

Flint Hills Prescribed Fire Update

March 30, 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.

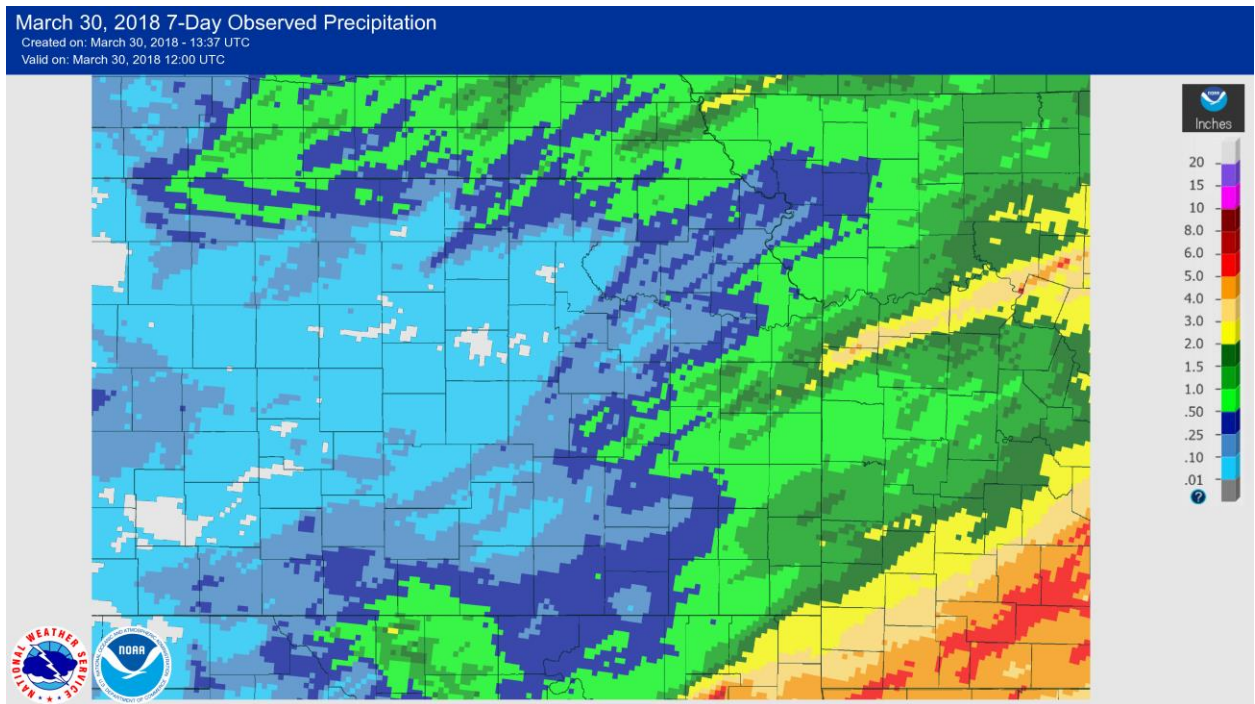




Meteorology

Breezy conditions and warm temperatures were observed last Friday (March 23) before a cold front brought cooler temperatures but continued breezy conditions for Saturday into Sunday (March 24-25). Rain showers and a few thunderstorms worked across the area on Monday (March 26) with precipitation totals varying from a mere tenth of an inch to upwards of an inch in localized locations within the Flint Hills. Light rain, fog, mostly cloudy, and cool conditions lingered across the area Tuesday into Thursday (March 27-29). A few peaks of sun were seen by late Thursday, but a cool north breeze accompanied well below normal temperatures throughout the day.

Precipitation

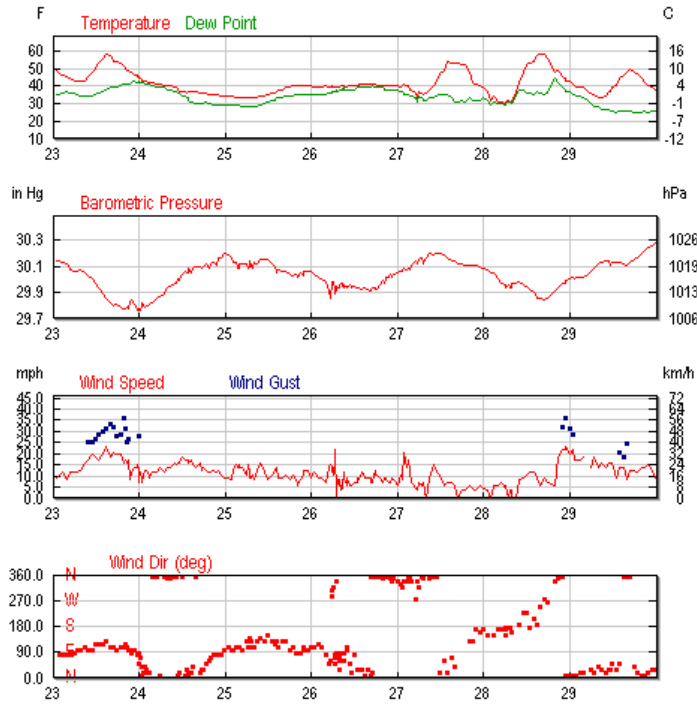


NOAA/NWS Observed Total Precipitation for March 23-29, 2018.

Flint Hills Prescribed Fire Update

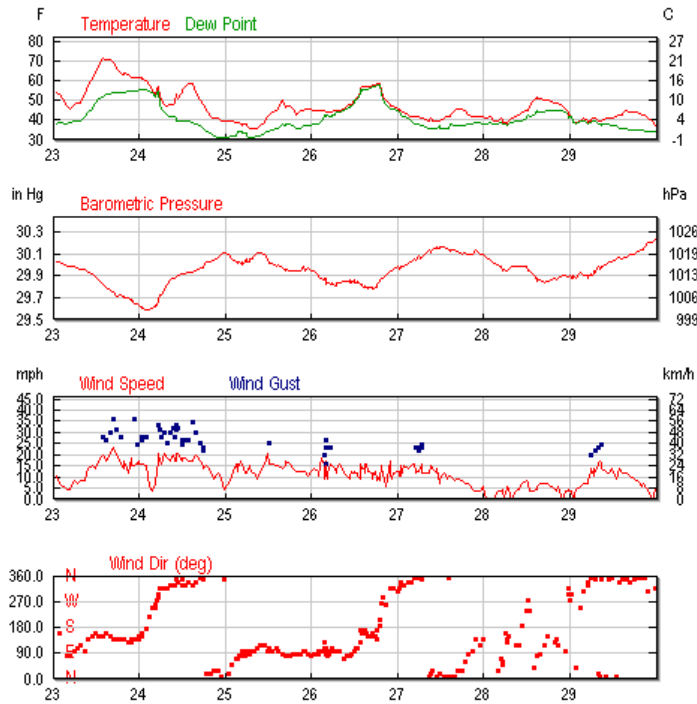


Lincoln, NE



March 23-29, 2018 Observed Weather from KLNK. Graphic: Weather Underground, Inc.

Emporia, KS



March 23-29, 2018 Observed Weather from KEMP. Graphic: Weather Underground, Inc.



Air Quality Data

Air quality data for the period of March 23-29, 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.

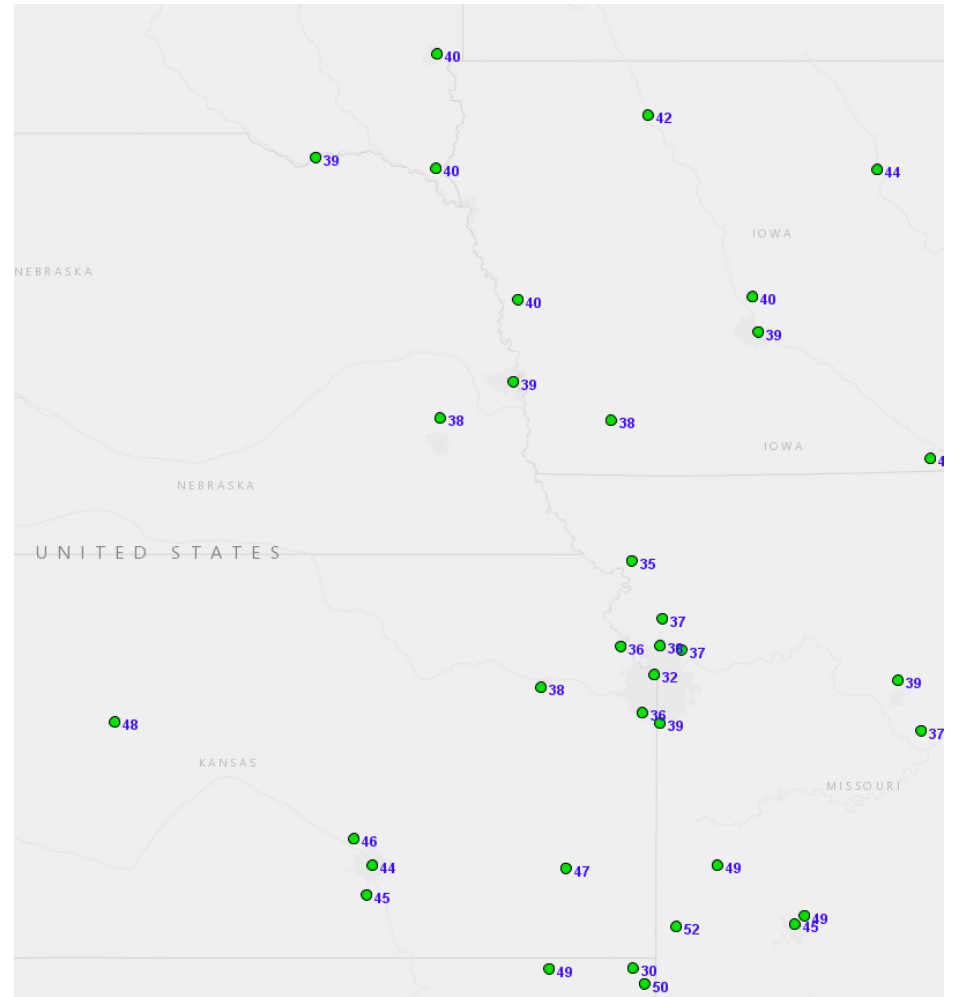
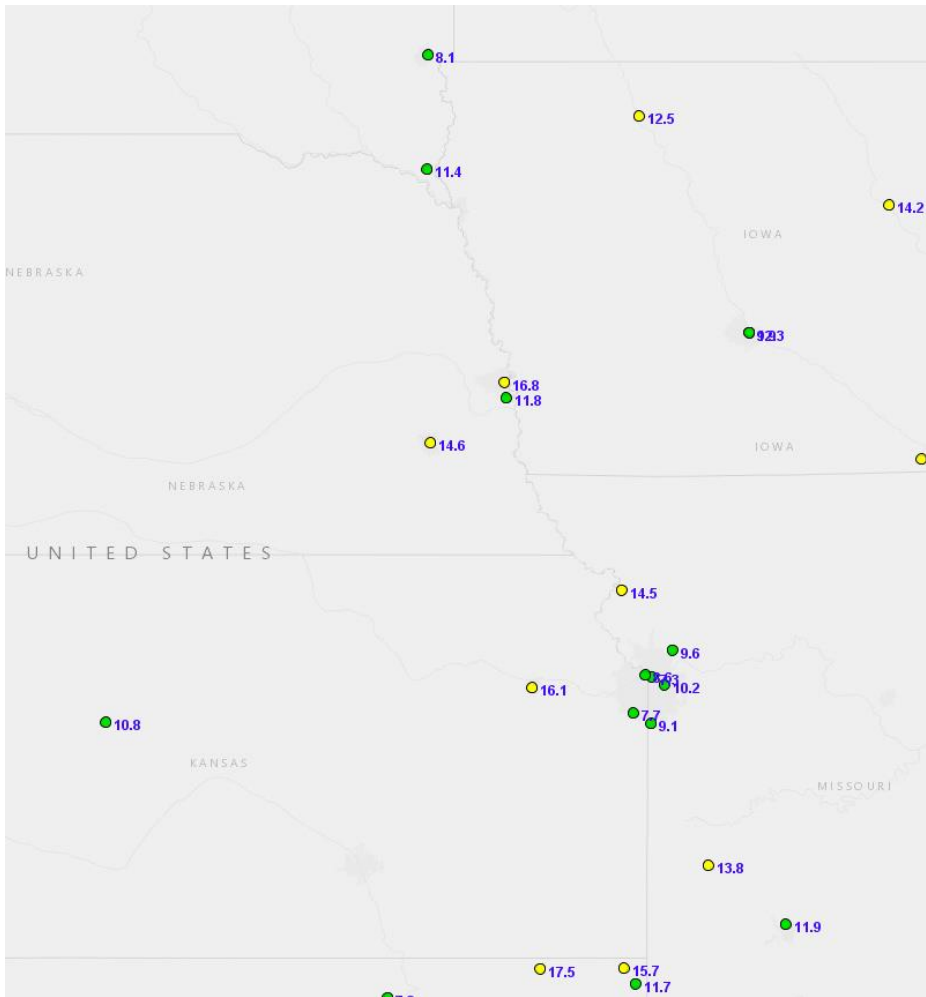
Flint Hills Prescribed Fire Update



Friday, March 23, 2018

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



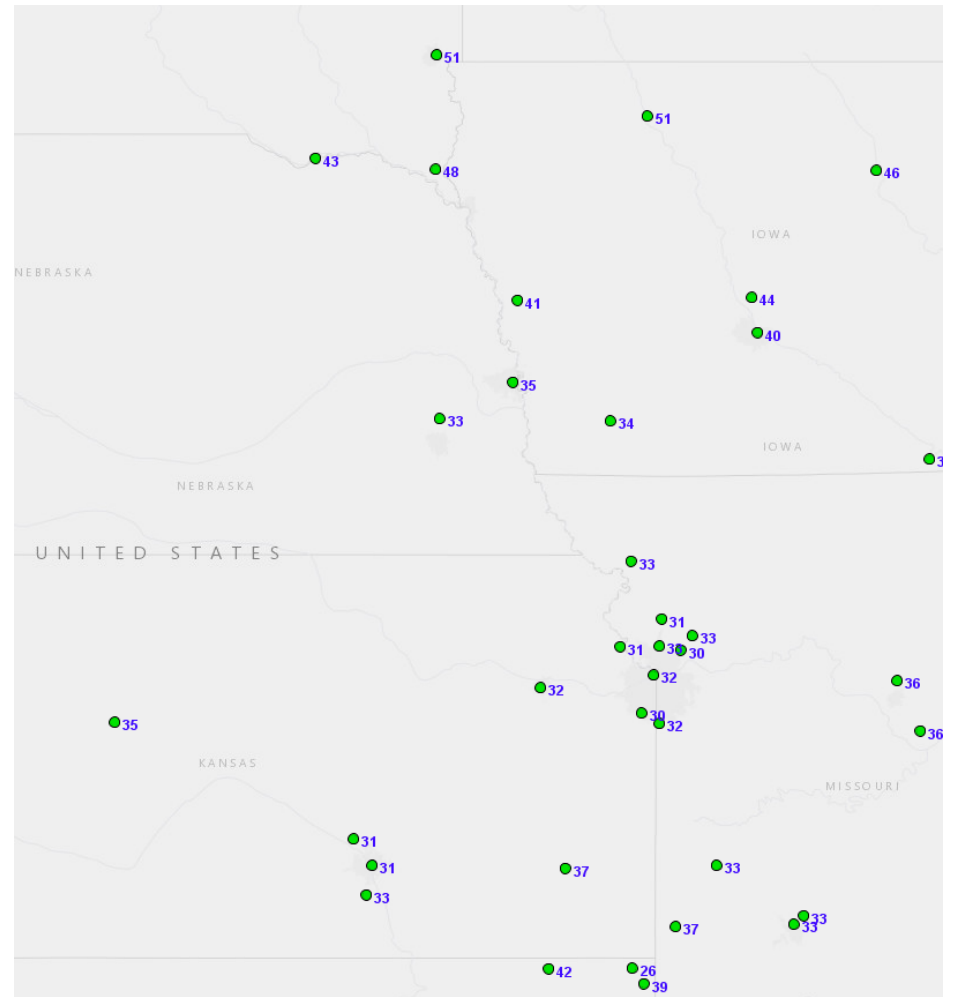
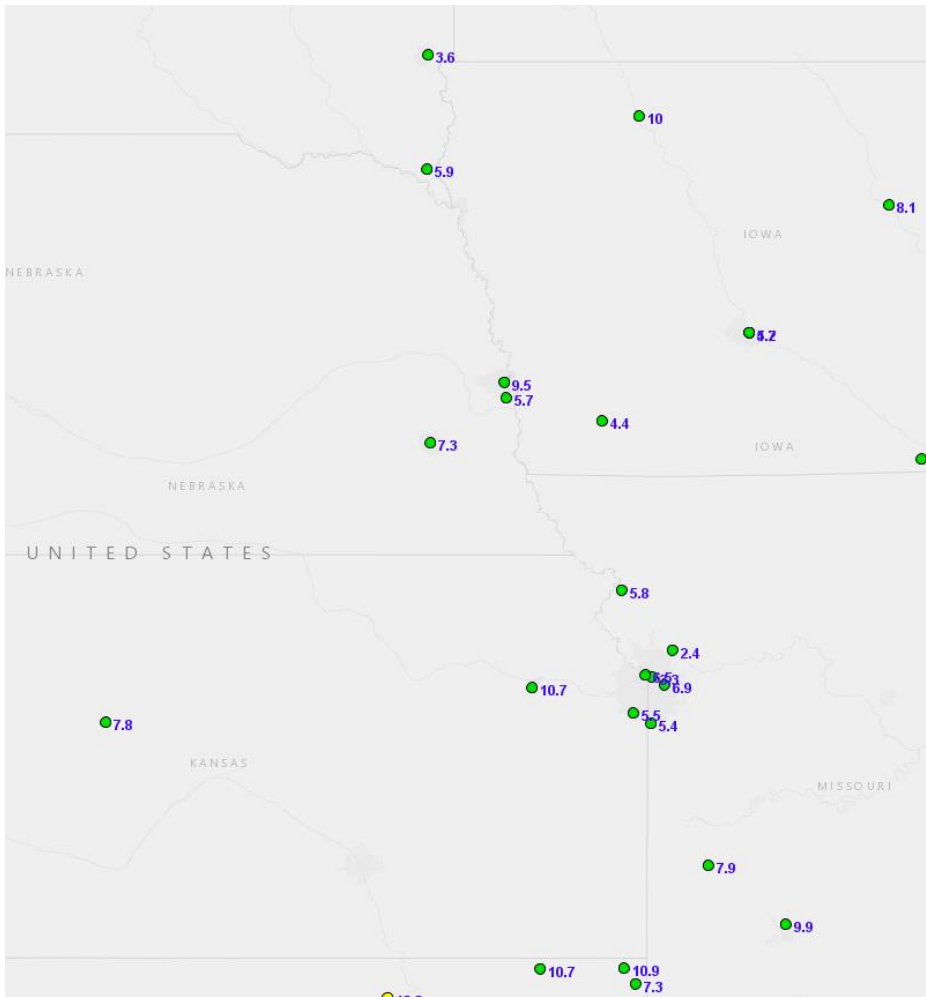
Flint Hills Prescribed Fire Update



Saturday, March 24, 2018

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



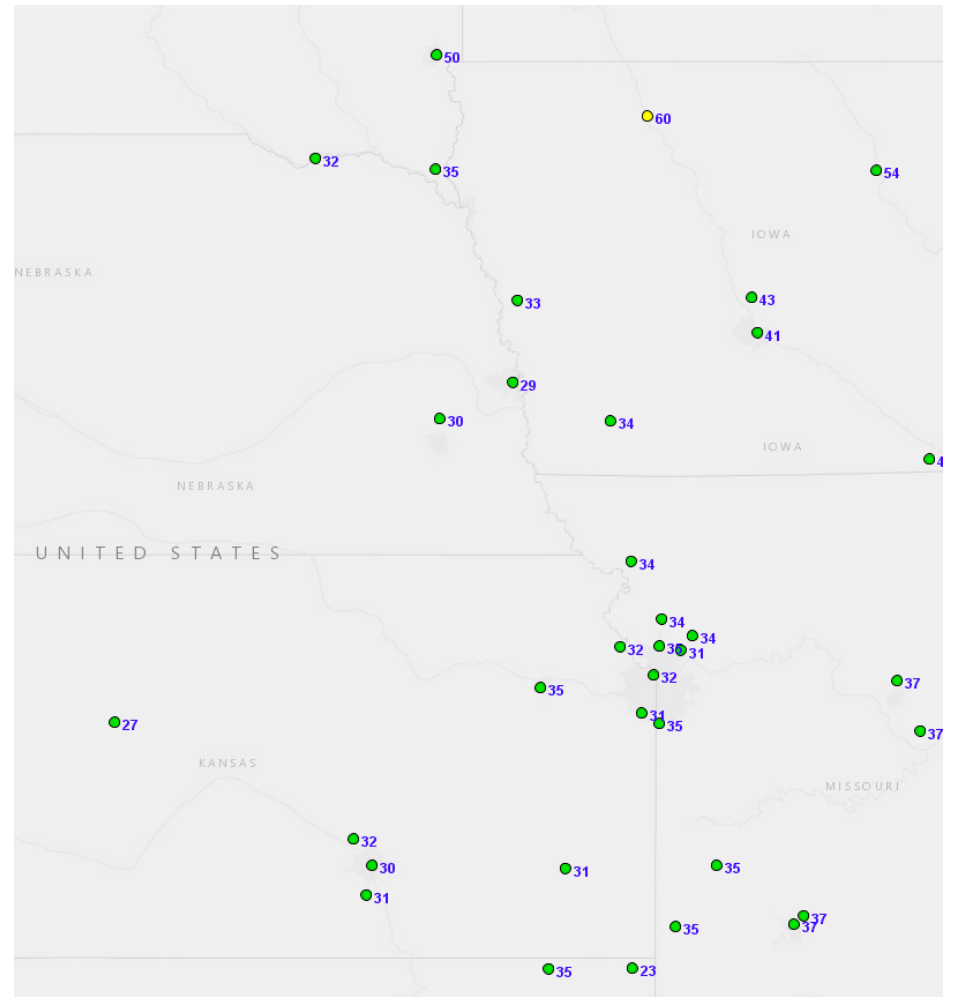
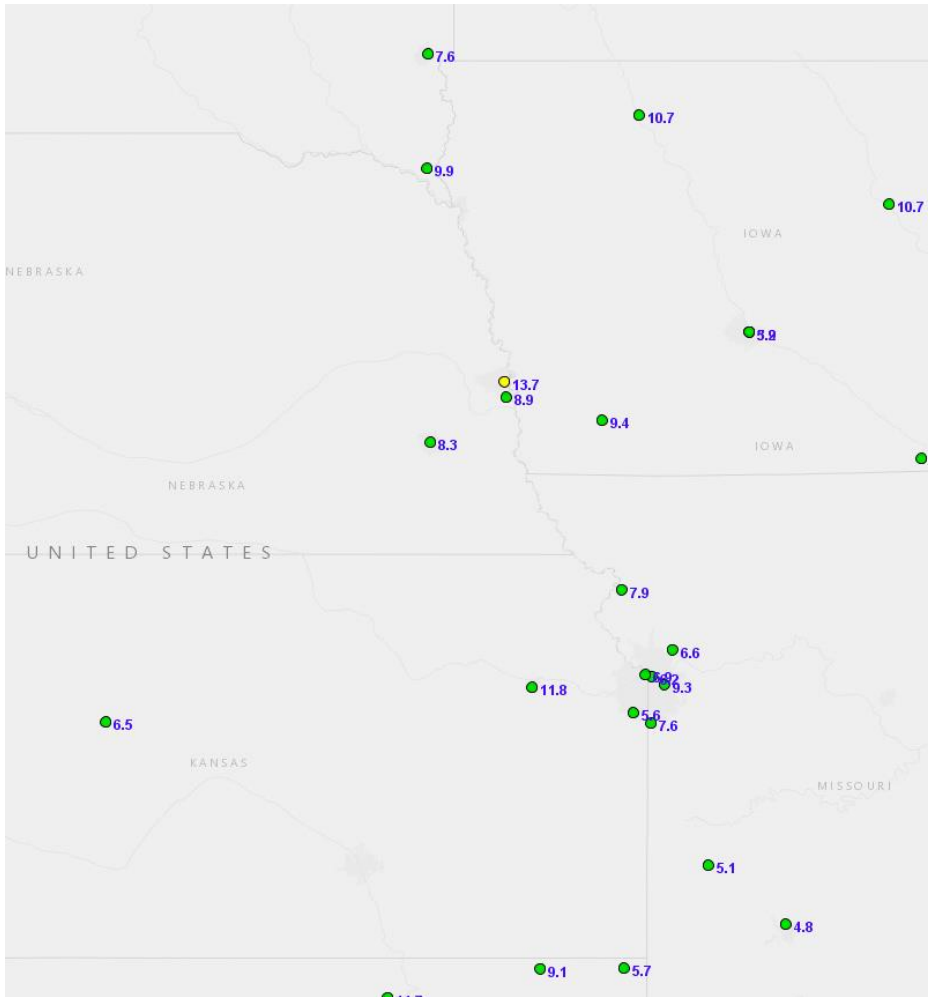
Flint Hills Prescribed Fire Update



Sunday, March 25, 2018

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



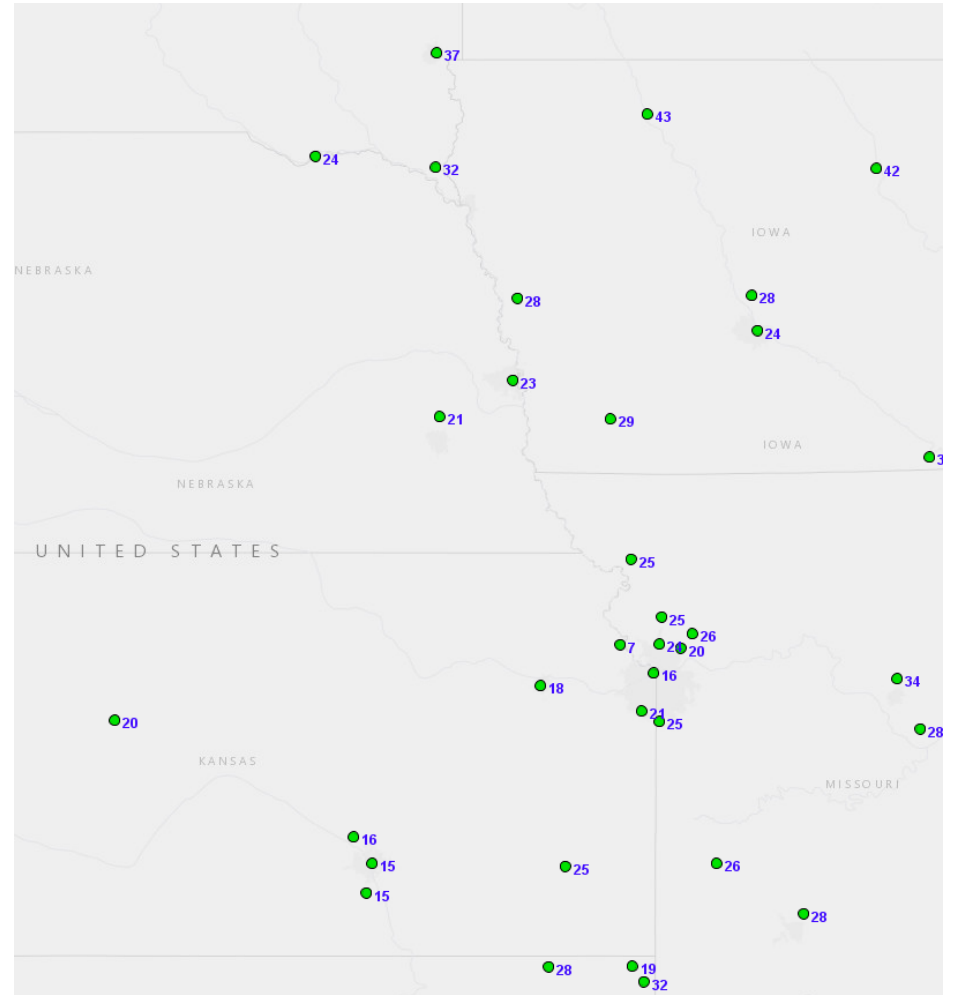
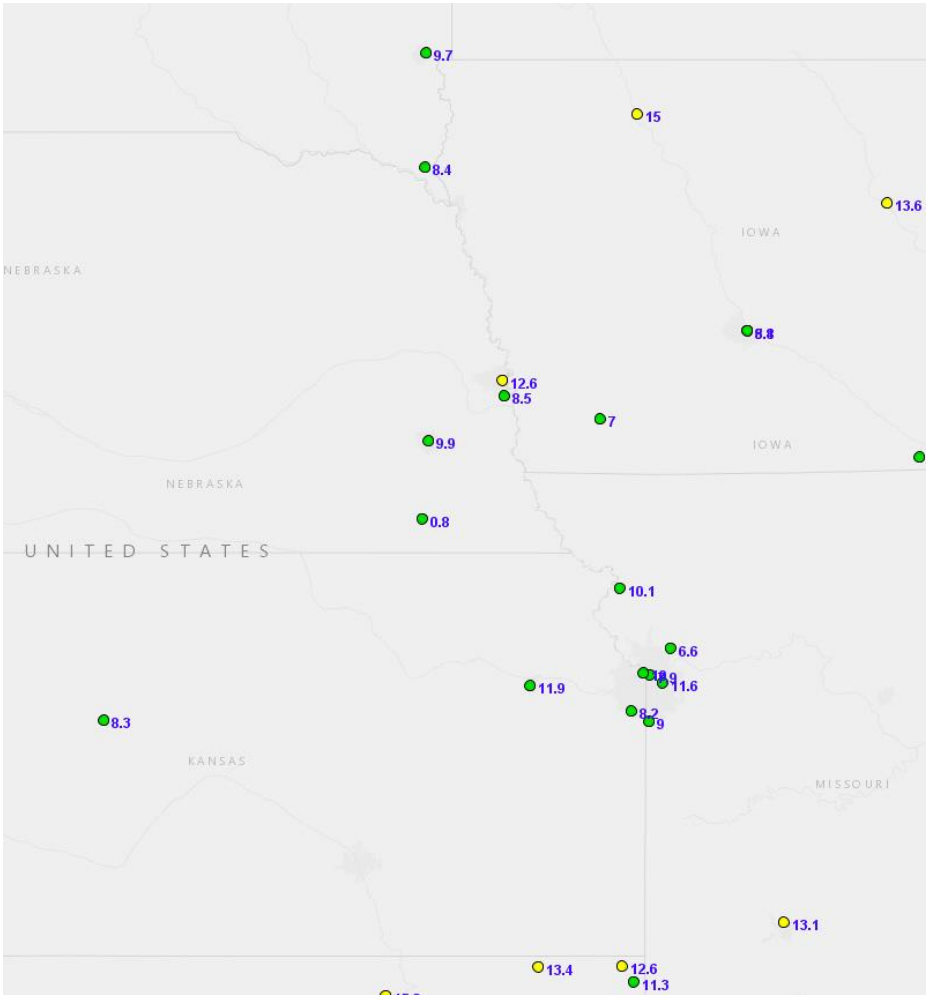
Flint Hills Prescribed Fire Update



Monday, March 26, 2018

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



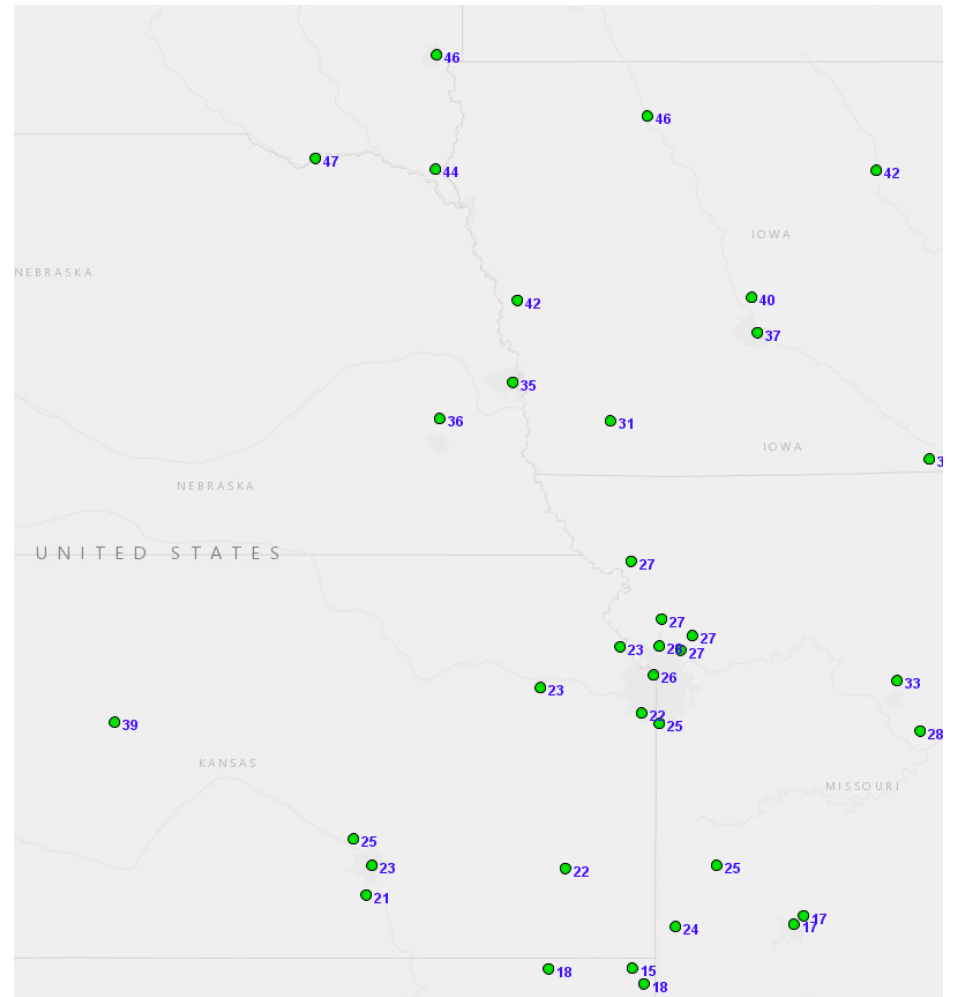
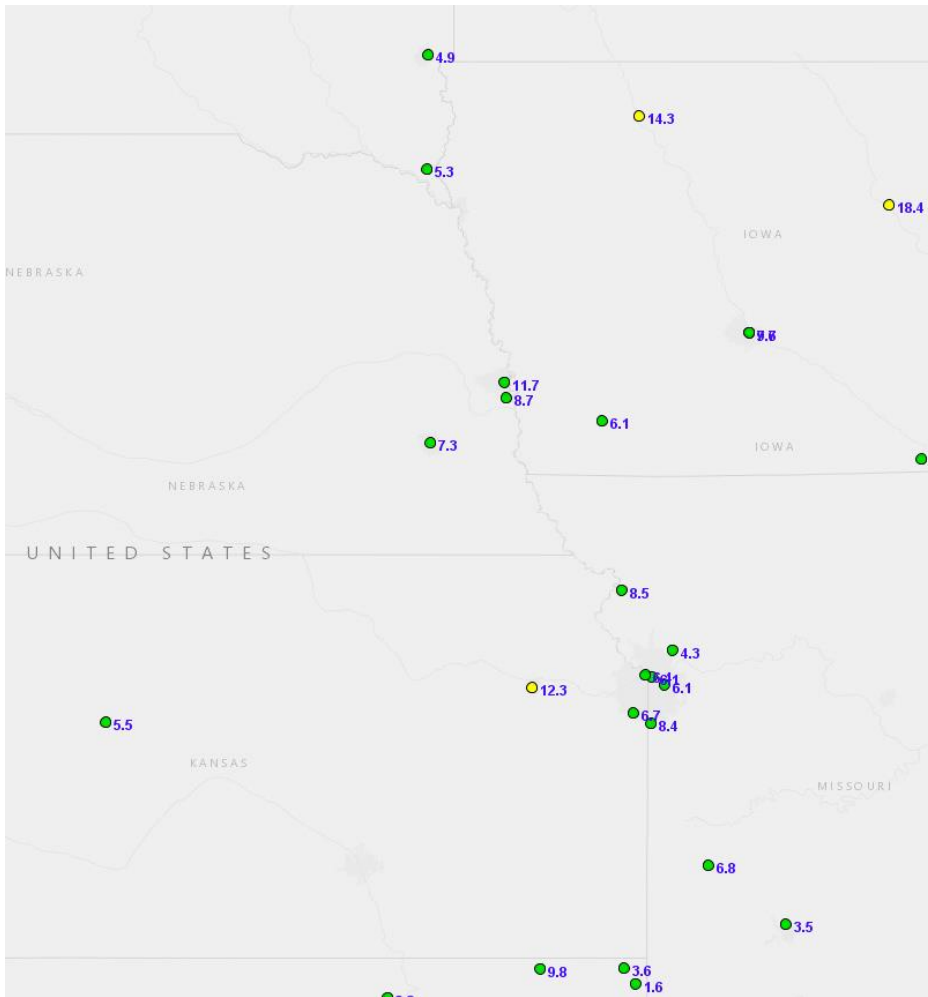
Flint Hills Prescribed Fire Update



Tuesday, March 27, 2018

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



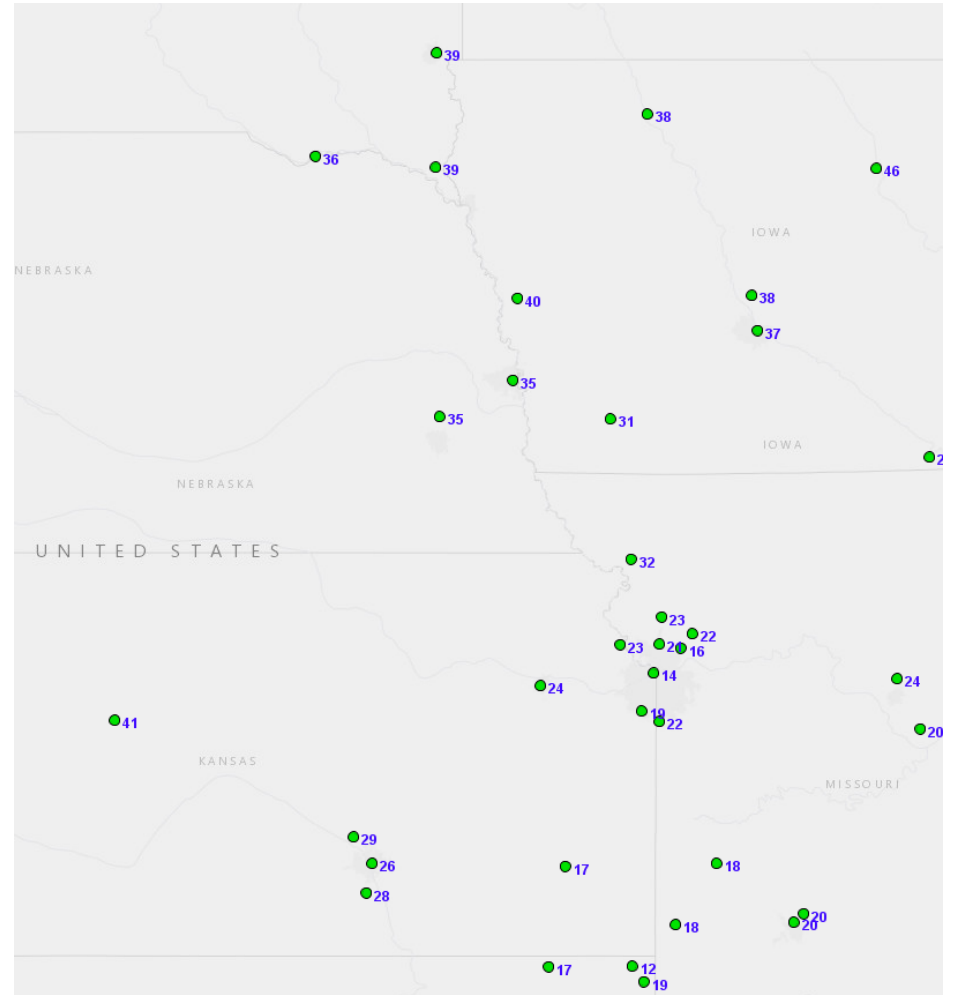
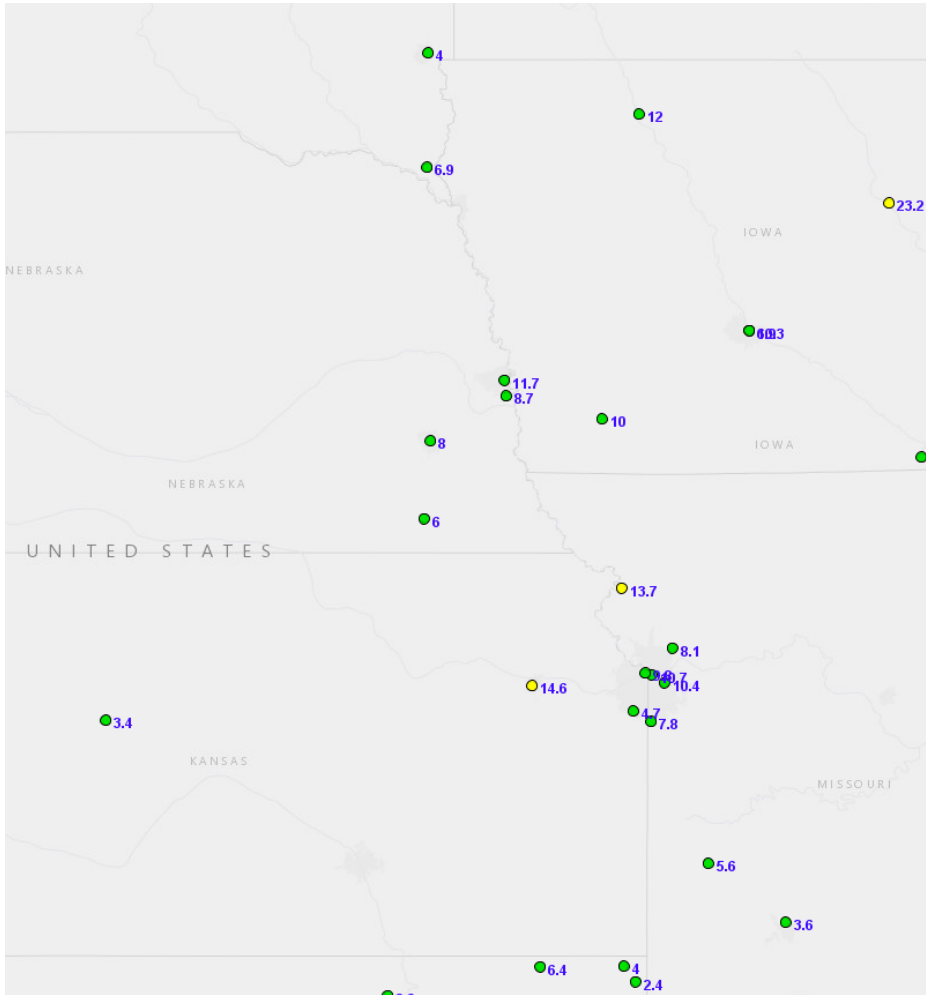
Flint Hills Prescribed Fire Update



Wednesday, March 28, 2018

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



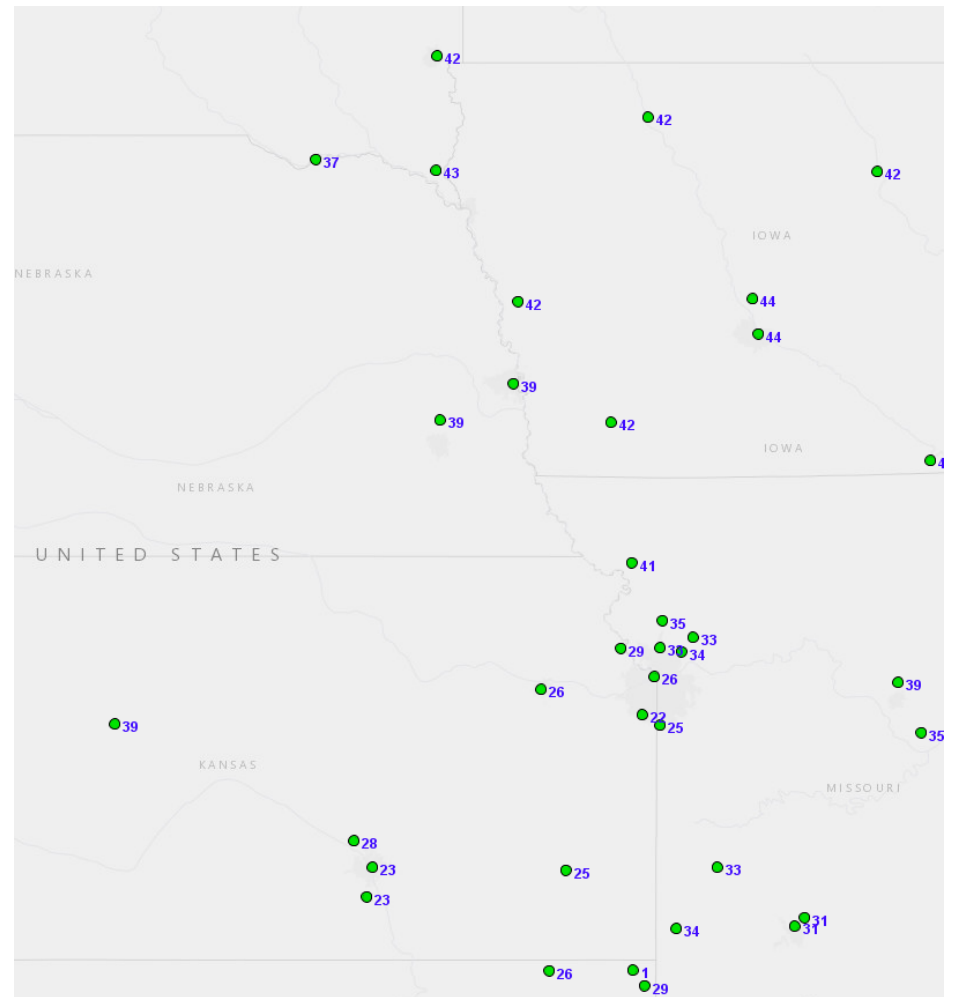
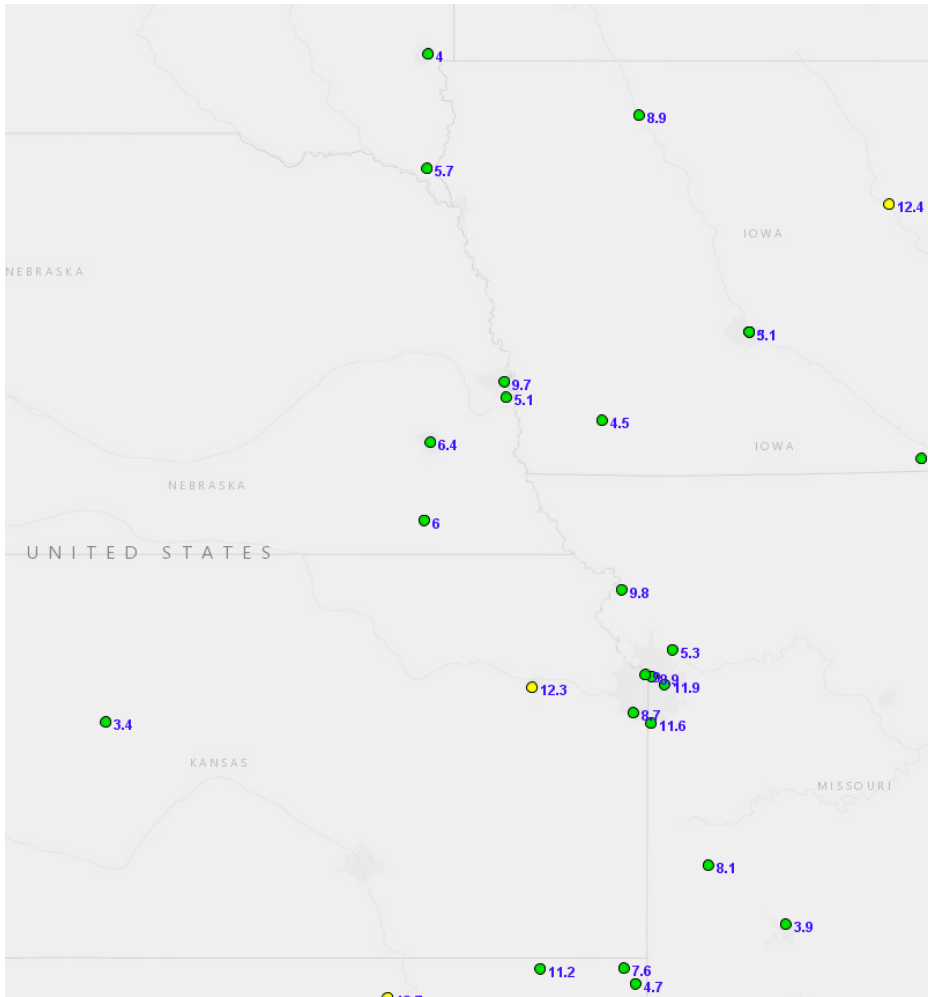
Flint Hills Prescribed Fire Update



Thursday, March 29, 2018

PM2.5 (24-hour average)

Ozone (8-hour average maximum)





Fires and Smoke

Gusty winds kept burning to a minimum last Friday (March 23) across the entire Flint Hills. Smoke from the prior day (Thursday, March 22) did provide some elevated air quality values across the Flint Hills and areas to the north as the strong south winds transported particulate. Winds remained gusty behind a cold front on Saturday (March 24) for much of the Flint Hills, but ahead of the front in the southern Flint Hills lower winds did allow for burning. The north winds pushed smoke into Oklahoma and created elevated air quality values there. Cloudy and cool conditions limited burning on Sunday (March 25) although a few peaks of sun across northeast Kansas did capture some fires.

Cloudy and wet conditions prohibited burning Monday (March 26) with continued clouds, fog, and light precipitation on Tuesday (March 27) kept burning to a minimum once again. Cooler temperatures and only occasional breaks in the clouds on Wednesday and Thursday (March 28-29) led to sporadic burning and minimal impact on air quality.

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

KSFIRE.ORG

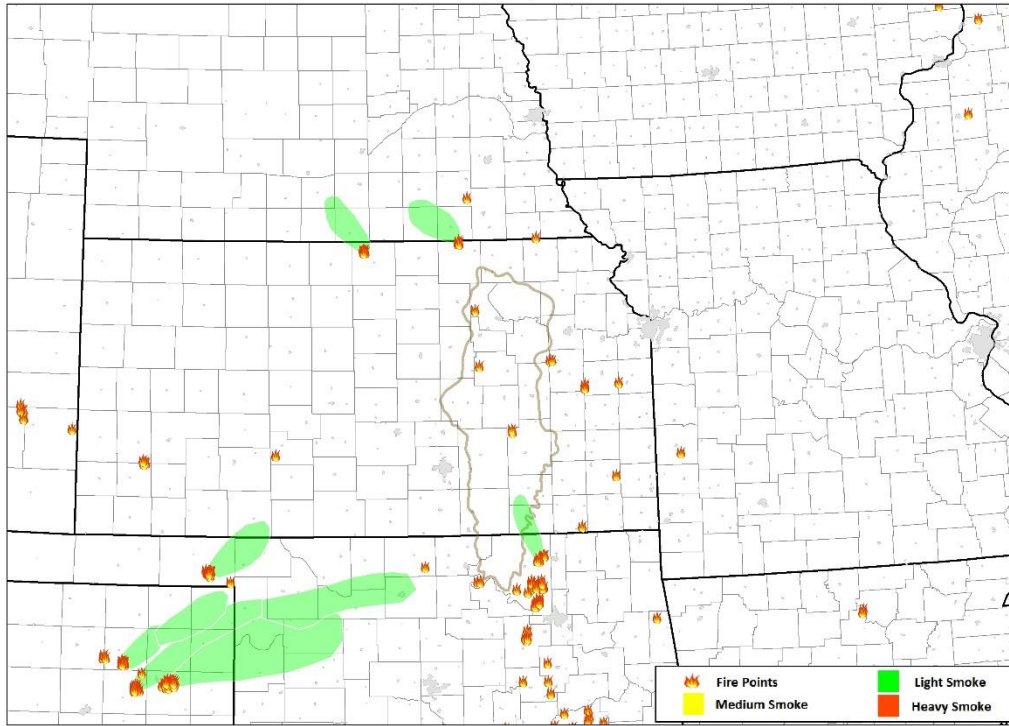


This website was developed as part of the development of the Kansas Flint Hills Smoke Management Plan. Kansas State University hosts the webpage and it includes important information for ranchers and others who might be interested in the Flint Hills. It provides training, regulations, policies, publications,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

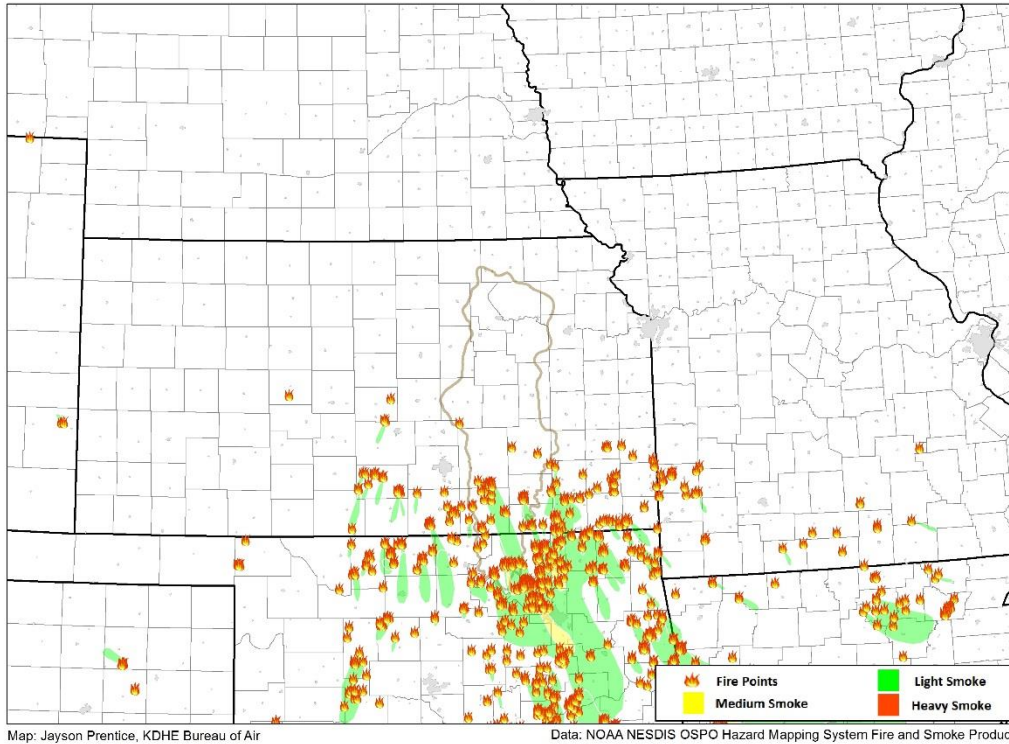
Flint Hills Prescribed Fire Update



HMS Fire & Smoke Analysis March 23, 2018



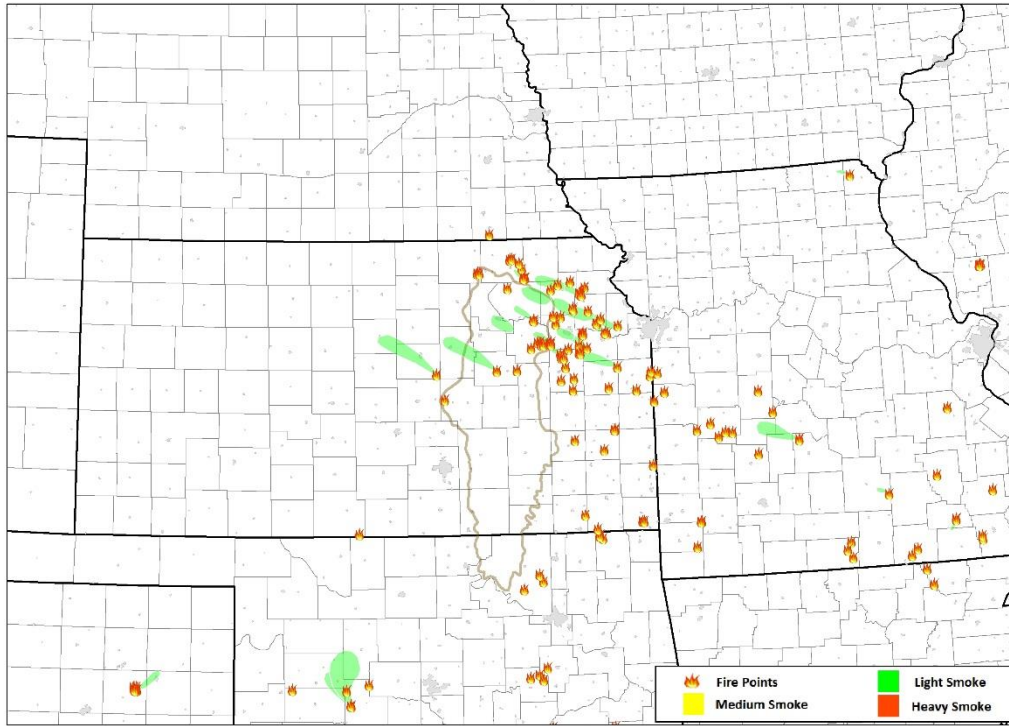
HMS Fire & Smoke Analysis March 24, 2018



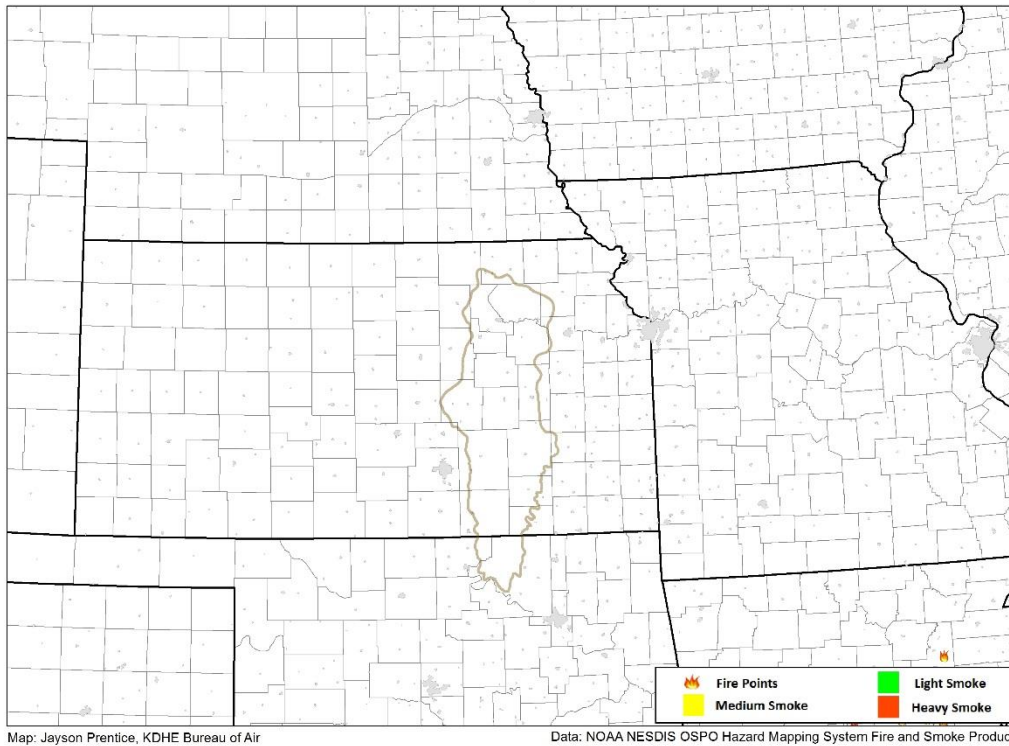
Flint Hills Prescribed Fire Update



HMS Fire & Smoke Analysis March 25, 2018



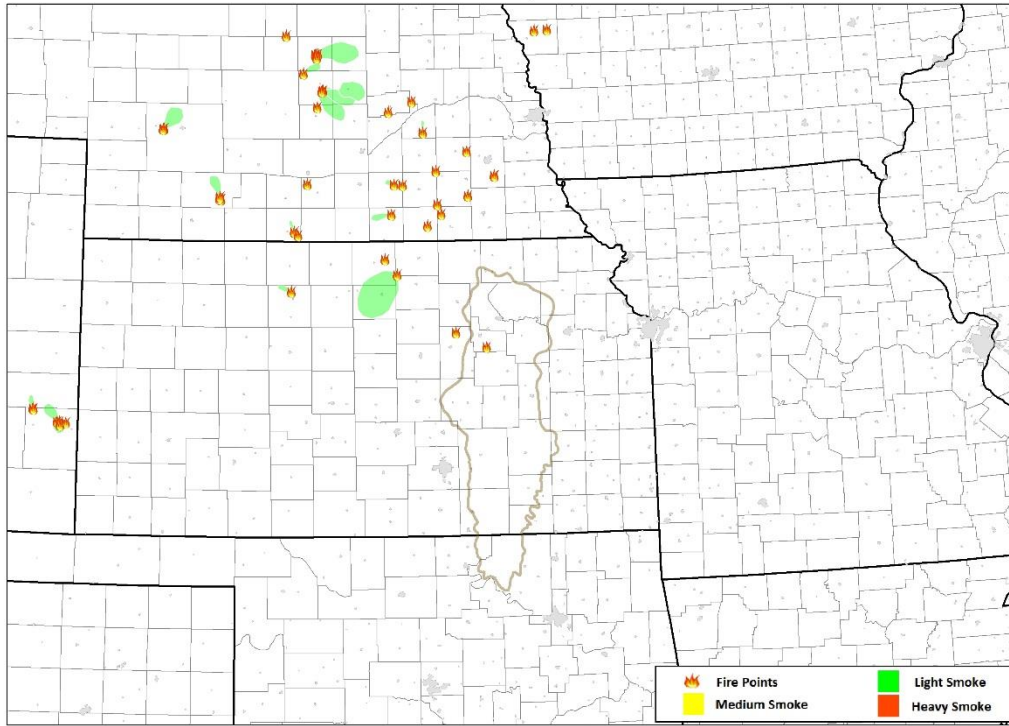
HMS Fire & Smoke Analysis March 26, 2018



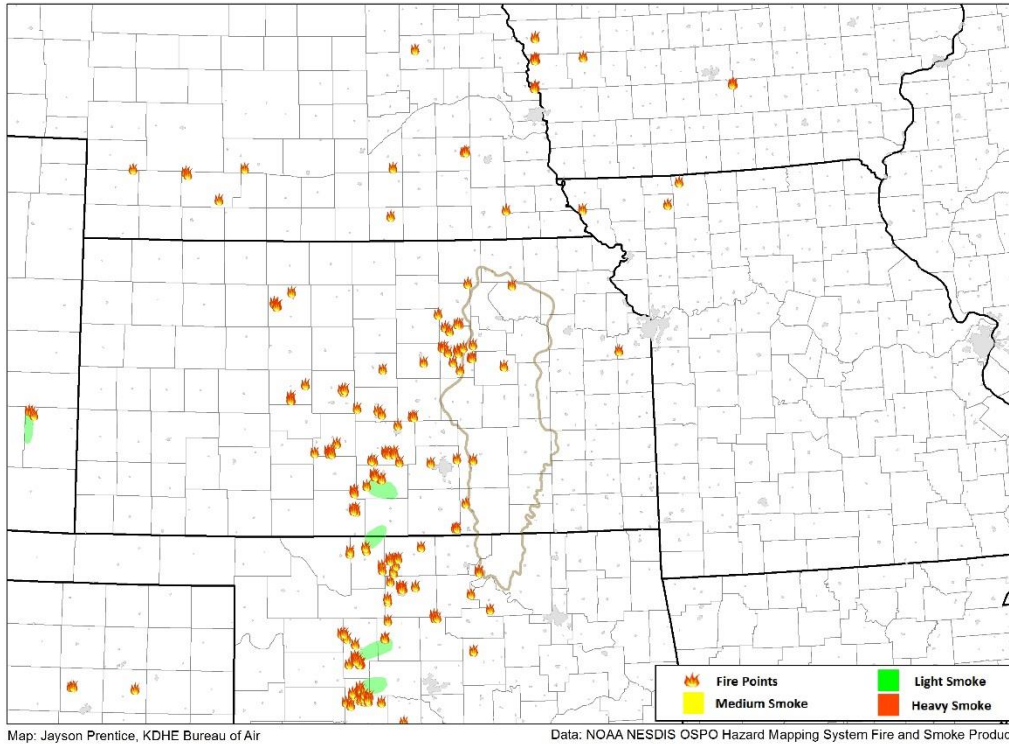
Flint Hills Prescribed Fire Update



HMS Fire & Smoke Analysis March 27, 2018



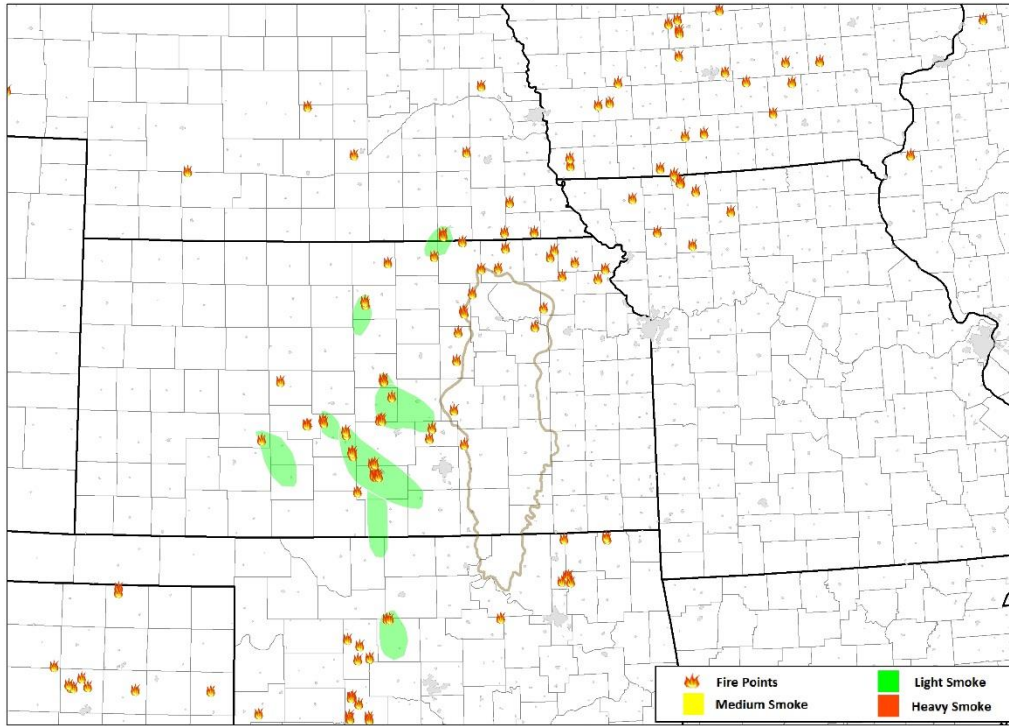
HMS Fire & Smoke Analysis March 28, 2018



Flint Hills Prescribed Fire Update

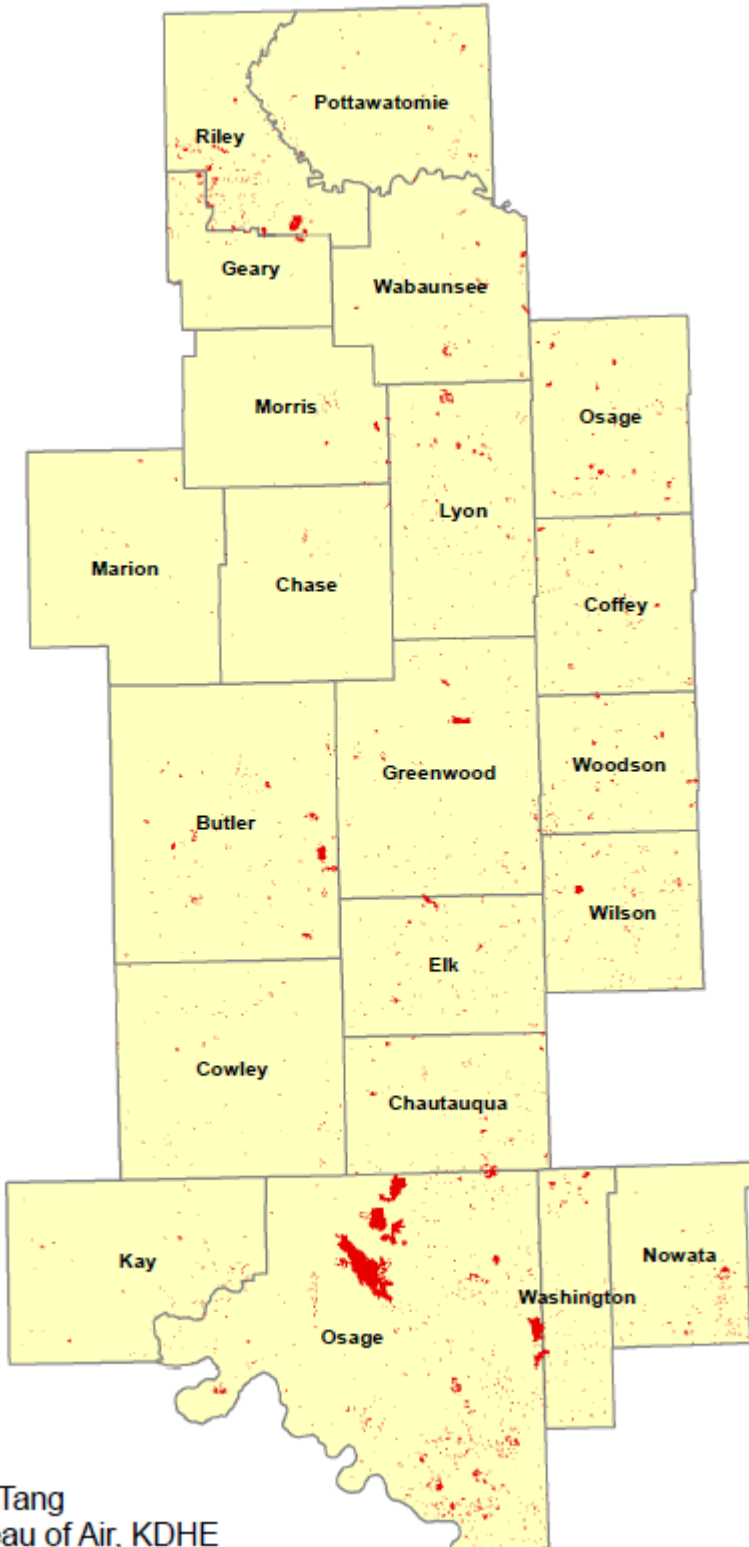


HMS Fire & Smoke Analysis March 29, 2018





Flint Hills Acreage Burned (February 17 – March 16, 2018)



<u>Counties</u>	<u>Acres Burned</u>	
Butler	7,599	*
Chase	803	*
Chautauqua	3,660	
Coffey	2,873	*
Cowley	1,792	
Elk	3,460	
Geary	2,100	*
Greenwood	4,525	
Lyon	4,912	*
Marion	602	*
Morris	1,467	*
Osage (KS)	4,016	*
Pottawatomie	2,131	*
Riley	8,093	*
Wabaunsee	3,135	*
Wilson	3,938	*
Woodson	3,012	
Nowata (OK)	3,336	*
Osage (OK)	61,067	
Washington (OK)	3,336	*
Kay (OK)	1,869	
Total	127,726	
* Denotes county was partly or completely covered by clouds during latest analysis.		

Yao Tang
Bureau of Air, KDHE

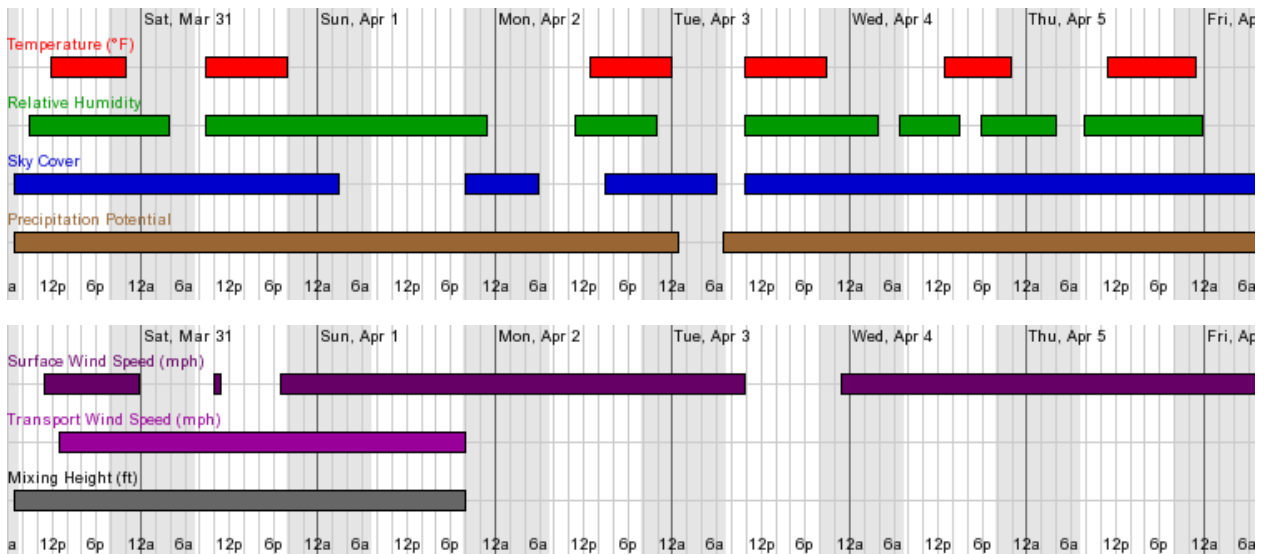


Upcoming Look at Fires and Smoke

Light and variable winds this morning should become steady out of the south today with clear skies and otherwise ideal weather conditions. Look for ample burning to take place across the entire Flint Hills and surrounding areas. Transport winds will also be southerly, look for smoke to be transported throughout the Flint Hills and northward into far southeast Nebraska, northwest Missouri, and into Iowa.

Winds will increase Friday night and continue to be breezy throughout Saturday, likely inhibiting burning for most areas. Chilly temperatures are forecast for Sunday under cloudy skies which will also lead to minimal burning. Monday looks to remain mostly cloudy but warmer, there may be the opportunity for some prescribed fire to take place. Strong northwest winds return on Tuesday with a chance of rain early – most likely a minimal burning day. Warmer temperatures return for Wednesday and Thursday of next week, although winds may be more towards the breezy side there may be a potential for burning both days if the forecast holds.

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 March 30, 2018.