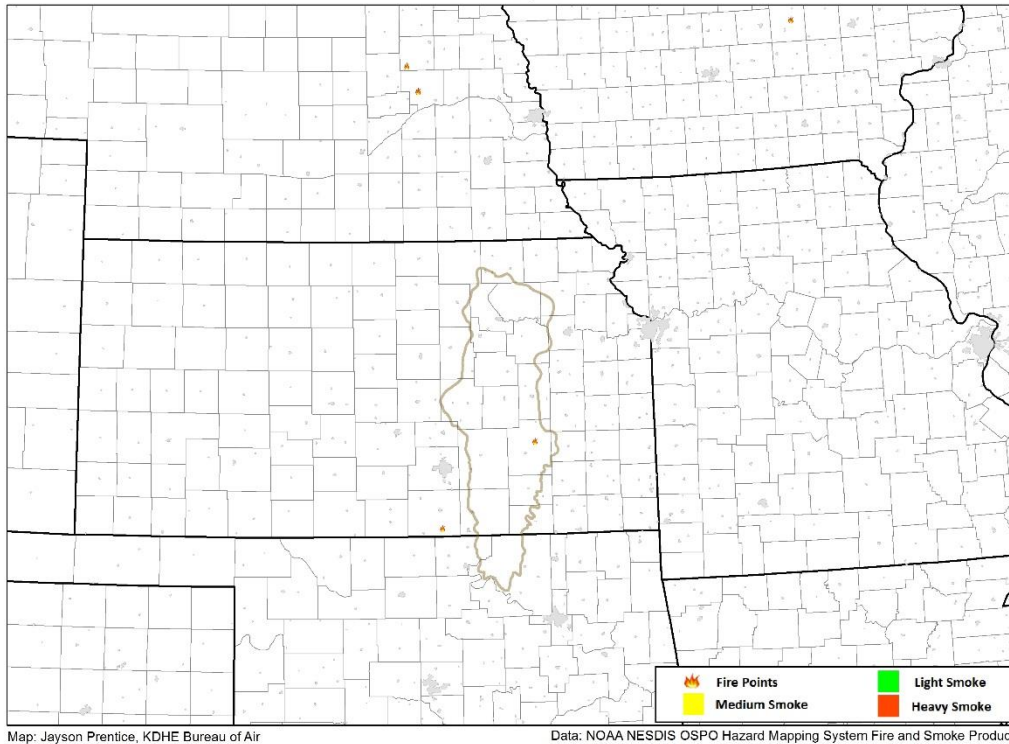
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HMS Fire & Smoke Analysis March 29, 2019



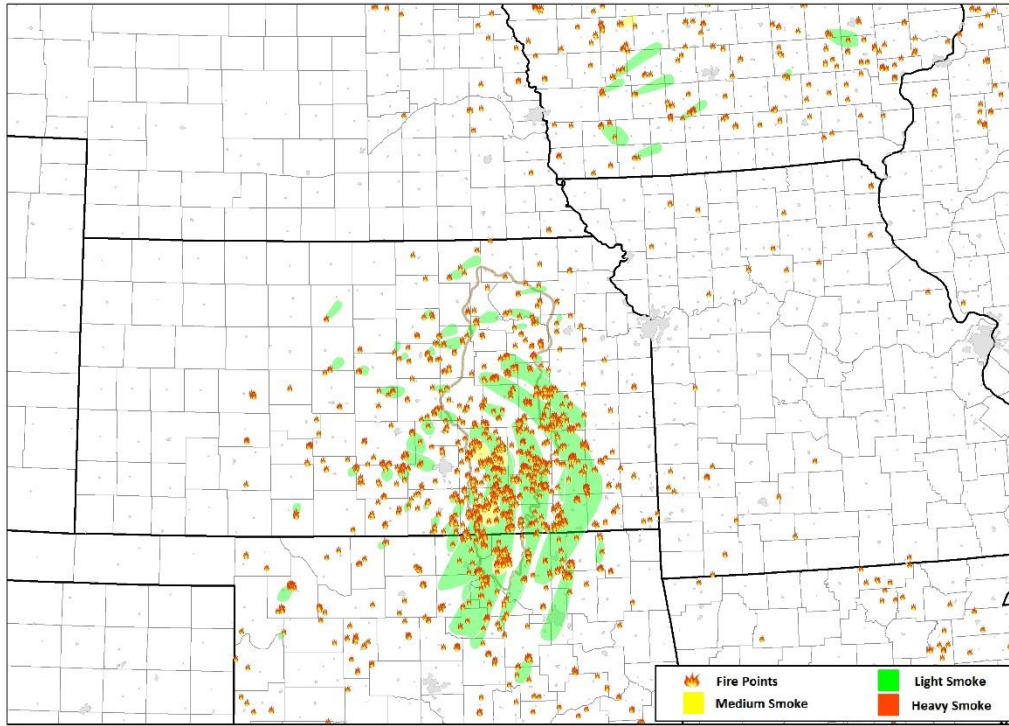
HMS Fire & Smoke Analysis March 30, 2019



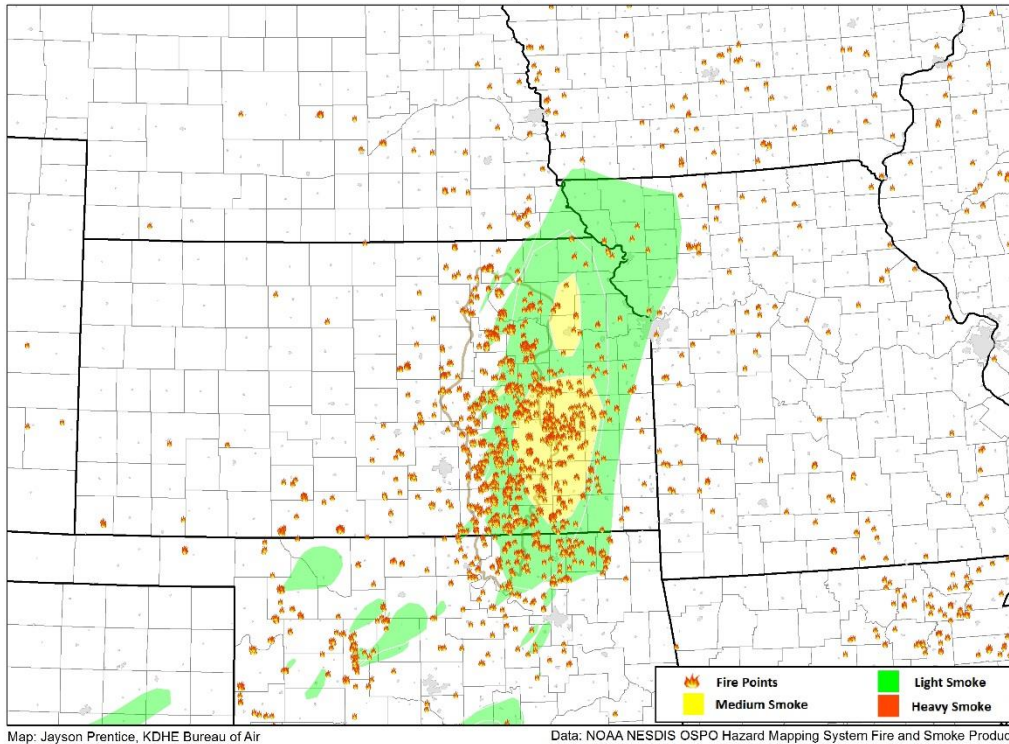
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HMS Fire & Smoke Analysis March 31, 2019



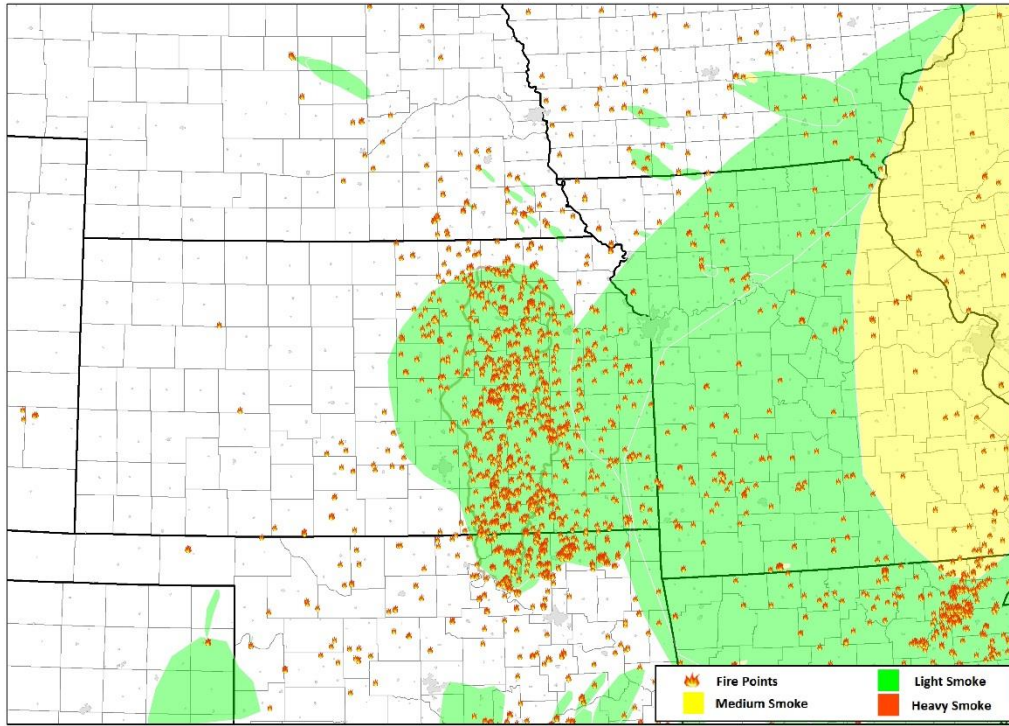
HMS Fire & Smoke Analysis April 01, 2019



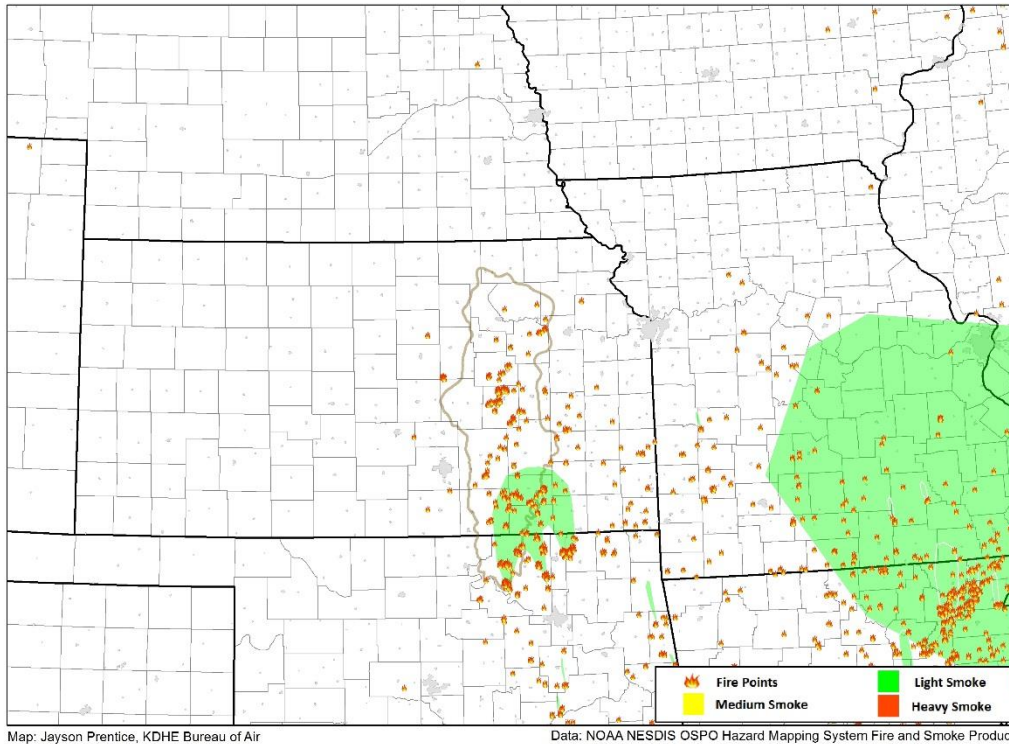
Flint Hills Prescribed Fire Update



HMS Fire & Smoke Analysis April 02, 2019



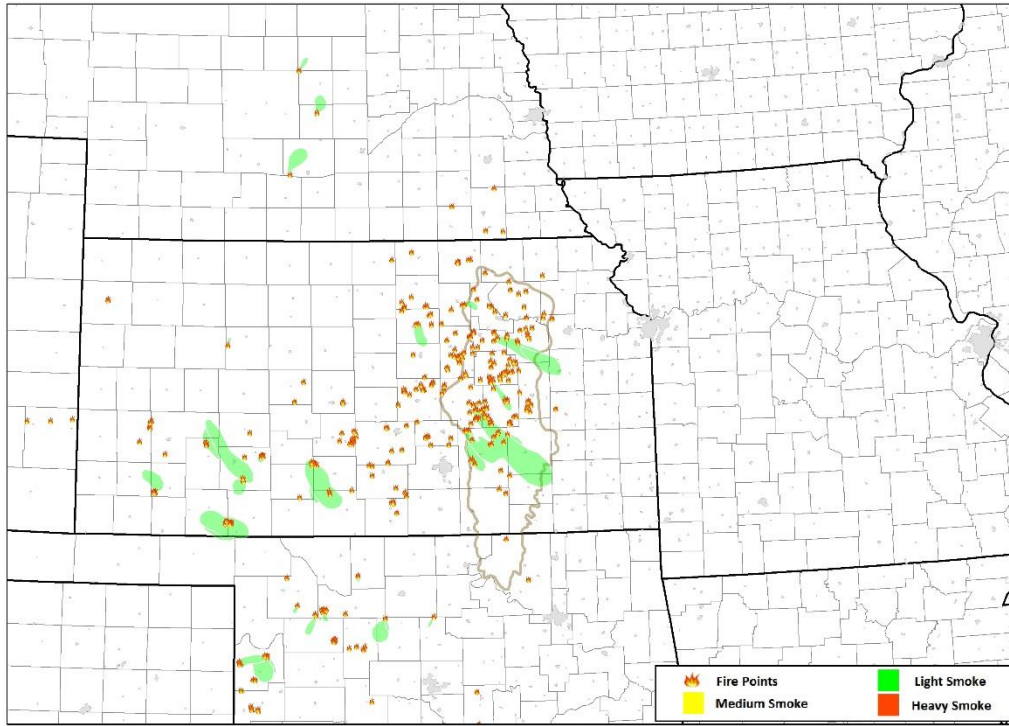
HMS Fire & Smoke Analysis April 03, 2019



Flint Hills Prescribed Fire Update



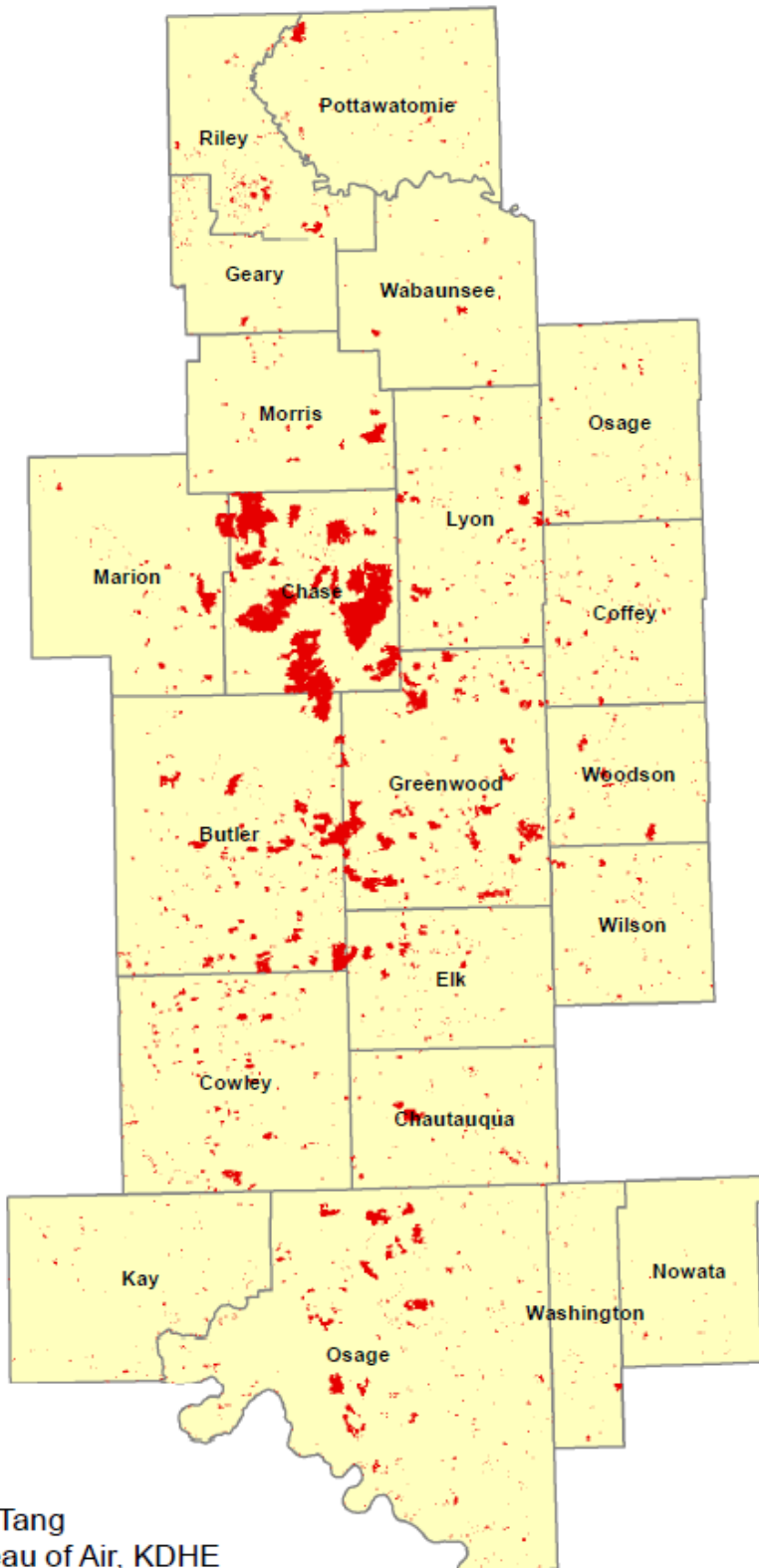
HMS Fire & Smoke Analysis April 04, 2019



Flint Hills Prescribed Fire Update



Flint Hills Acreage Burned (March 15 - March 31, 2019)



<u>Counties</u>	<u>Acres Burned</u>
Butler	52,882
Chase	144,266
Chautauqua	7,908
Coffey	6,579
Cowley	18,116
Elk	11,491
Geary	2,193
Greenwood	56,573
Lyon	13,267
Marion	13,622
Morris	8,278
Osage (KS)	4,077
Pottawatomie	6,008
Riley	8,139
Wabaunsee	3,212
Wilson	4,433
Woodson	5,622
Nowata (OK)	803
Osage (OK)	40,557
Washington (OK)	2,085
Kay (OK)	2,965
Total	413,076
<i>* Denotes county was partly or completely covered by clouds during latest analysis.</i>	

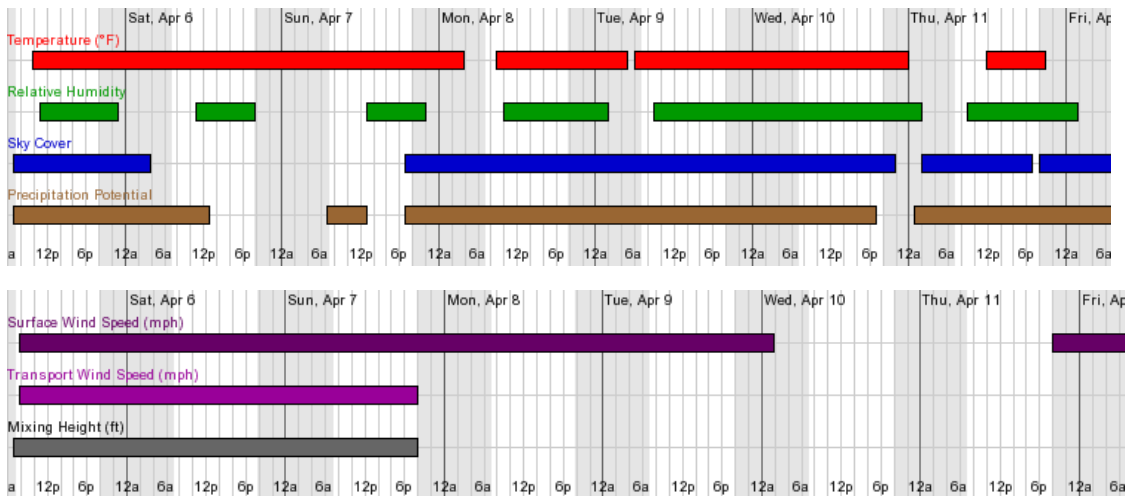
Yao Tang
Bureau of Air, KDHE



Upcoming Look at Fires and Smoke

Dense fog this morning (Friday, April 5) across the Flint Hills will likely delay any fire activity until this afternoon when the sun returns, and the grasses can dry. Expect ideal conditions for many with light winds, warm temperatures, and reasonable humidity. Cloudy skies and periods of afternoon showers and thunderstorms will likely limit fire potential for Saturday (April 6), and potentially on Sunday (April 7) with a chance of rain remaining in the forecast under otherwise mostly cloudy skies. Monday and Tuesday (April 8-9) are currently forecast to be sunny and warm with lighter winds, and will likely be good burn days for most. The potential for rain returns by late Wednesday, but wind speeds are also expected to increase for Wednesday and Thursday (April 10-11) and may inhibit burning for much of the Flint Hills.

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 5, 2019.

For more information, contact:

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