

Flint Hills Prescribed Fire Update

April 6, 2018

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

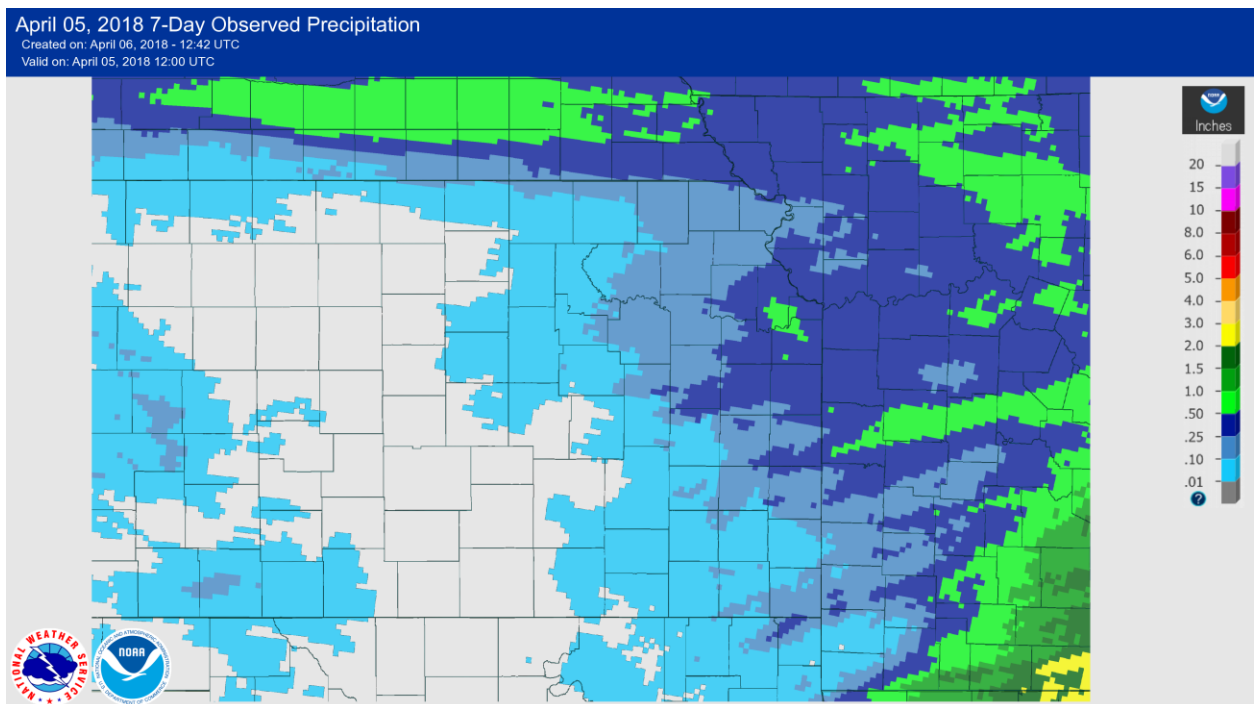




Meteorology

Seasonal temperatures were seen last Friday and Saturday (March 30-31) with only Saturday being breezy with wind gusts up to 35 mph across the Flint Hills. A cold front brought well below normal temperatures to the region on Sunday (April 1) with a mix of rain and snow falling across much of the Flint Hills. Cold temperatures continued for Monday and Tuesday (April 2-3) with windy conditions and some hit and miss light rain and snow on Tuesday. Temperatures began their rebound on Wednesday (April 4) with winds switching from the northwest to the south. A warm and somewhat breezy day was observed Thursday (April 5) as temperatures soared into the 60s and 70s and southerly winds gusted to near 25 mph.

Precipitation

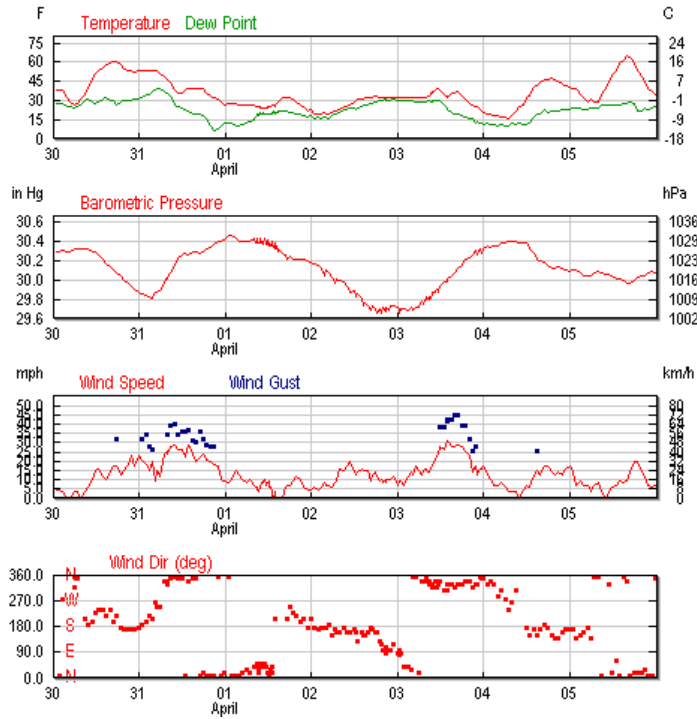


NOAA/NWS Observed Total Precipitation for March 30-April 5, 2018.

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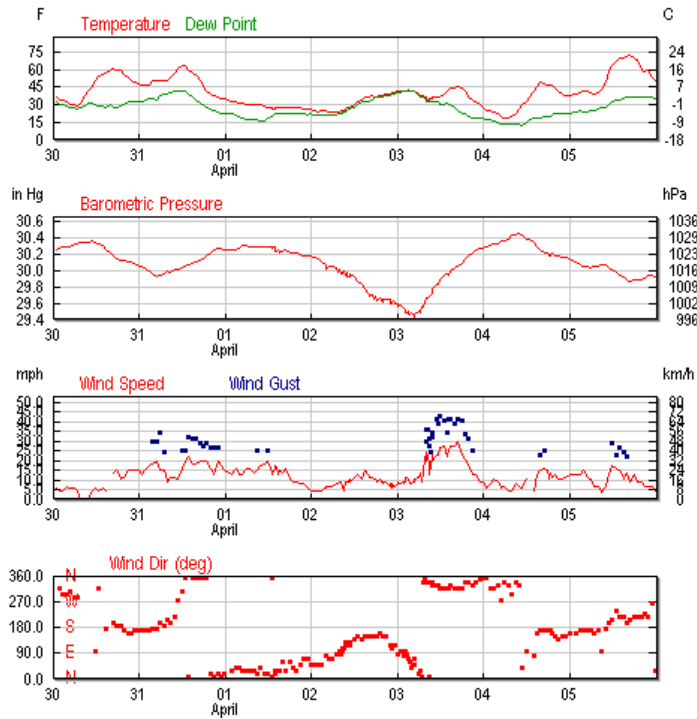


Lincoln, NE



March 30-April 5, 2018 Observed Weather from KLNK. Graphic: Weather Underground, Inc.

Emporia, KS



March 30-April 5, 2018 Observed Weather from KEMP. Graphic: Weather Underground, Inc.



Air Quality Data

Air quality data for the period of March 30-April 5, 2018:

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

PM2.5: Preliminary data indicates no exceedances of the NAAQS 24-hour daily 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.

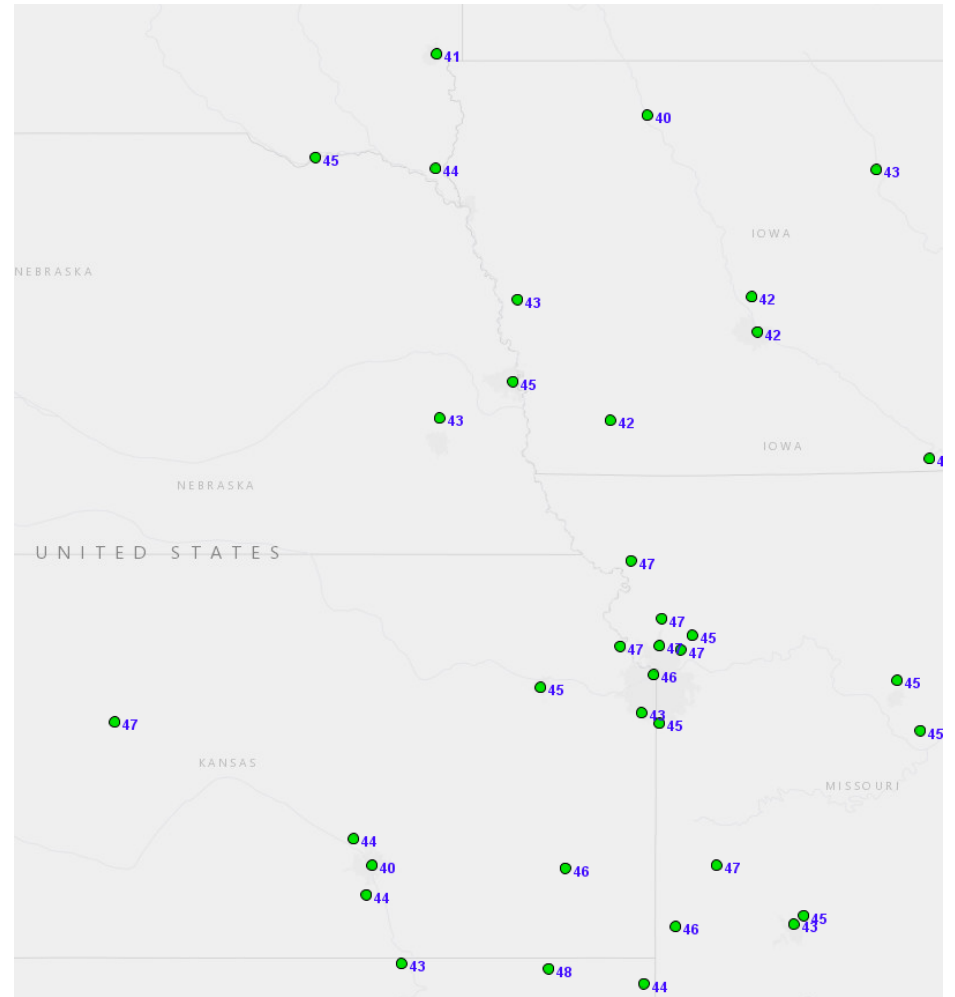
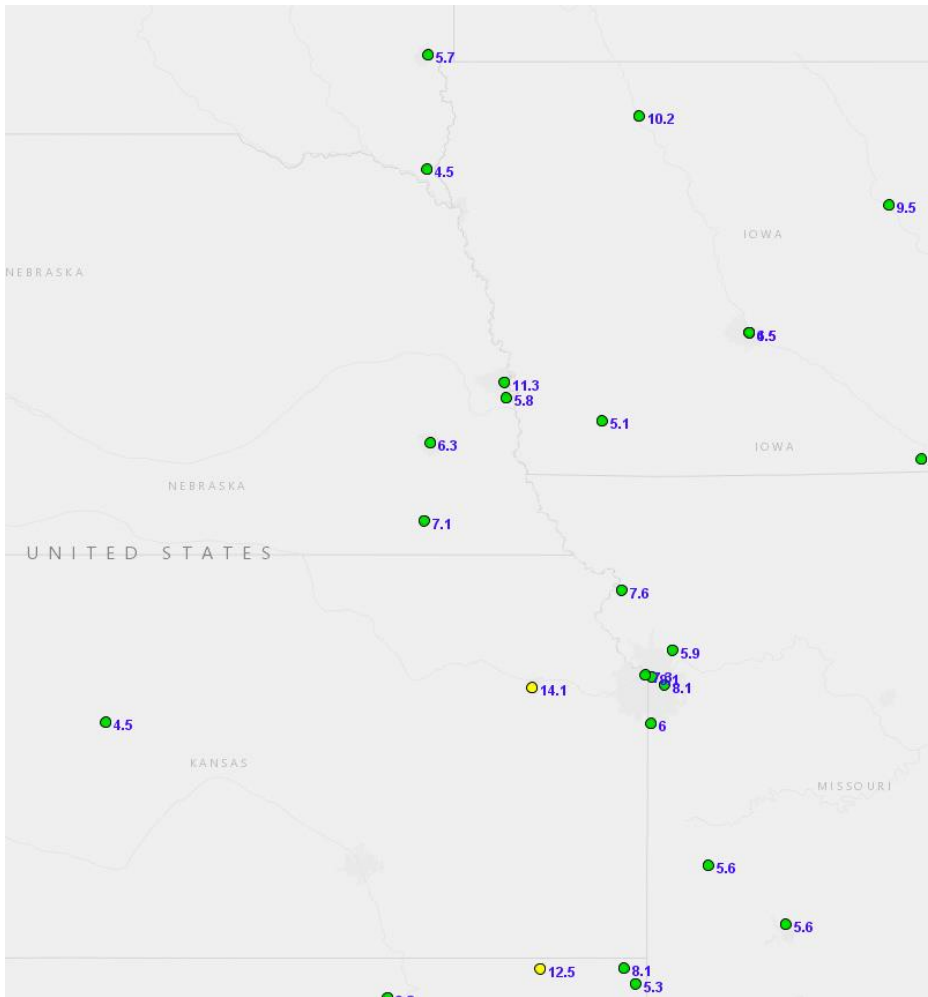
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Friday, March 30, 2018

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



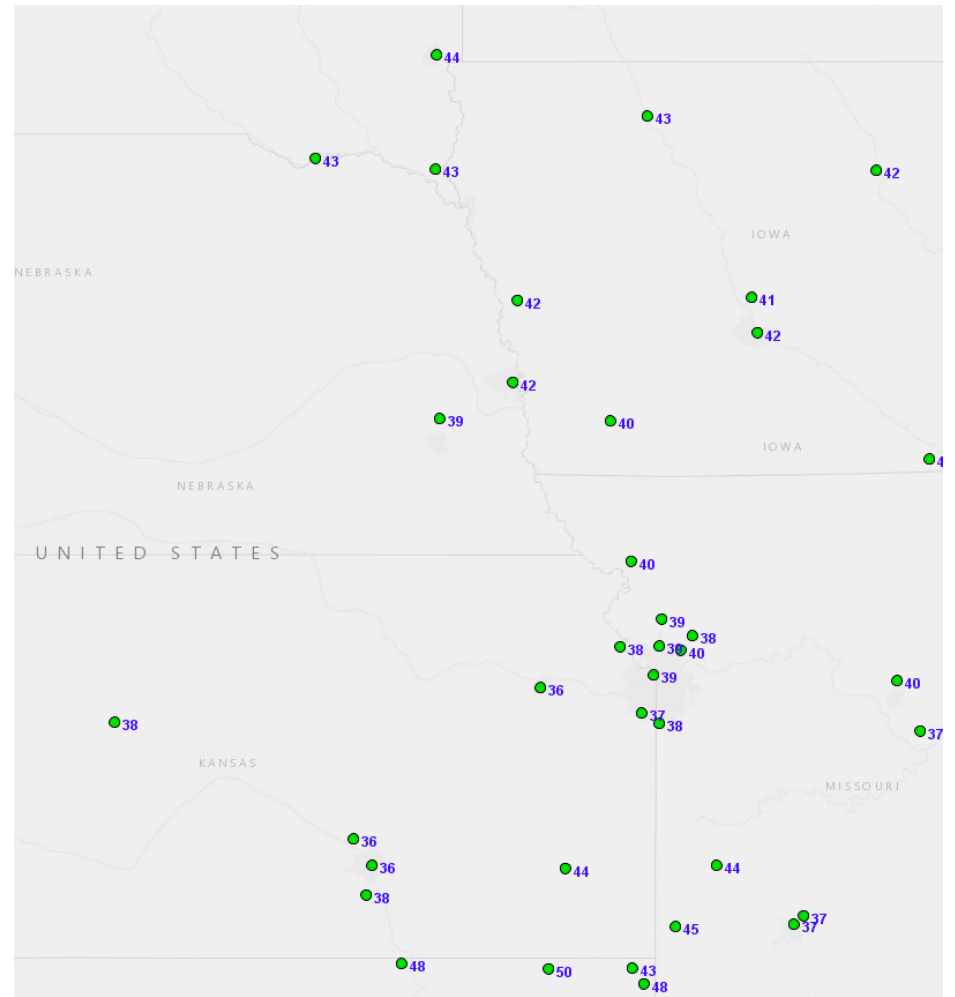
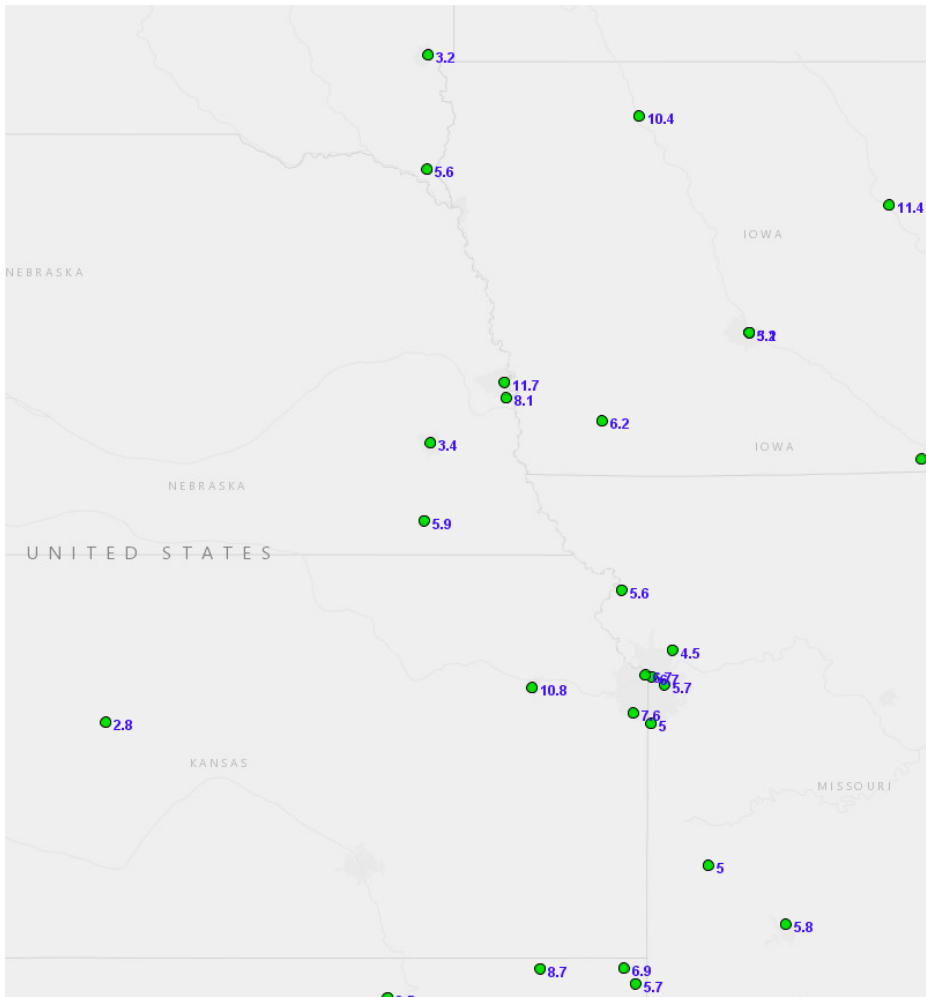
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Saturday, March 31, 2018

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



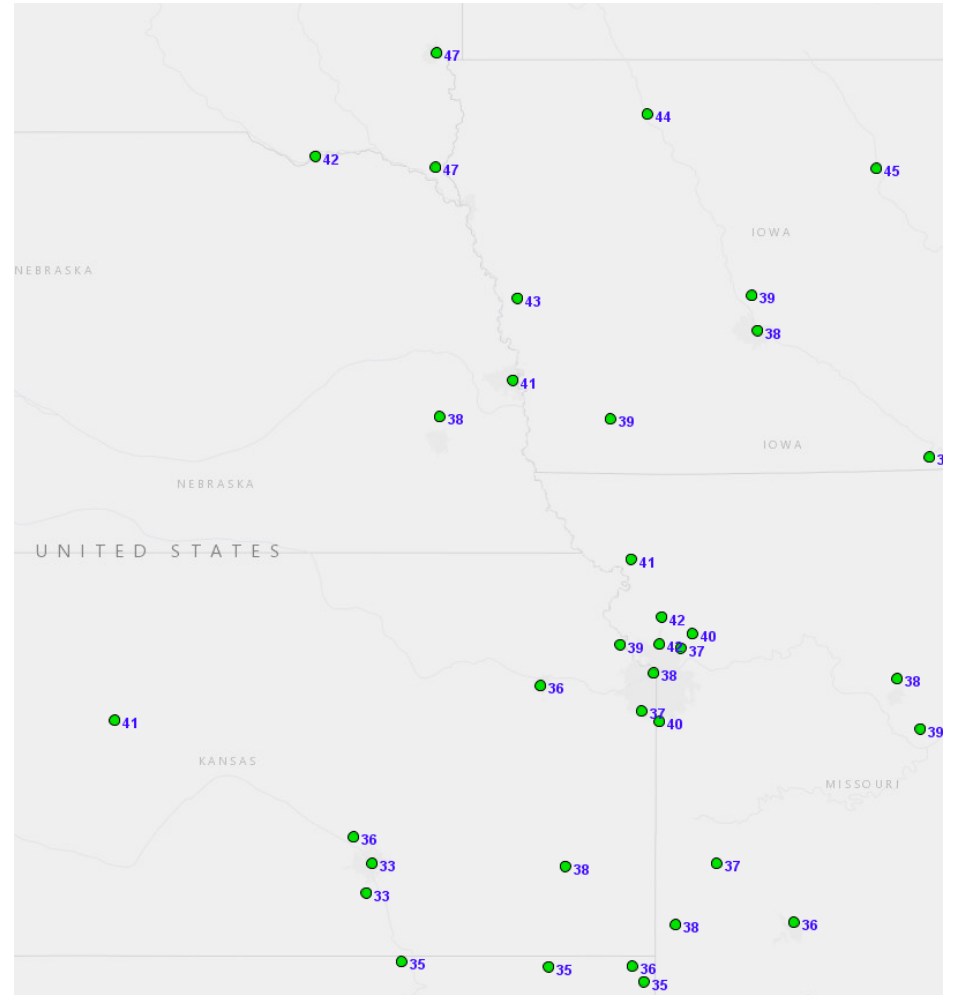
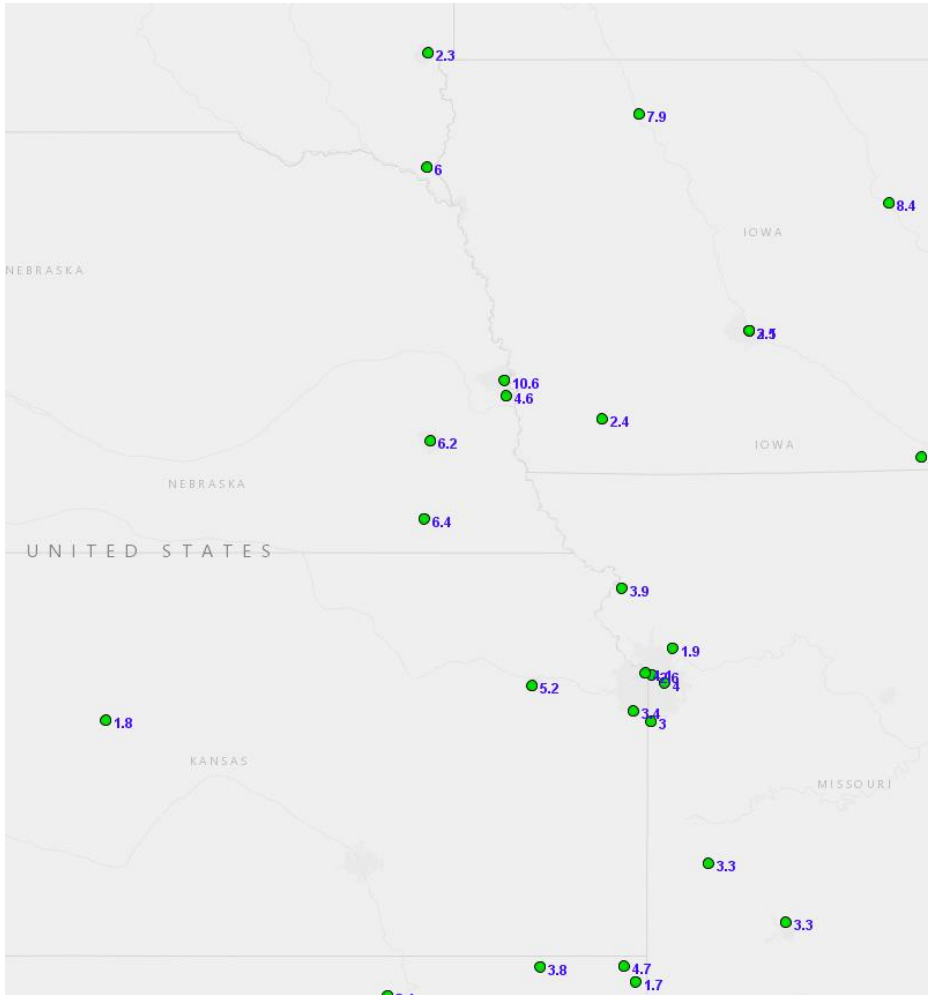
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Sunday, April 1, 2018

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



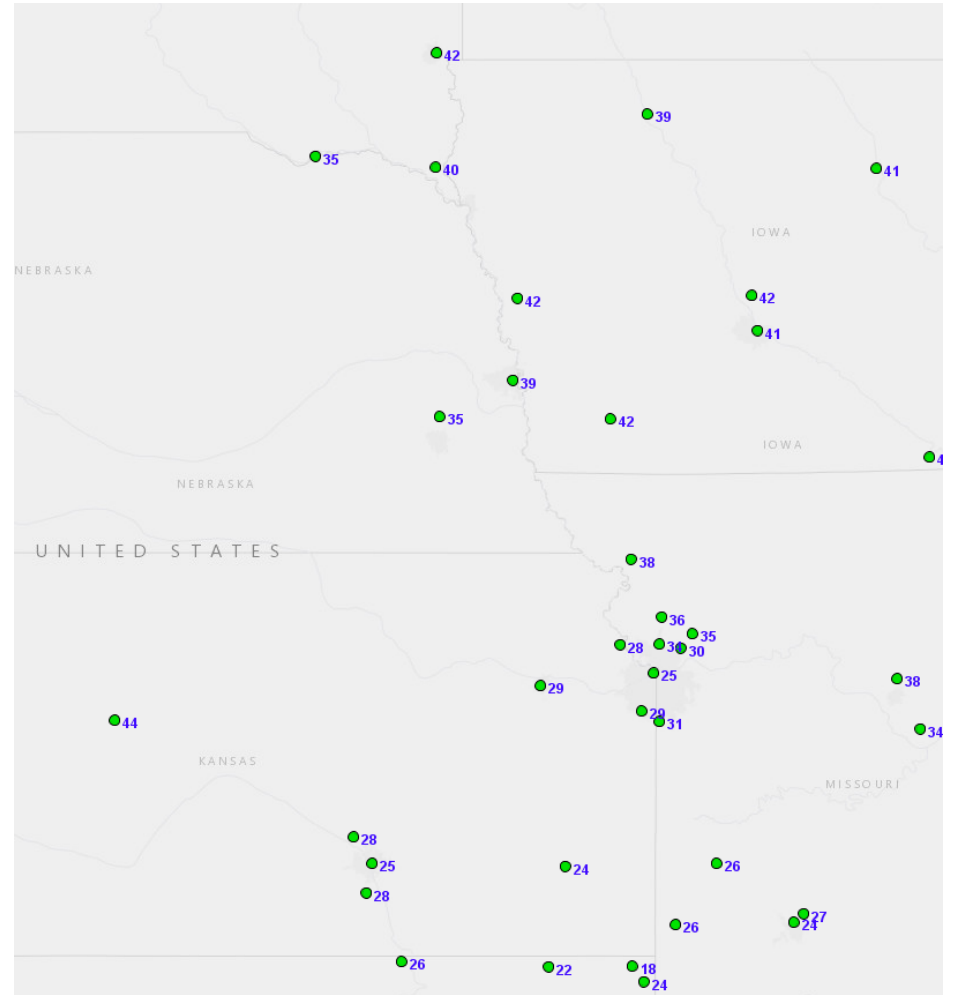
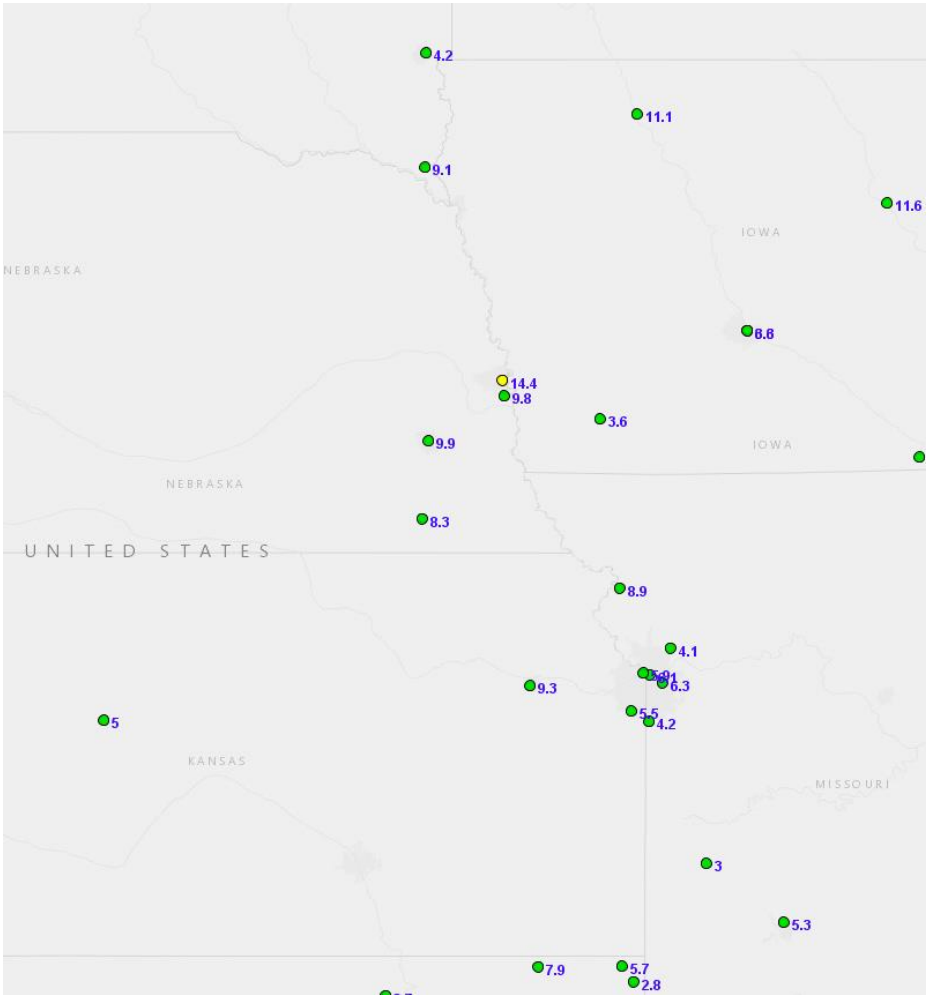
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Monday, April 2, 2018

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



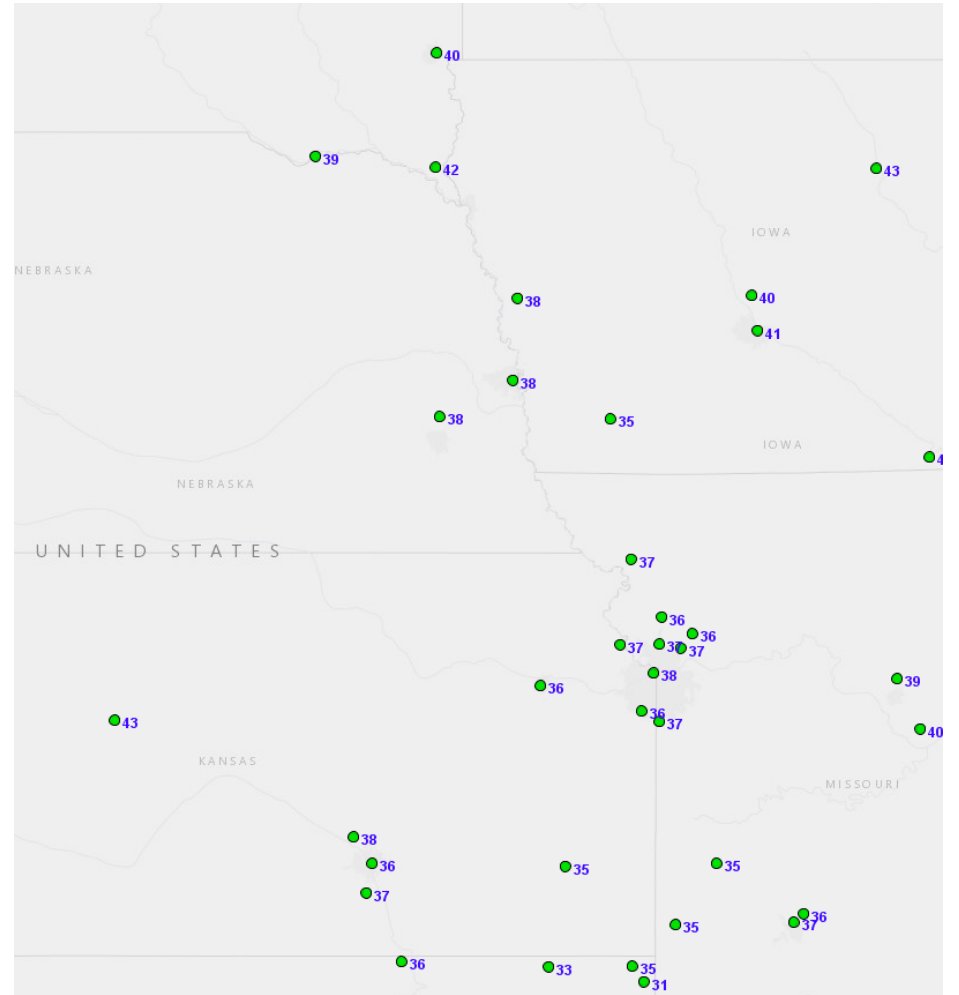
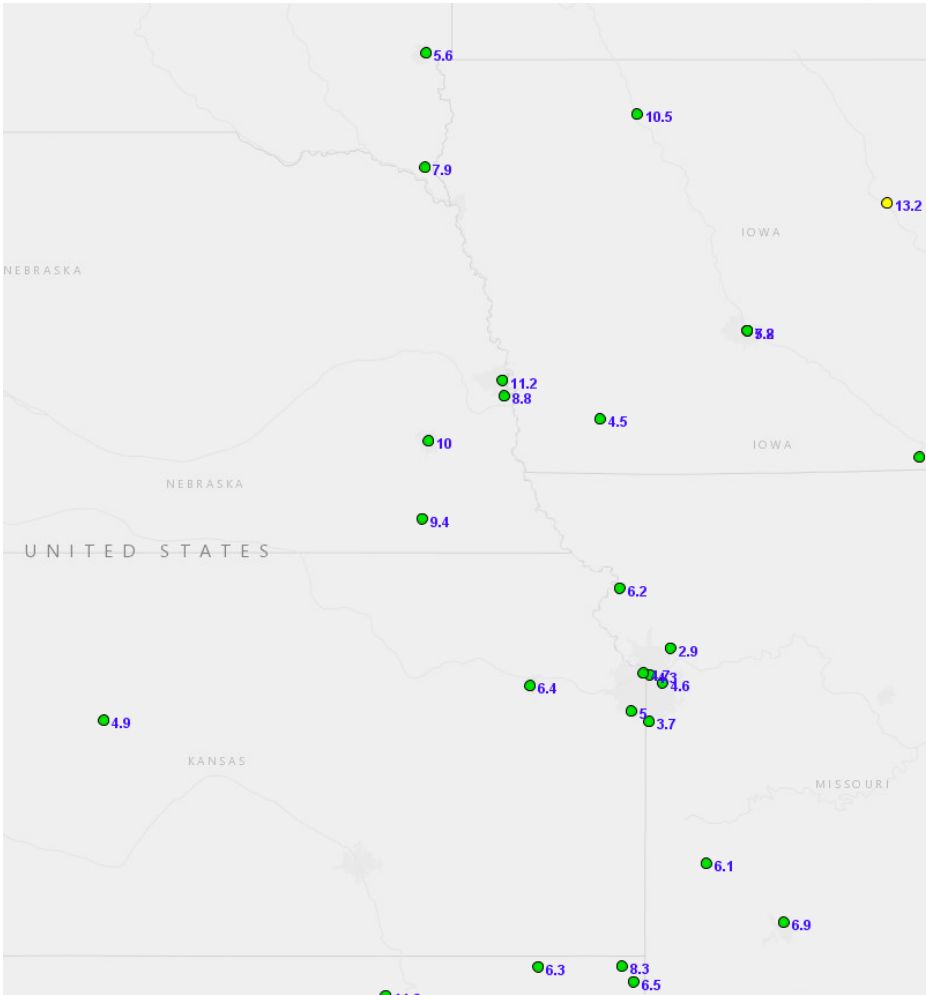
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Tuesday, April 3, 2018

PM2.5 (24-hour average)

Ozone (8-hour average maximum)

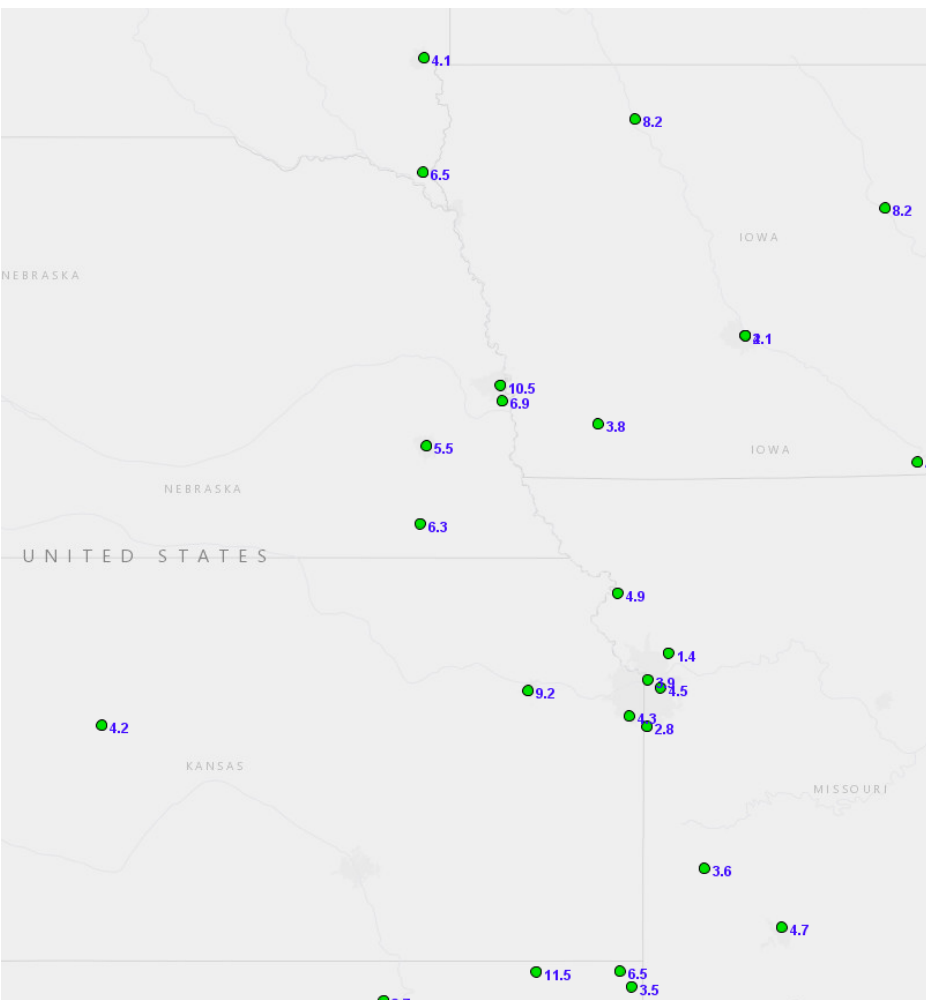


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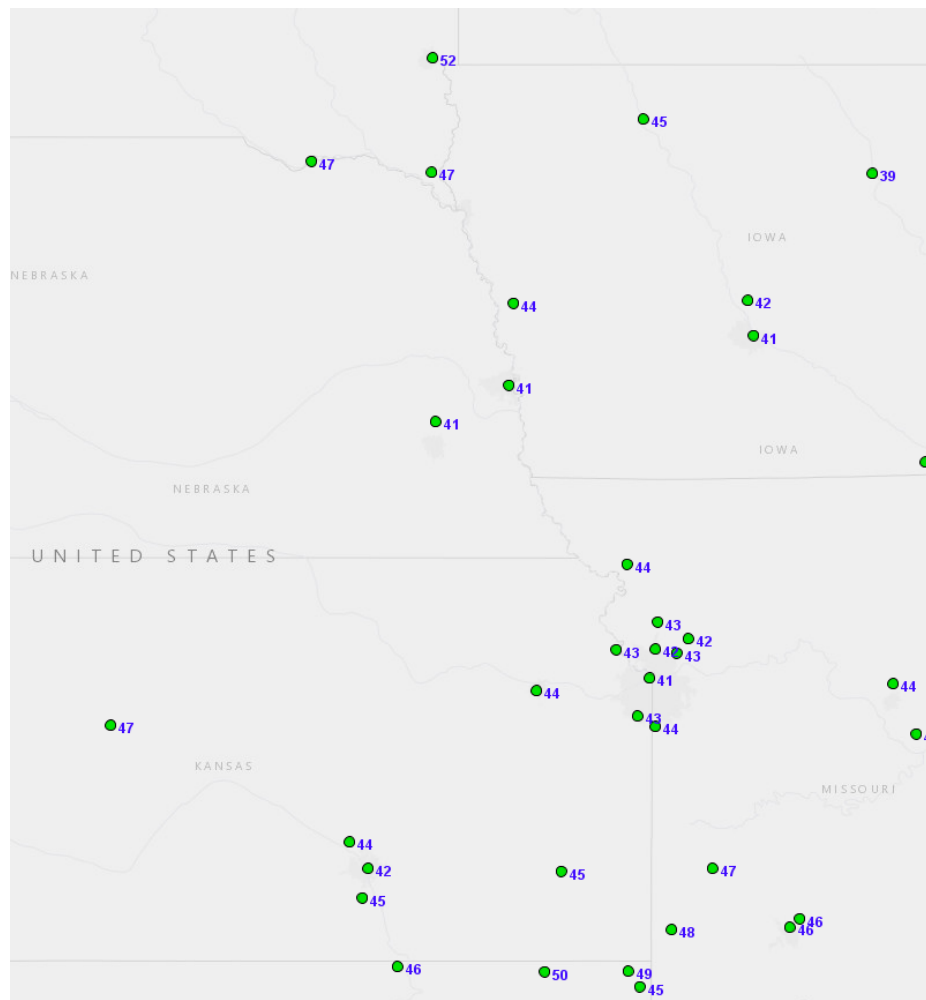


Wednesday, April 4, 2018

PM2.5 (24-hour average)



Ozone (8-hour average maximum)



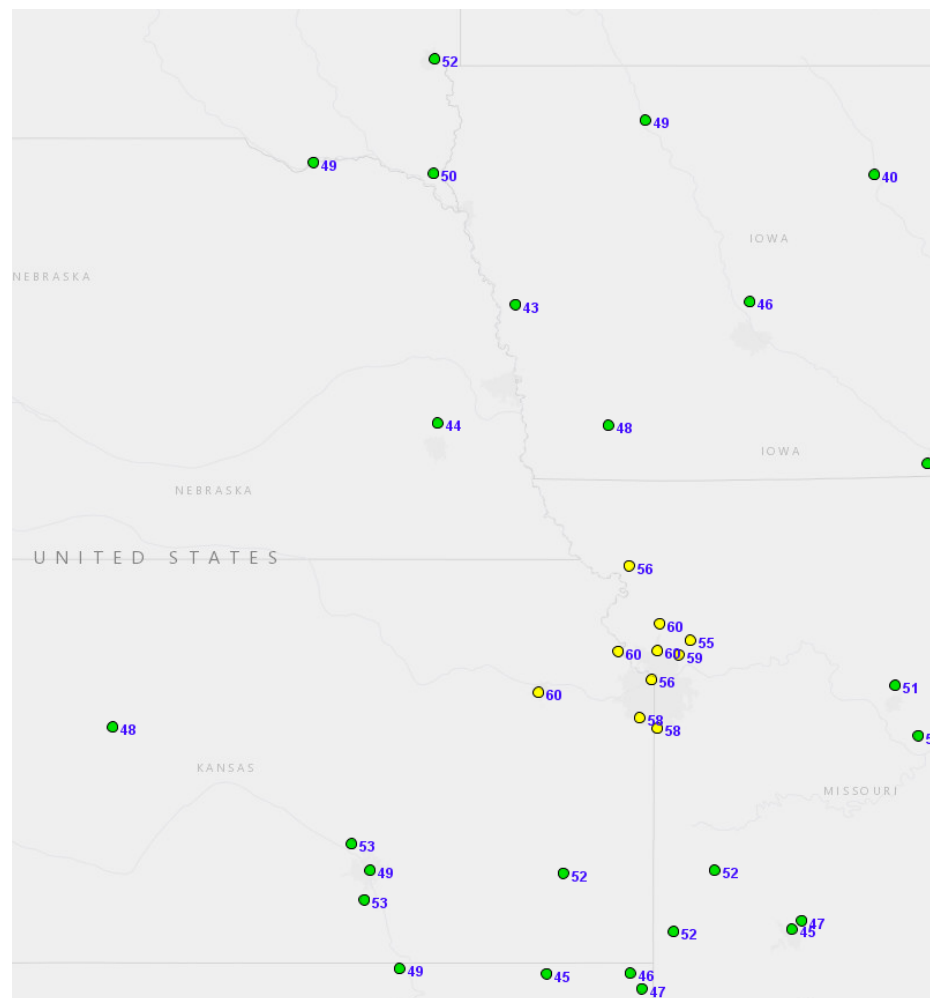
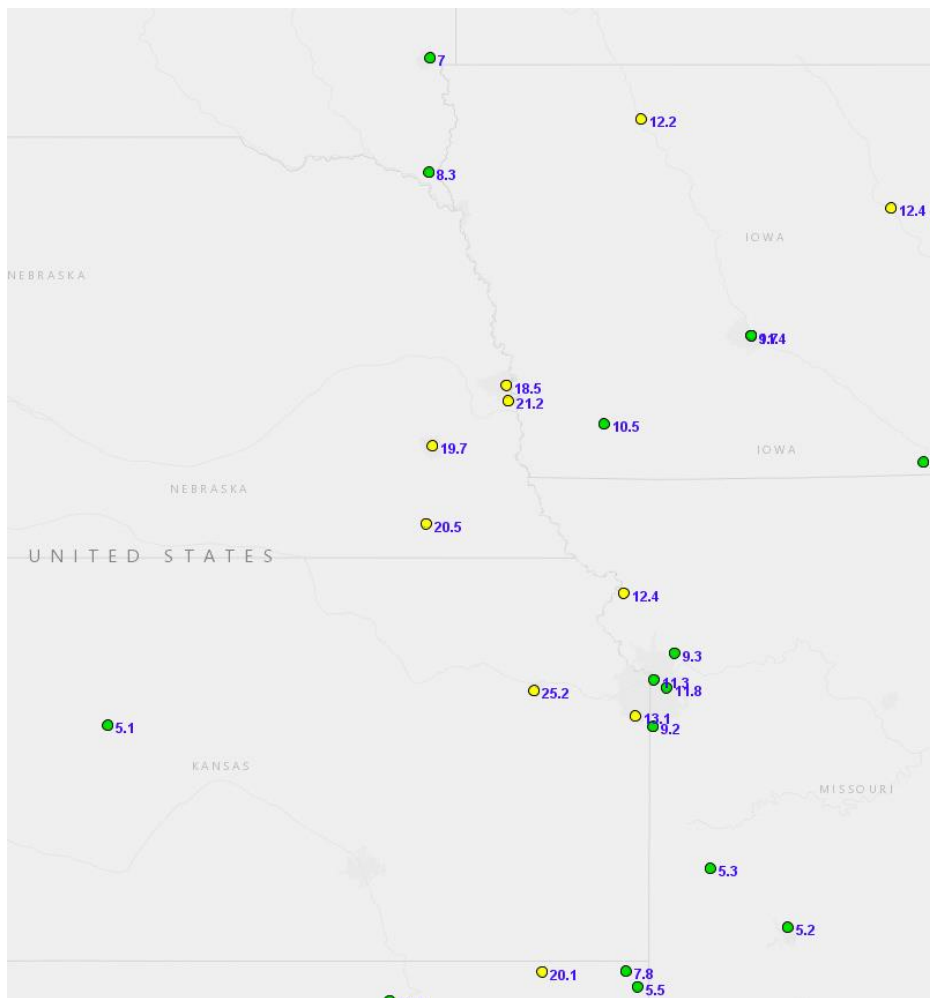
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Thursday, April 5, 2018

PM2.5 (24-hour average)

Ozone (8-hour average maximum)





Fires and Smoke

Light winds and seasonable temperatures allowed for a good amount of burning last Friday (March 30), especially for southeast Kansas – although much of it occurred outside of the Flint Hills corridor. Strong winds aloft and a cold front allowed smoke to disperse quickly to the northeast.

A wind shift and gusty north winds on Saturday (March 31) kept any burning confined to southeast Kansas and northeast Oklahoma where the change in winds occurred later in the day. Clouds, wind, rain, and even snow brought burning conditions to a halt for Sunday through Tuesday (April 1-3).

Sunny skies returned for Wednesday (April 4) alongside light north winds initially, which allowed for burning to occur over the southern Flint Hills and sporadically throughout the region. A shift to south winds brought smoke to the north where it was stalled and confined to southeast Nebraska and southwest Iowa by calm winds, an inversion, and a slow moving cold front. Light winds and variable wind directions allowed for ample burning to occur Thursday (April 5) across the entire region. Smoke from fires on Thursday drifted northeast primarily, although it has now all been pushed to the south with another cold front that has moved through the region.

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

KSFIRE.ORG

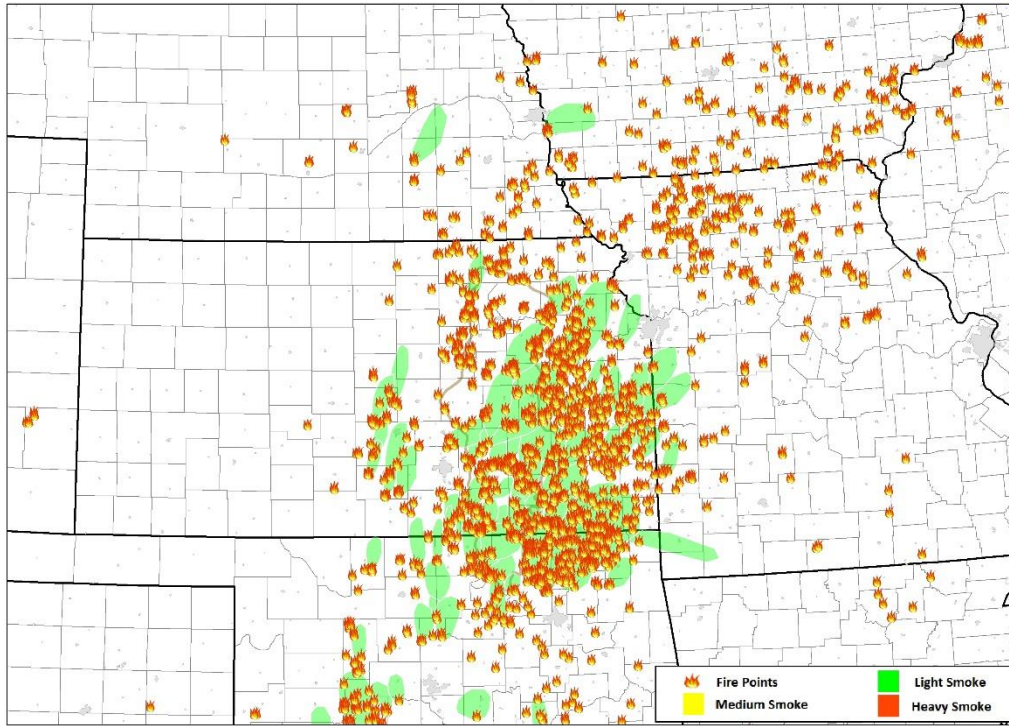


This website was developed as part of the development of the Kansas Flint Hills Smoke Management Plan. Kansas State University hosts the webpage and it includes important information for ranchers and others who might be interested in the Flint Hills. It provides training, regulations, policies, publications,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

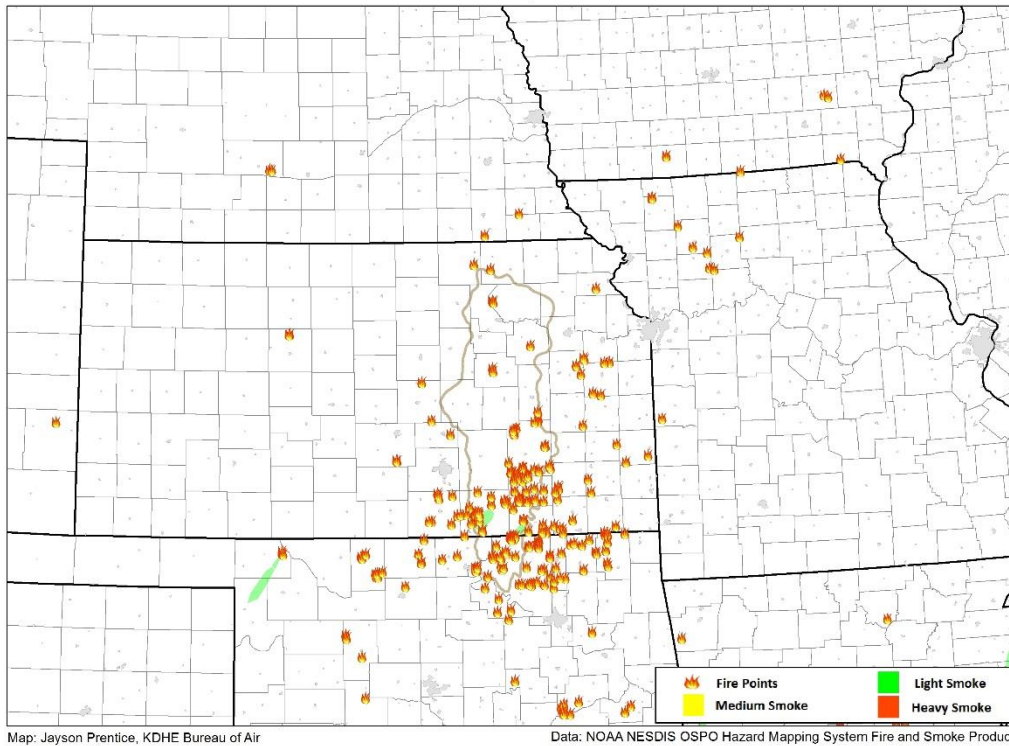
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HMS Fire & Smoke Analysis March 30, 2018



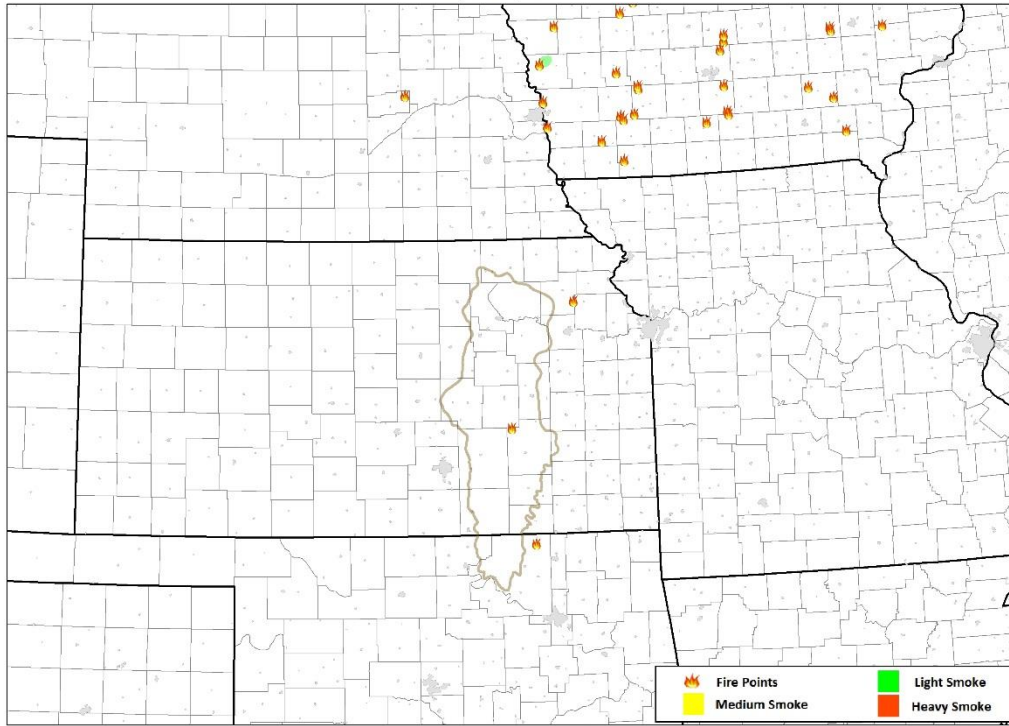
HMS Fire & Smoke Analysis March 31, 2018



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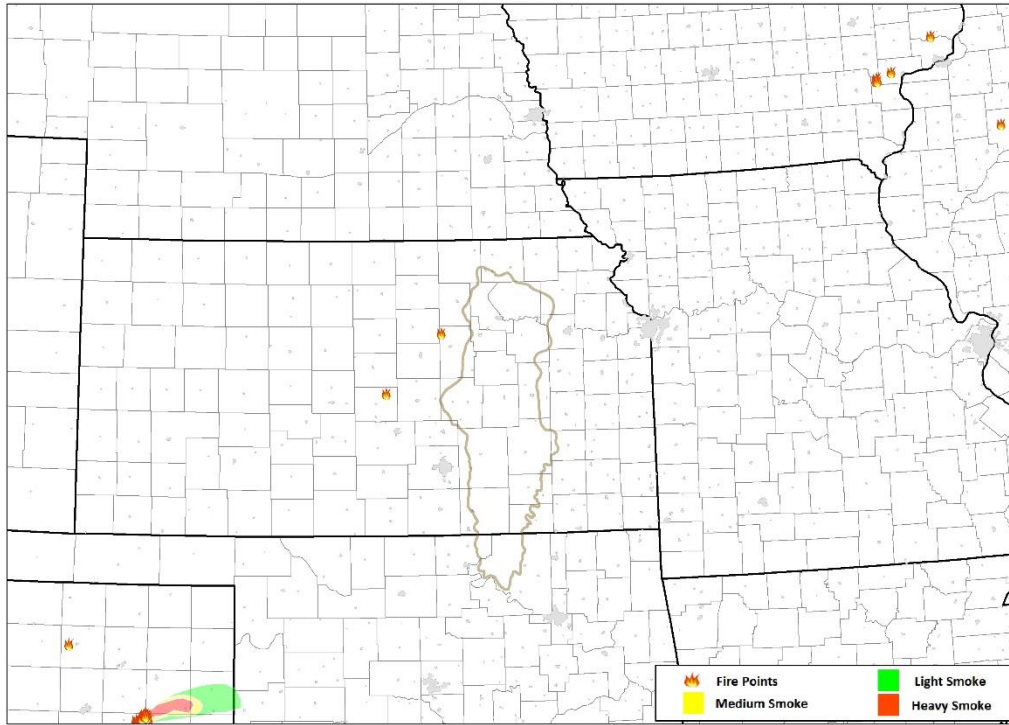
HMS Fire & Smoke Analysis April 01, 2018



Map: Jayson Prentice, KDHE Bureau of Air

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

HMS Fire & Smoke Analysis April 02, 2018



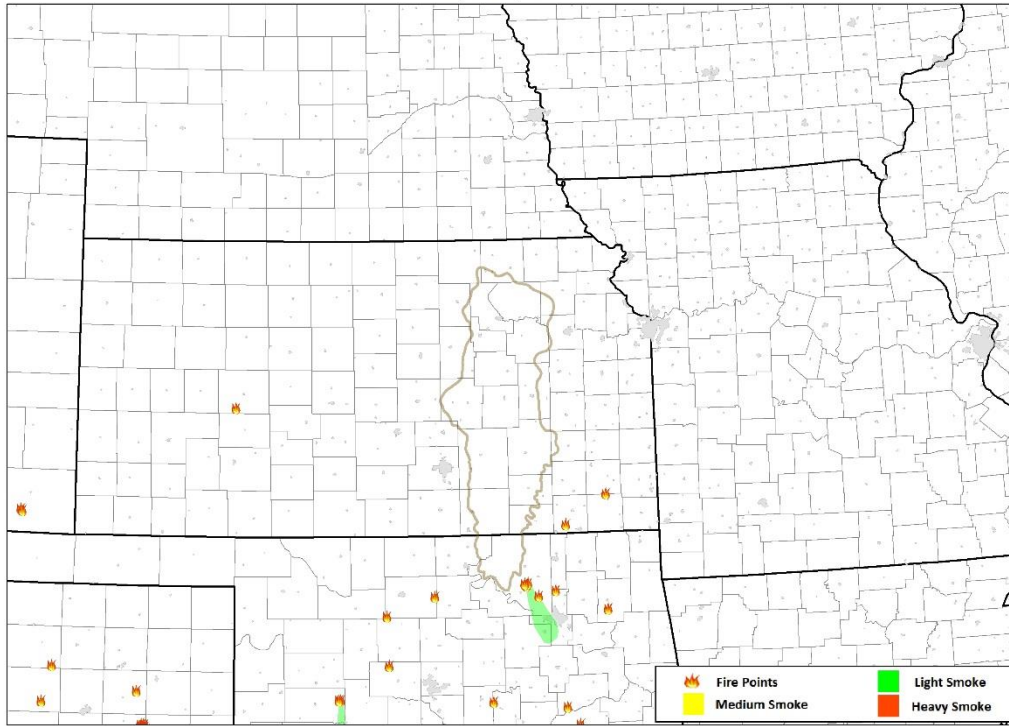
Map: Jayson Prentice, KDHE Bureau of Air

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

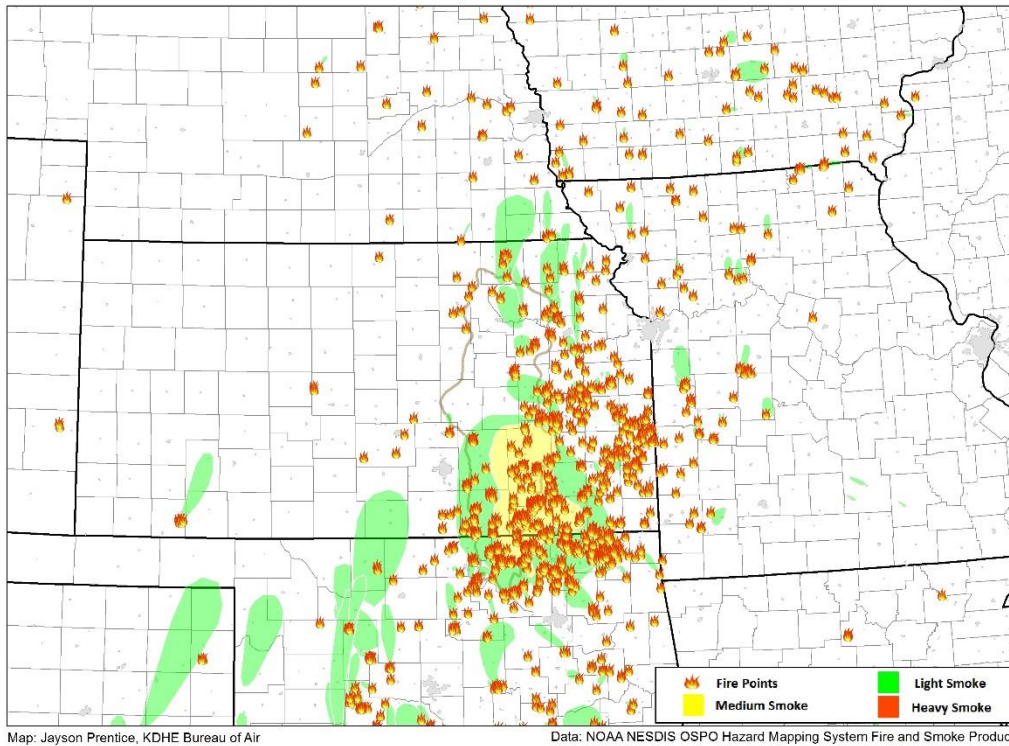
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HMS Fire & Smoke Analysis April 03, 2018



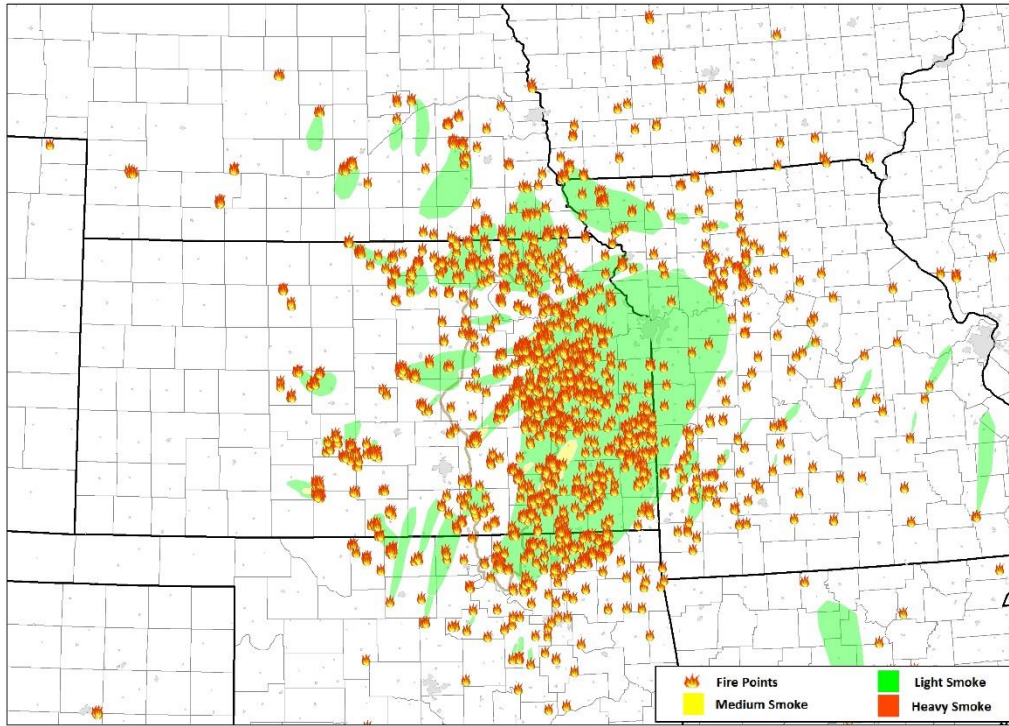
HMS Fire & Smoke Analysis April 04, 2018



Flint Hills Prescribed Fire Update



HMS Fire & Smoke Analysis April 05, 2018

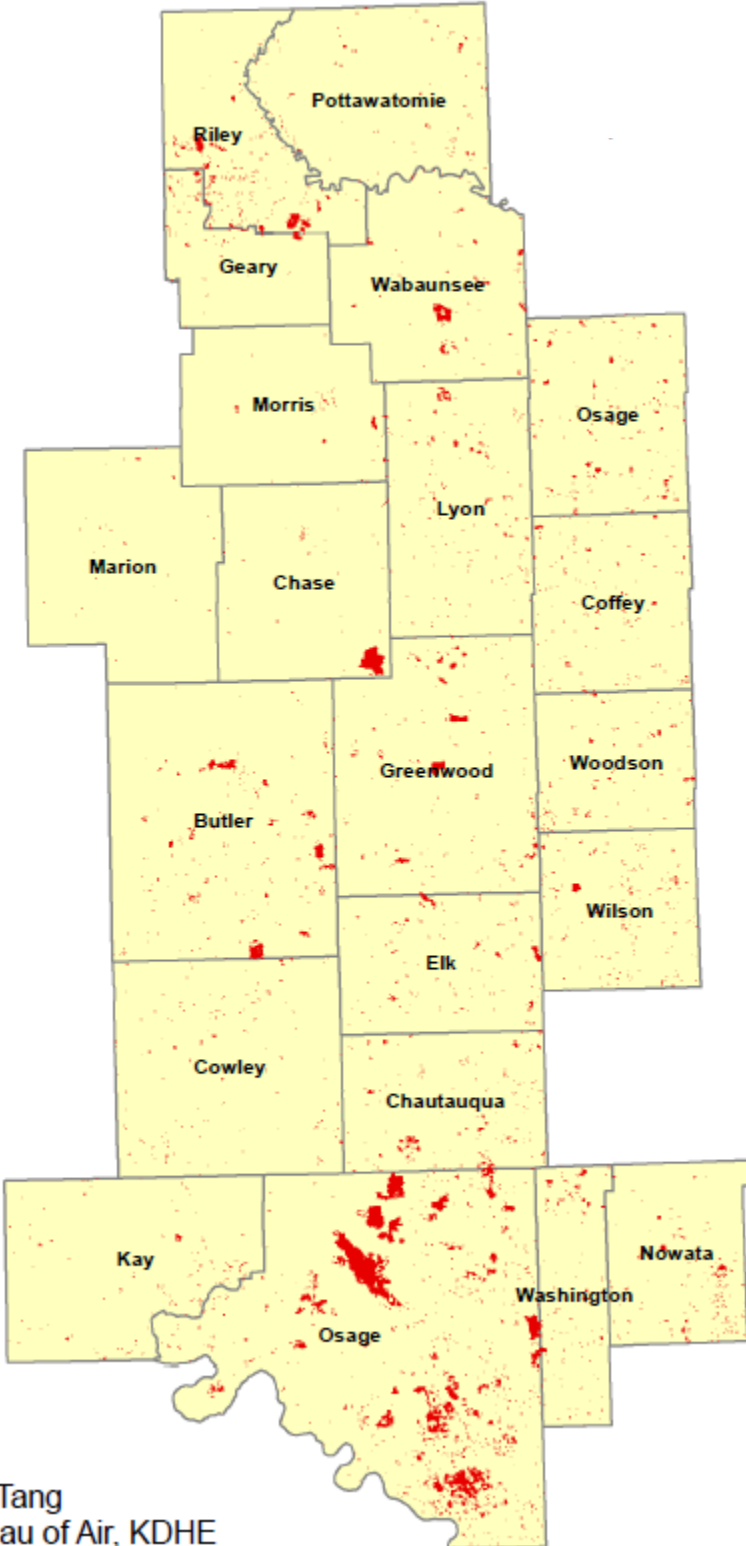


Map: Jayson Prentice, KDHE Bureau of Air

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



Flint Hills Acreage Burned (February 17 – March 22, 2018)



<u>Counties</u>	<u>Acres Burned</u>	
Butler	14,132	*
Chase	7,521	*
Chautauqua	6,888	
Coffey	4,247	*
Cowley	3,490	*
Elk	5,606	
Geary	2,934	*
Greenwood	10,456	
Lyon	6,163	*
Marion	741	*
Morris	1,915	*
Osage (KS)	7,089	*
Pottawatomie	3,058	*
Riley	11,568	*
Wabaunsee	7,336	*
Wilson	5,066	*
Woodson	3,645	*
Nowata (OK)	5,097	
Osage (OK)	101,161	
Washington (OK)	4,741	
Kay (OK)	3,259	
Total	216,113	
* Denotes county was partly or completely covered by clouds during latest analysis.		

Yao Tang
Bureau of Air, KDHE

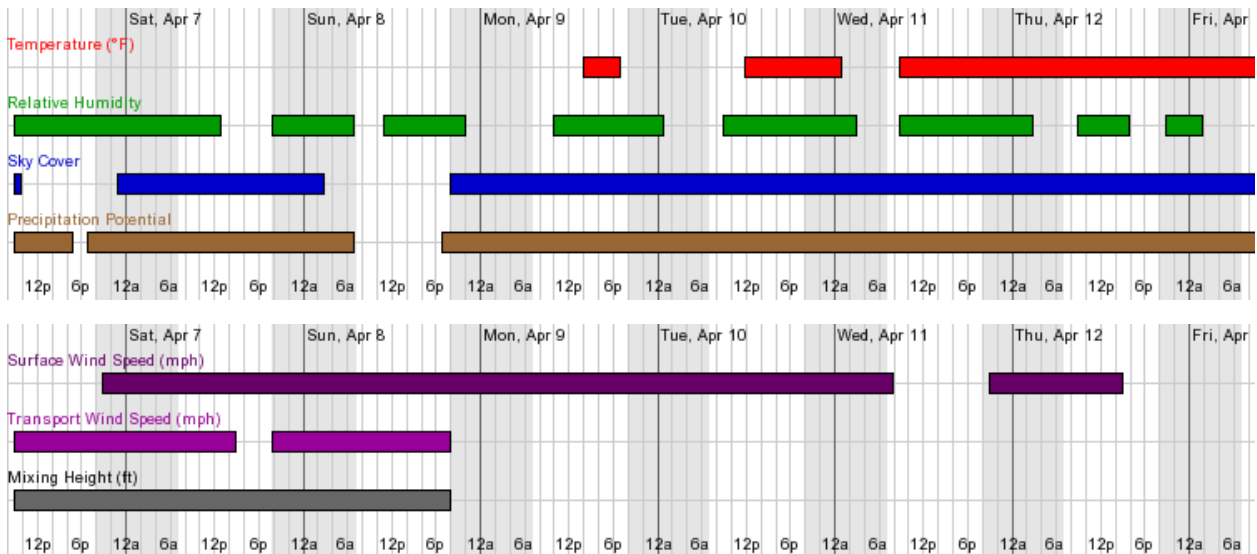


Upcoming Look at Fires and Smoke

Cold temperatures, occasional gusty winds, and precipitation (both rain and snow) will have burning halted for the most part today through Sunday across the region. Temperatures will rebound for Monday and Tuesday with winds expected to remain on the lighter side. Look for burning to return for both Monday and Tuesday with those conditions. Temperatures push into the 60s and 70s for the remainder of the week, although wind speeds look to become an issue for Wednesday and beyond which may inhibit widespread burning.

Climatological peak for prescribed fires within the Flint Hills region is approaching, and any days that incur favorable weather conditions will likely be widespread burn days for at least the next two weeks.

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 April 6, 2018.