

Flint Hills Prescribed Fire Update

April 28, 2017

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



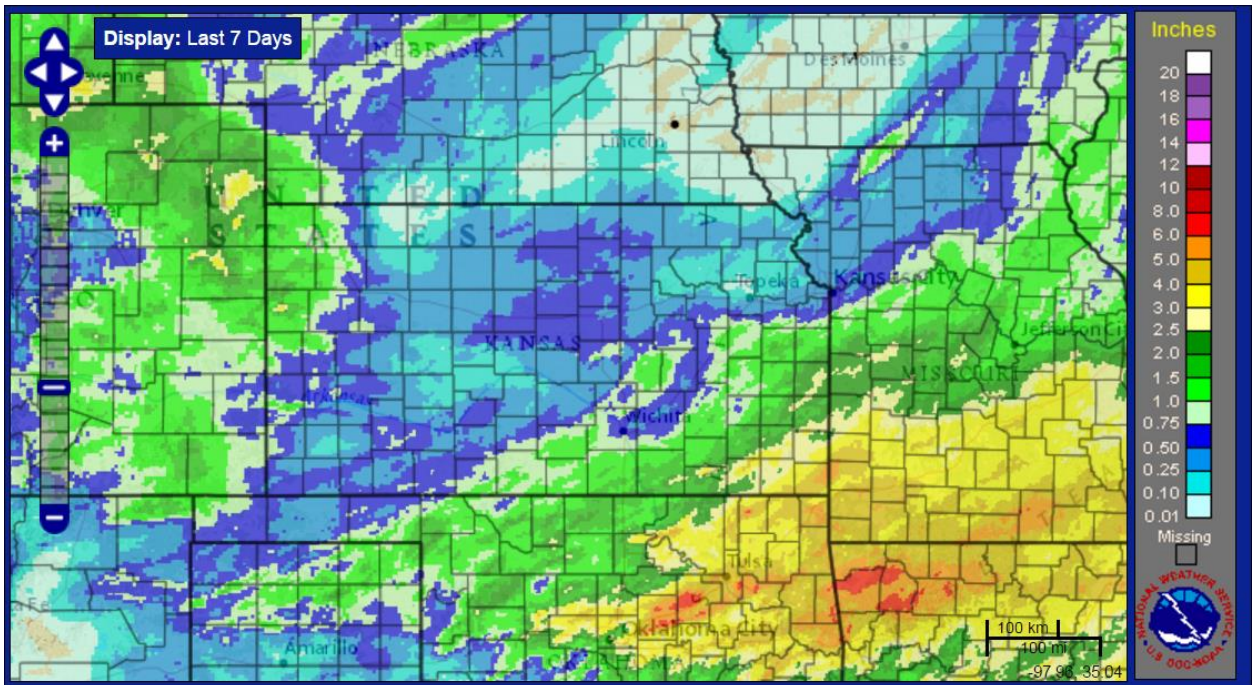


Meteorology

Areas of light rain fell on Friday (April 21) across much of the Flint Hills, and then a strong cold front brought showers and thunderstorms to the area Tuesday evening (April 25) and night as well. Additional rain occurred Thursday night (April 27) into this morning across the Flint Hills. Total rainfall amounts over the past week ranged from near a quarter-inch to more than three inches from north to south across the Flint Hills.

Temperatures were on the cooler side last Friday before rebounding into the 60s for last Saturday (April 22) and Sunday (April 23). It was warm and breezy on Monday (April 24) and Tuesday with gusts in the 30-40 mph range. A cold front pushed temperatures back into the low 50s for highs on Wednesday (April 26) and brought patchy frost to the Flint Hills for Thursday morning with lows well into the 30s.

Precipitation

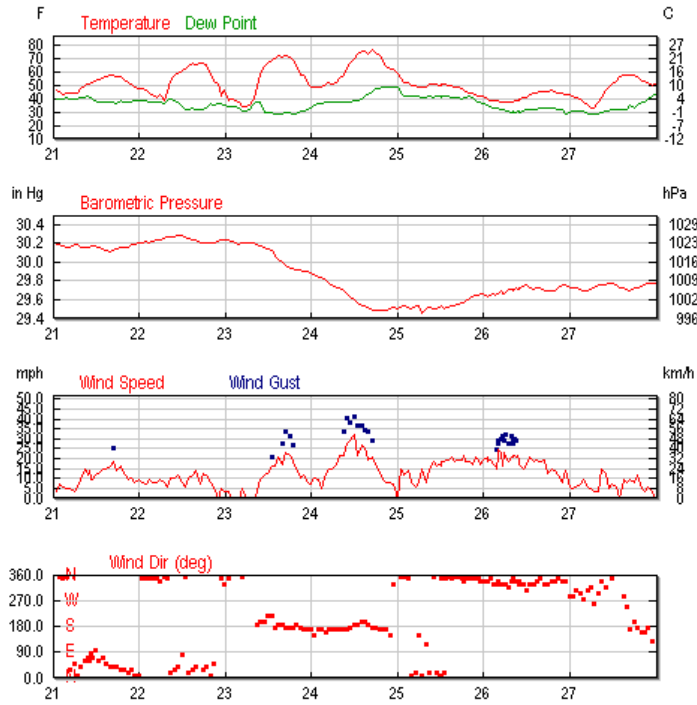


NOAA/NWS Observed Total Precipitation for April 21-27, 2017.

Flint Hills Prescribed Fire Update

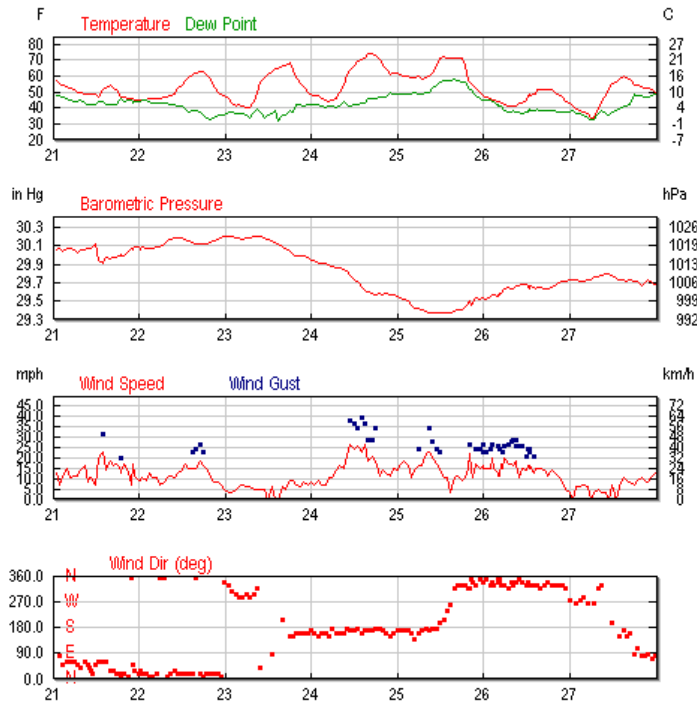


Lincoln, NE



Apr 21-27, 2017 Observed Weather from KLNK. Graphic: Weather Underground, Inc.

Emporia, KS



Apr 21-27, 2017 Observed Weather from KEMP. Graphic: Weather Underground, Inc.



Air Quality Data

Air quality data for the week of April 21-27, 2017.

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.

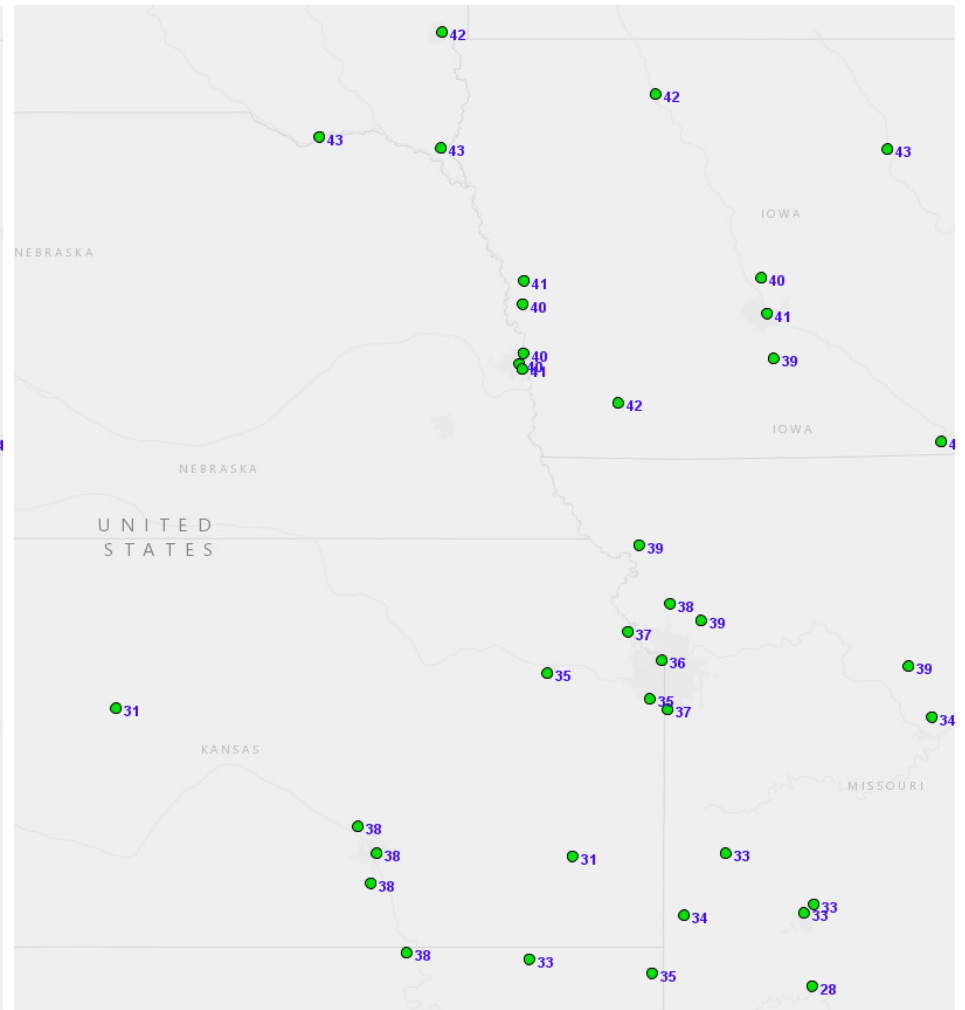
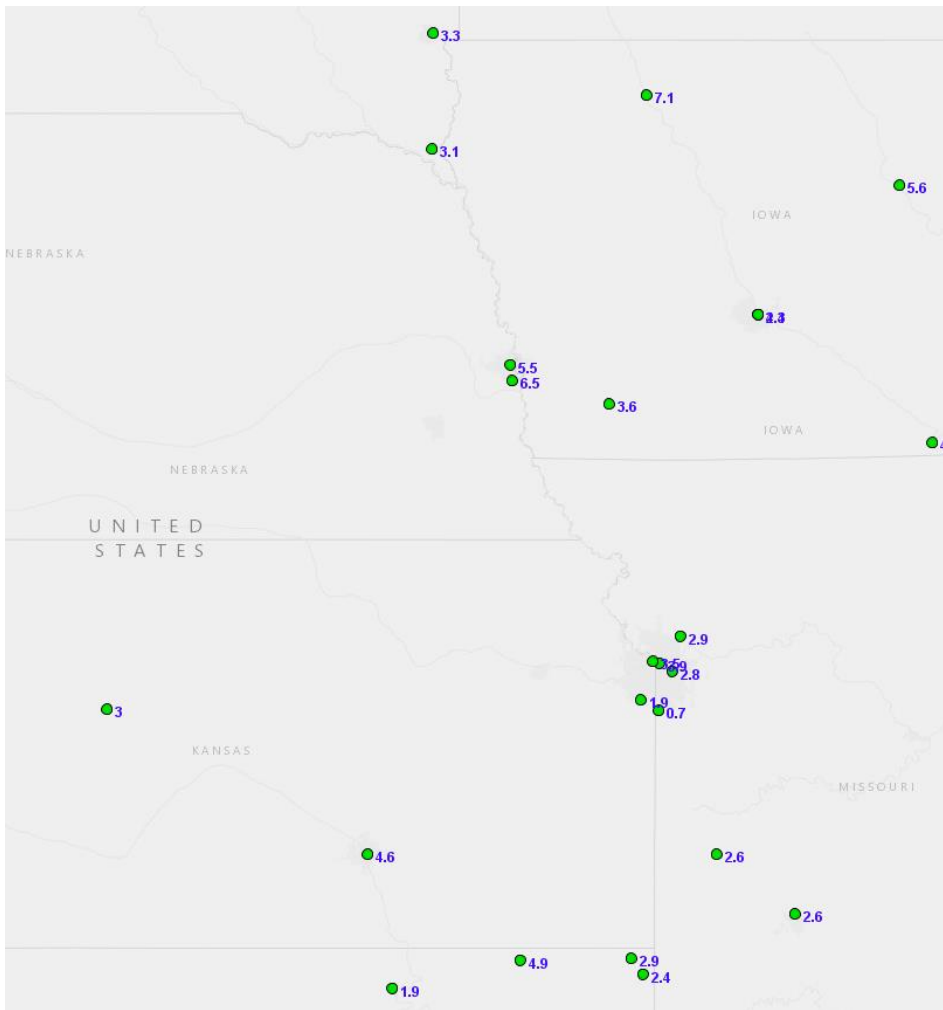
Flint Hills Prescribed Fire Update



Friday, April 21, 2017

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



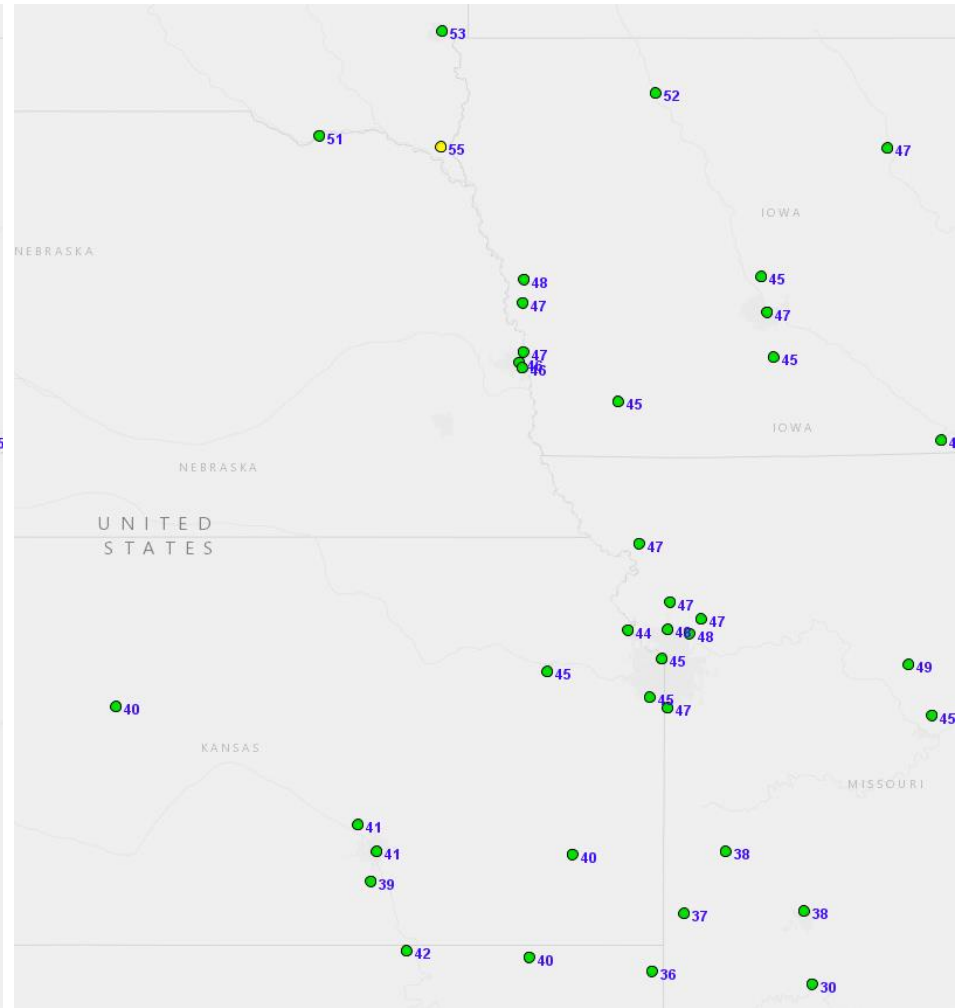
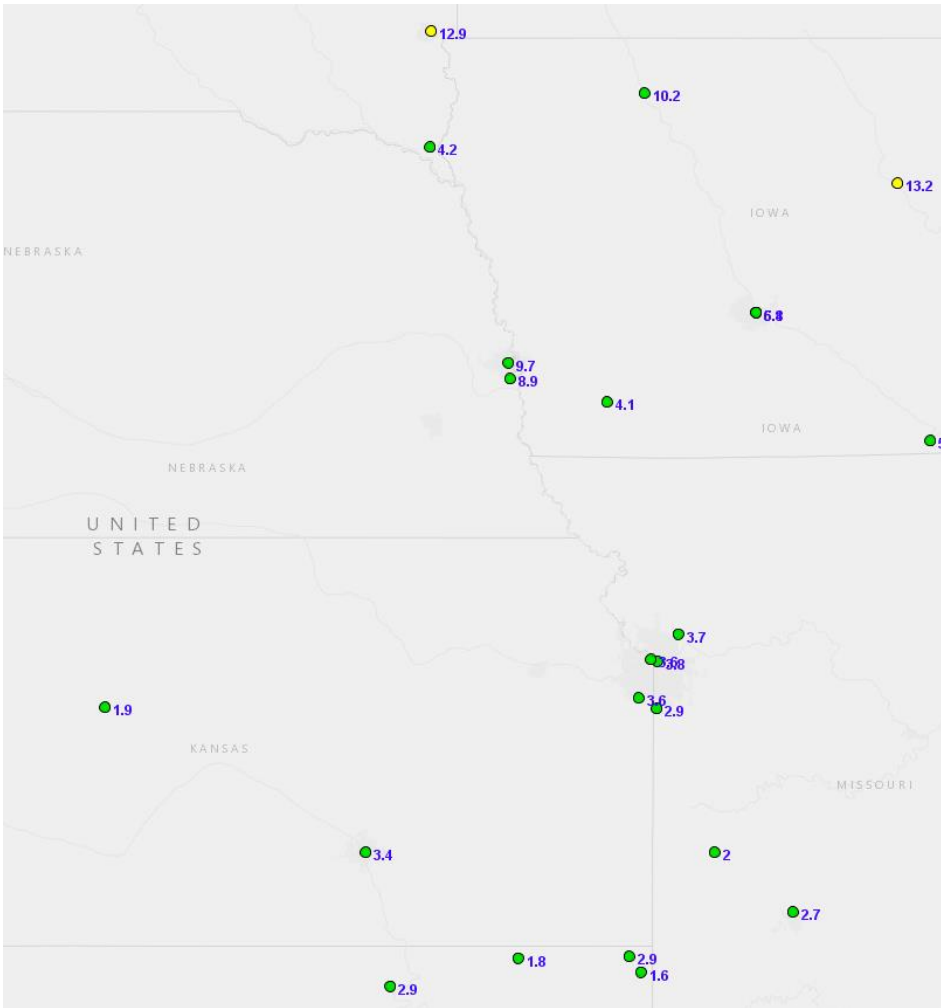
Flint Hills Prescribed Fire Update



Saturday, April 22, 2017

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



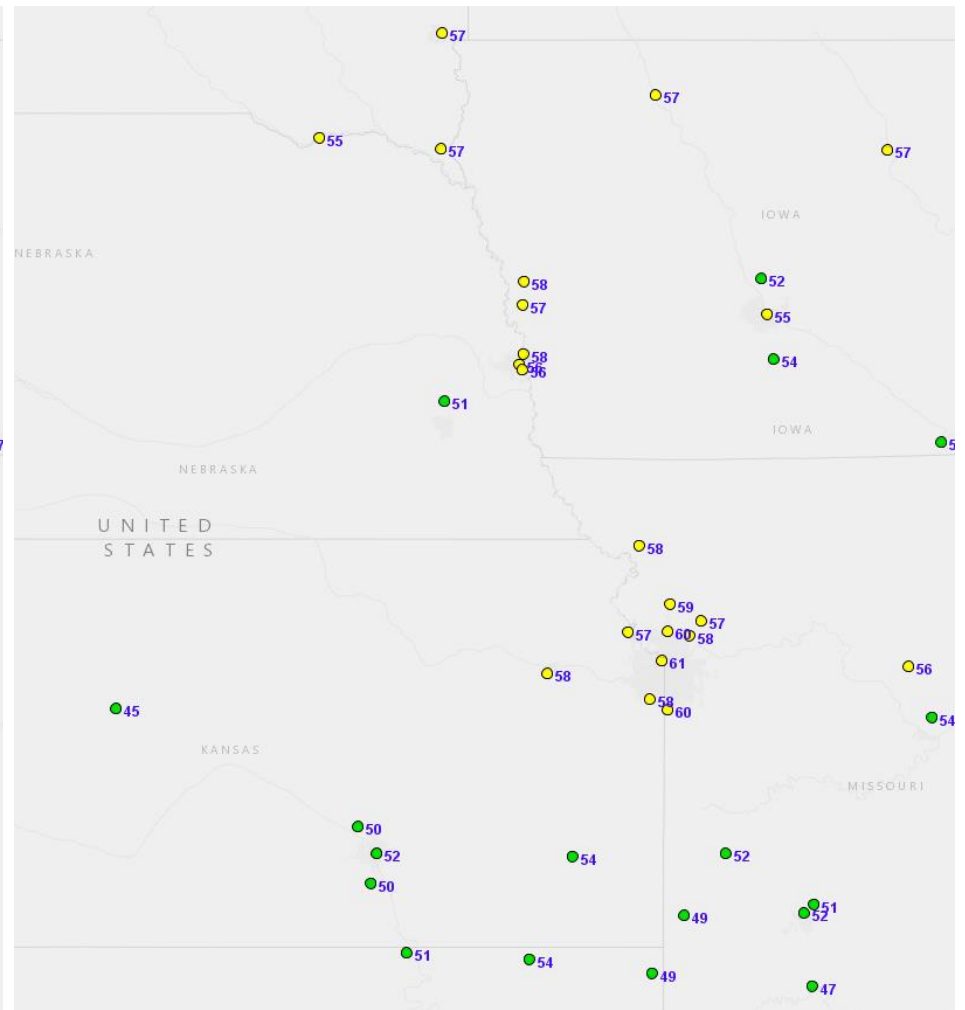
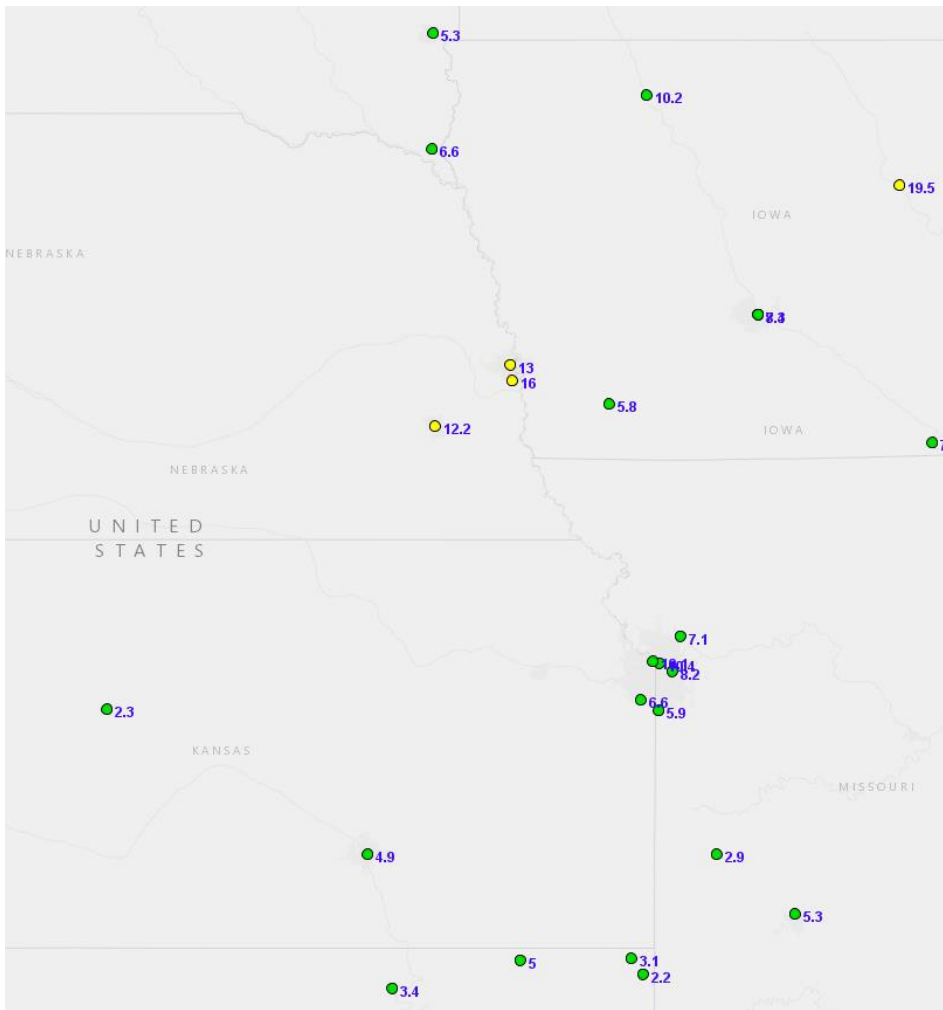
Flint Hills Prescribed Fire Update



Sunday, April 23, 2017

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



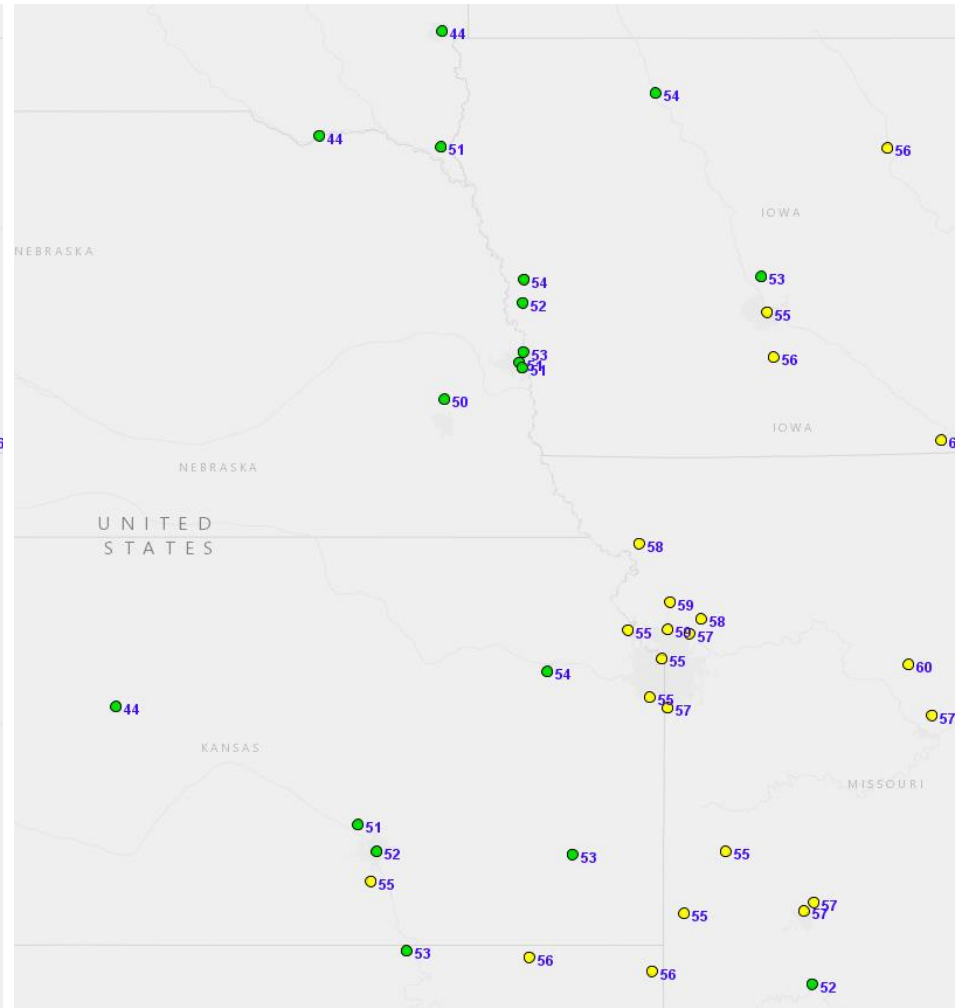
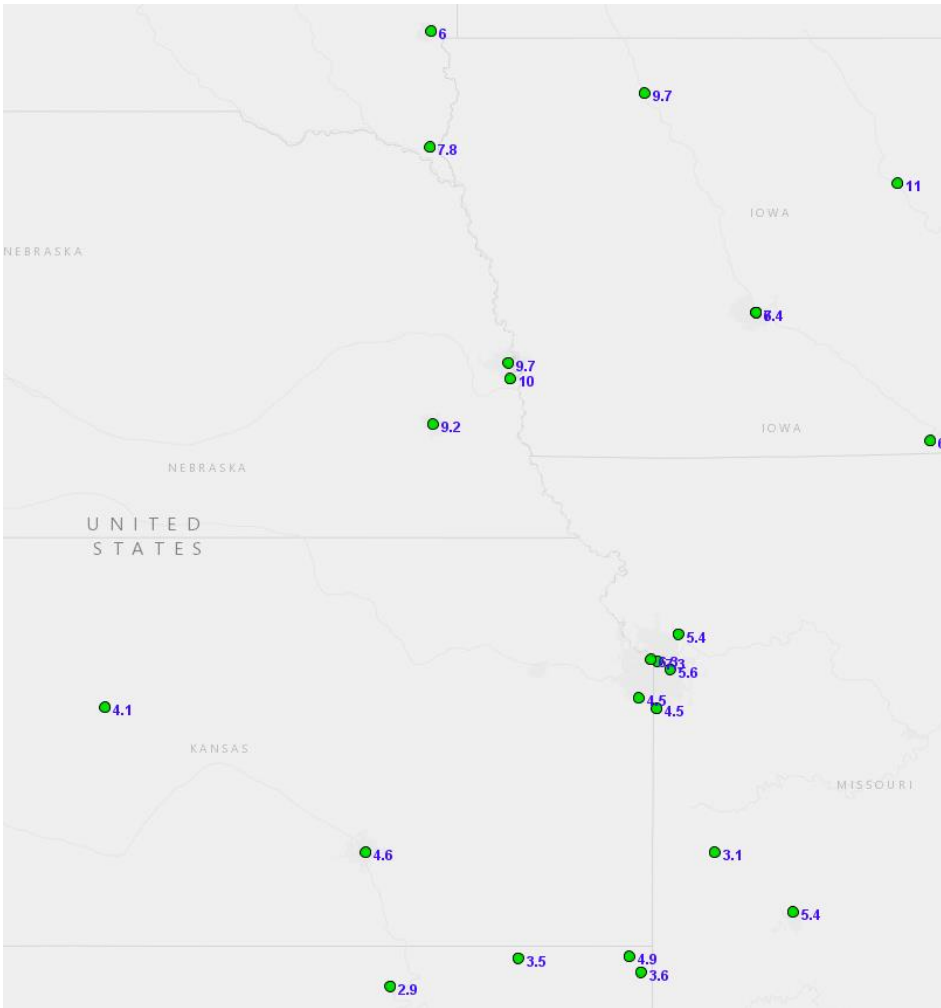
Flint Hills Prescribed Fire Update



Monday, April 24, 2017

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



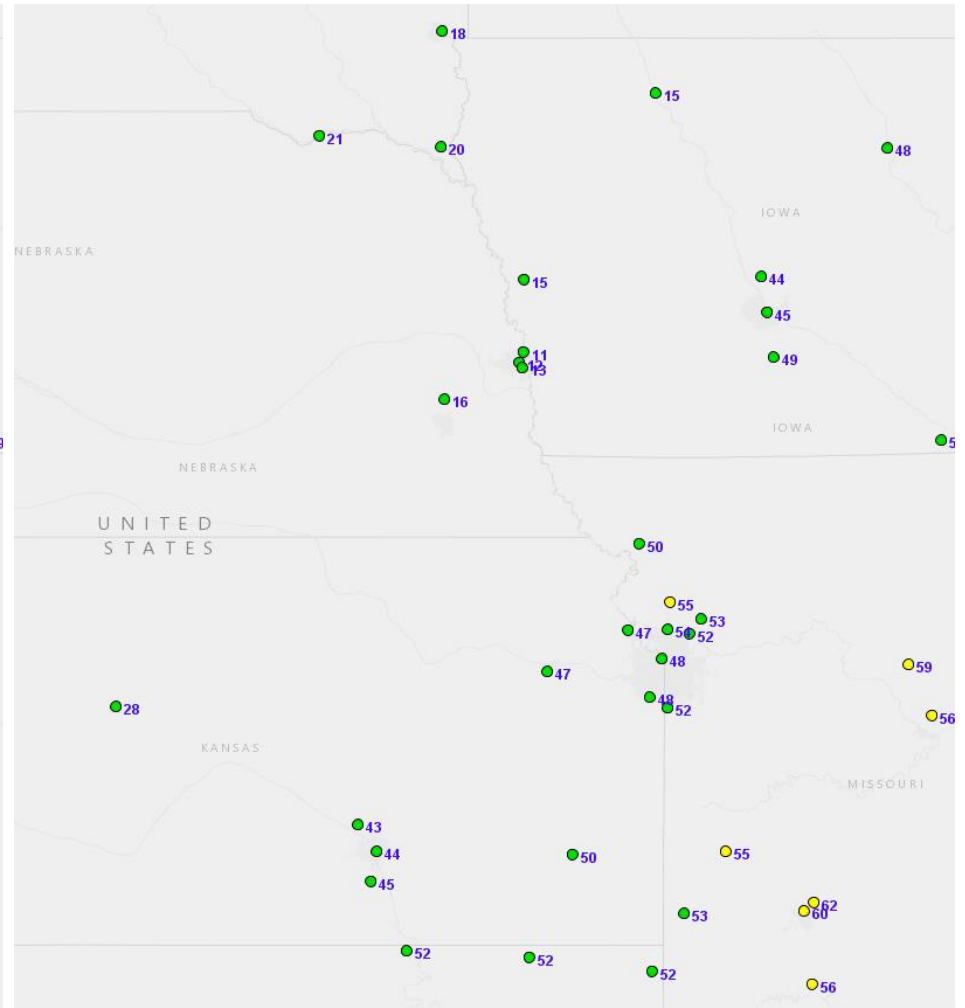
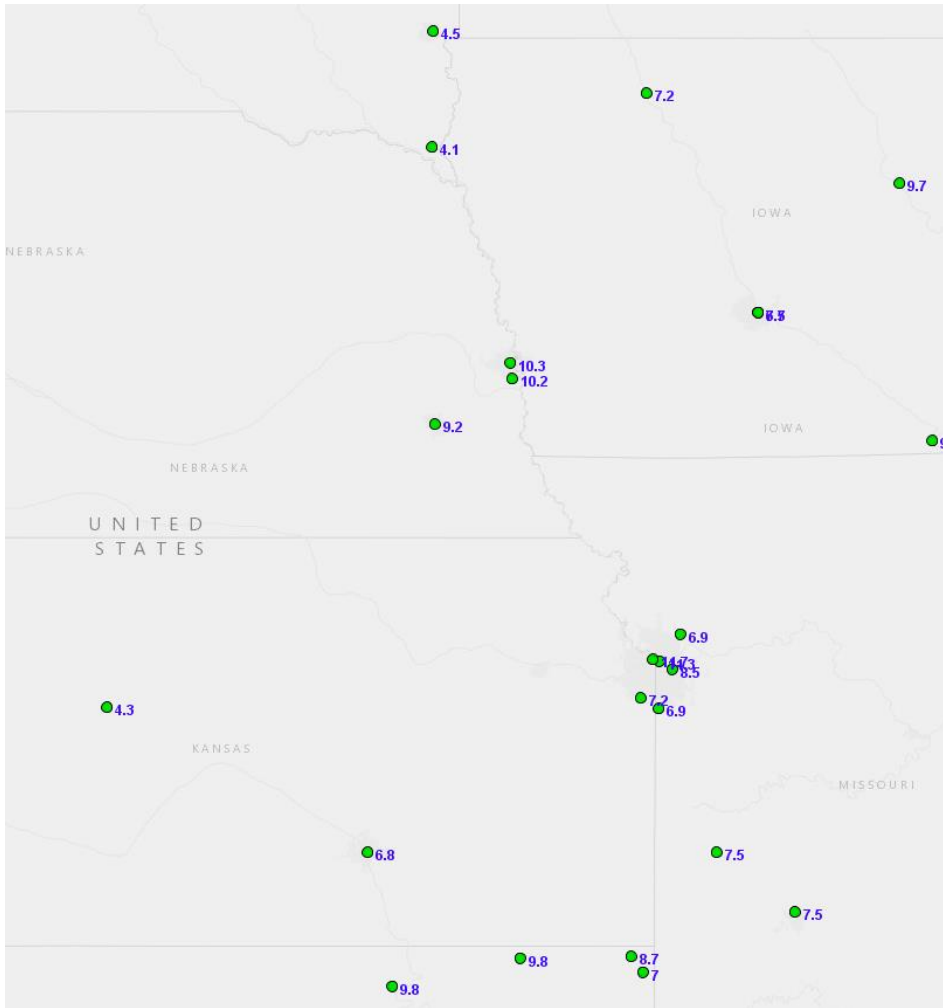
Flint Hills Prescribed Fire Update



Tuesday, April 25, 2017

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



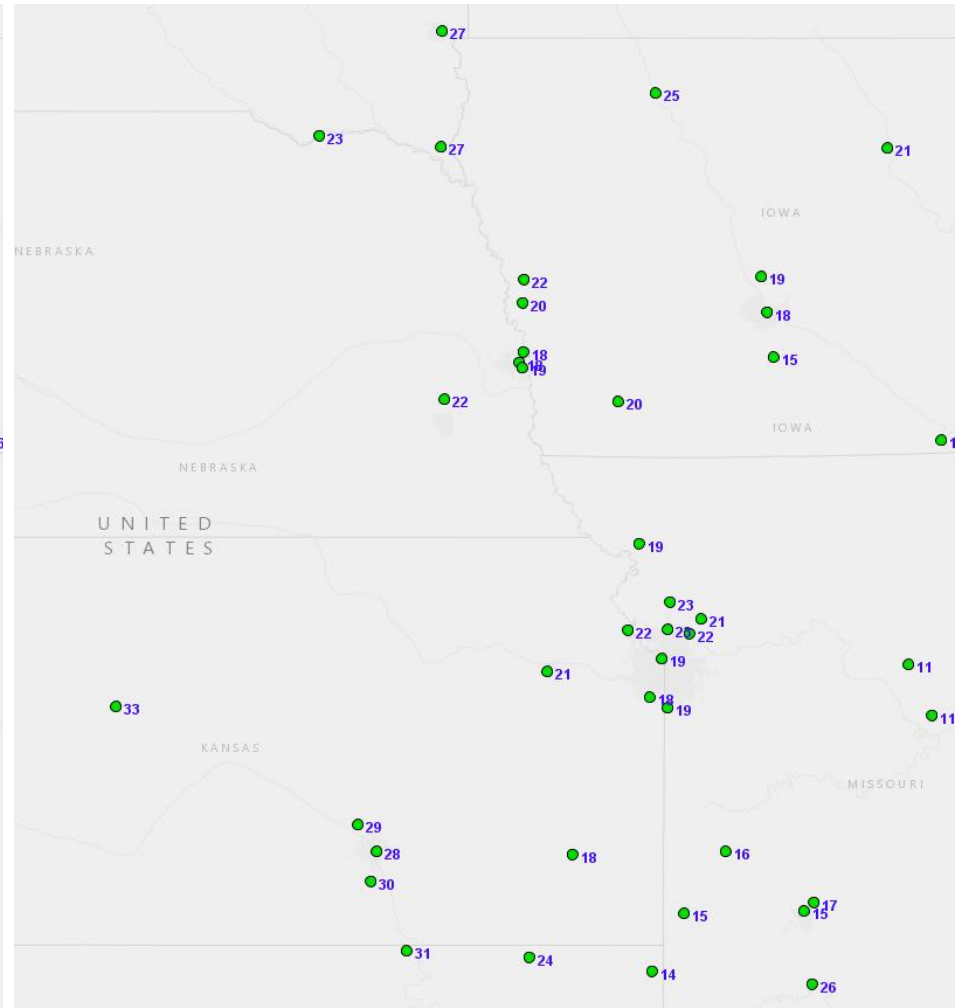
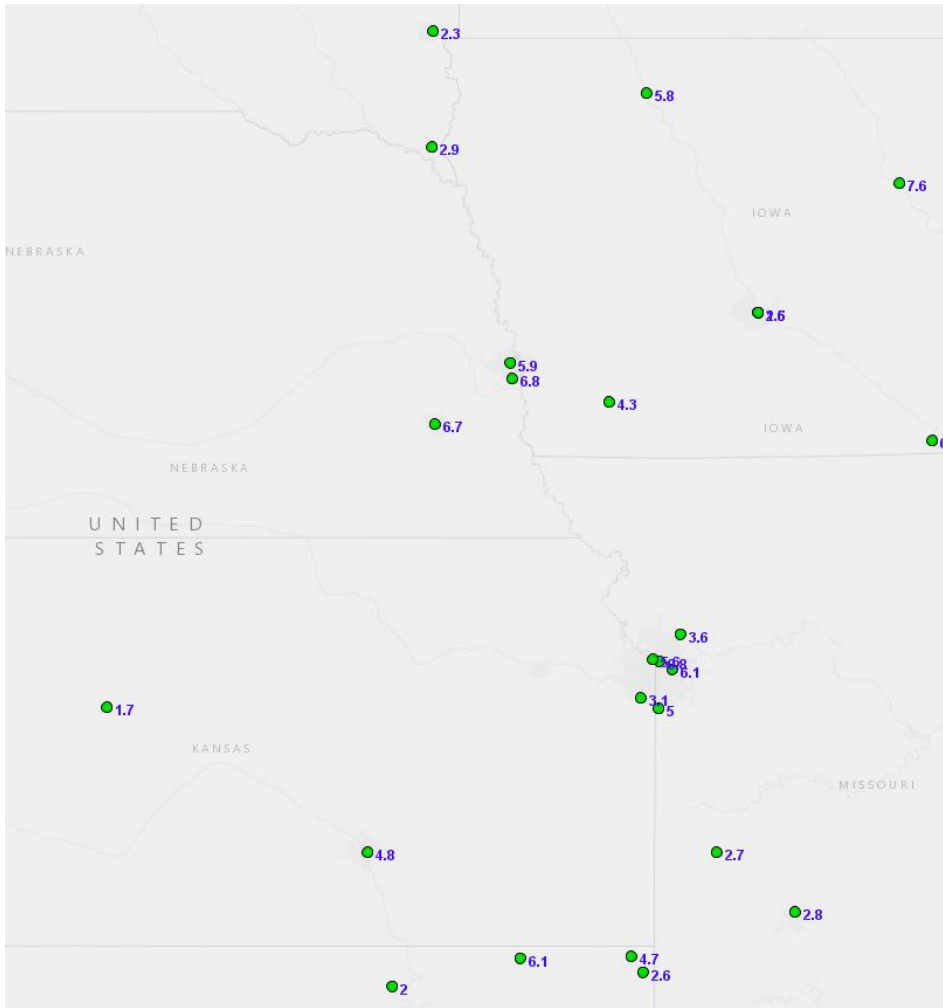
Flint Hills Prescribed Fire Update



Wednesday, April 26, 2017

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



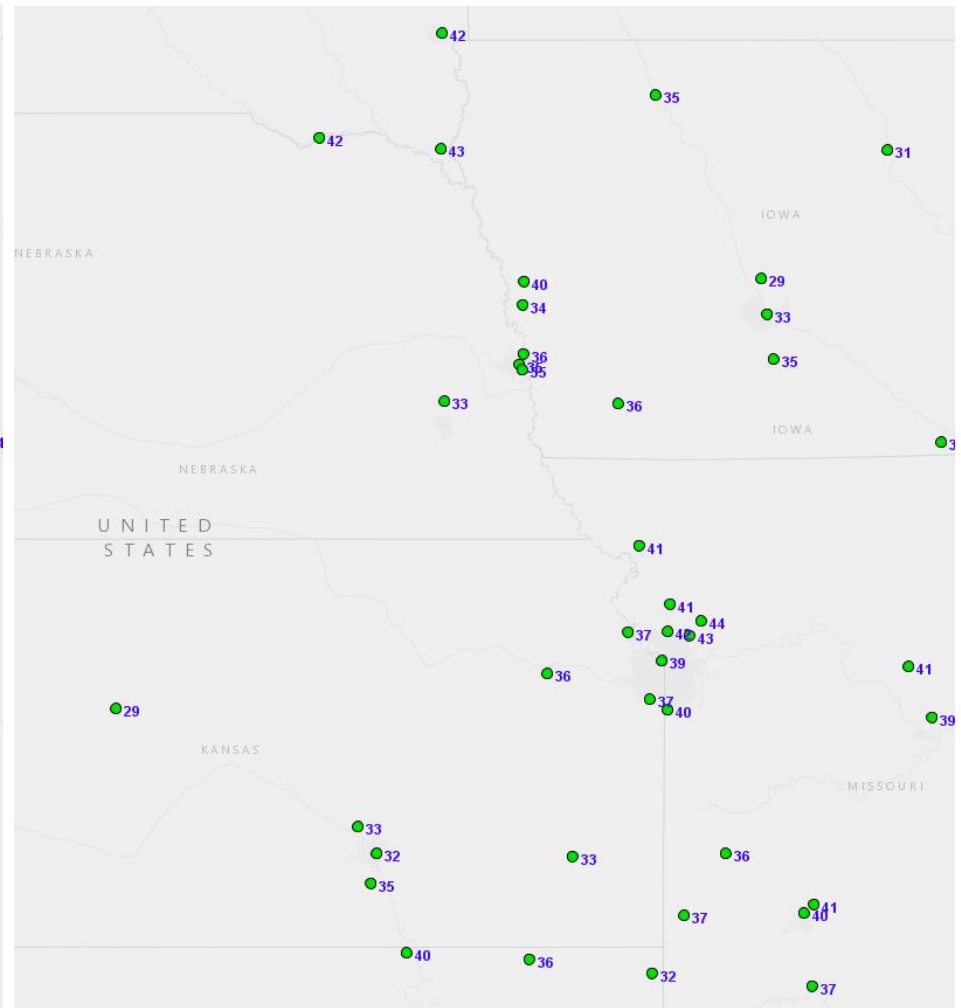
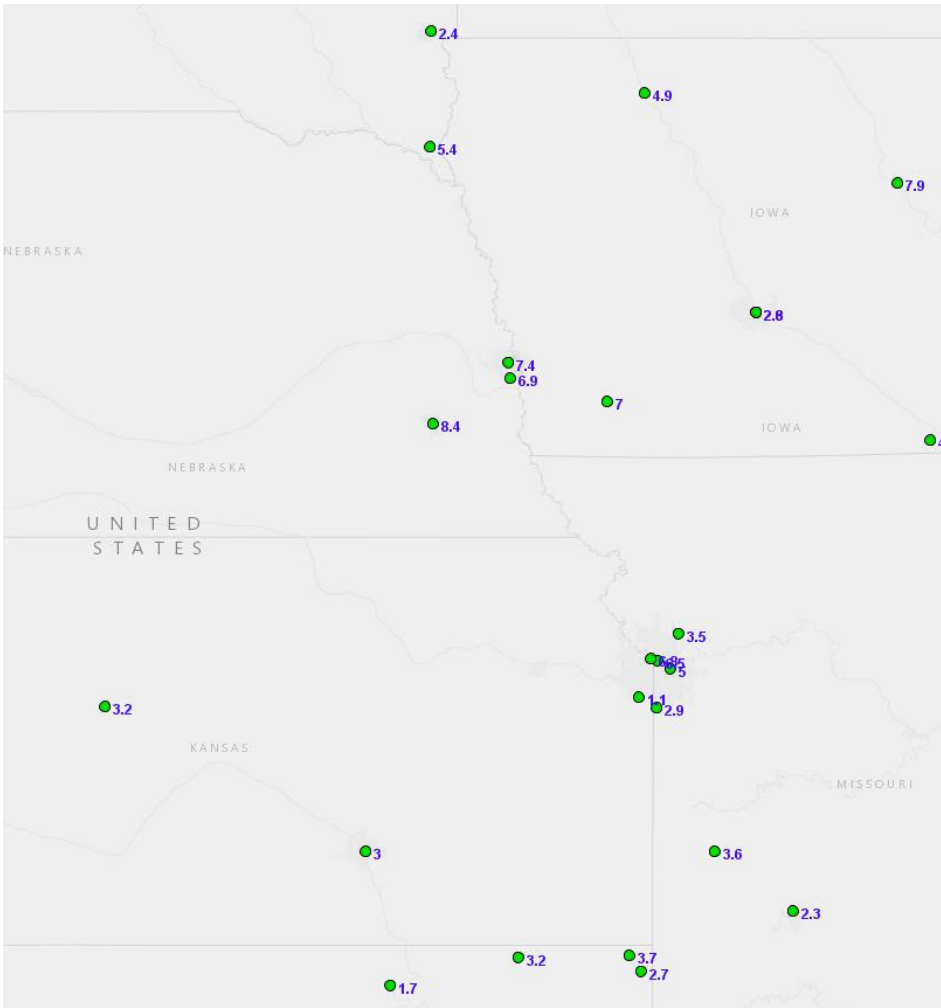
Flint Hills Prescribed Fire Update



Thursday, April 27, 2017

PM2.5 (24-hour average)

Ozone (8-hour average maximum)





Fires and Smoke

Rain showers on Friday (April 21) and cloud cover lent to zero burns being detected across the Flint Hills. Clearing skies and light winds allowed for the opportunity to burn over the weekend on Saturday (April 22) and Sunday (April 23) and a handful of fires were detected on each of those days.

A handful of burns occurred on Monday (April 24) within the Flint Hills. Somewhat breezy conditions and an incoming storm system with showers and thunderstorms on Tuesday (April 25) led to minimal burning. Stronger winds and cooler temperatures led to near zero prescribed burns on Wednesday (April 26). While skies cleared somewhat on Thursday (April 27), only a few prescribed fires were analyzed across the area.

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

KSFIRE.ORG

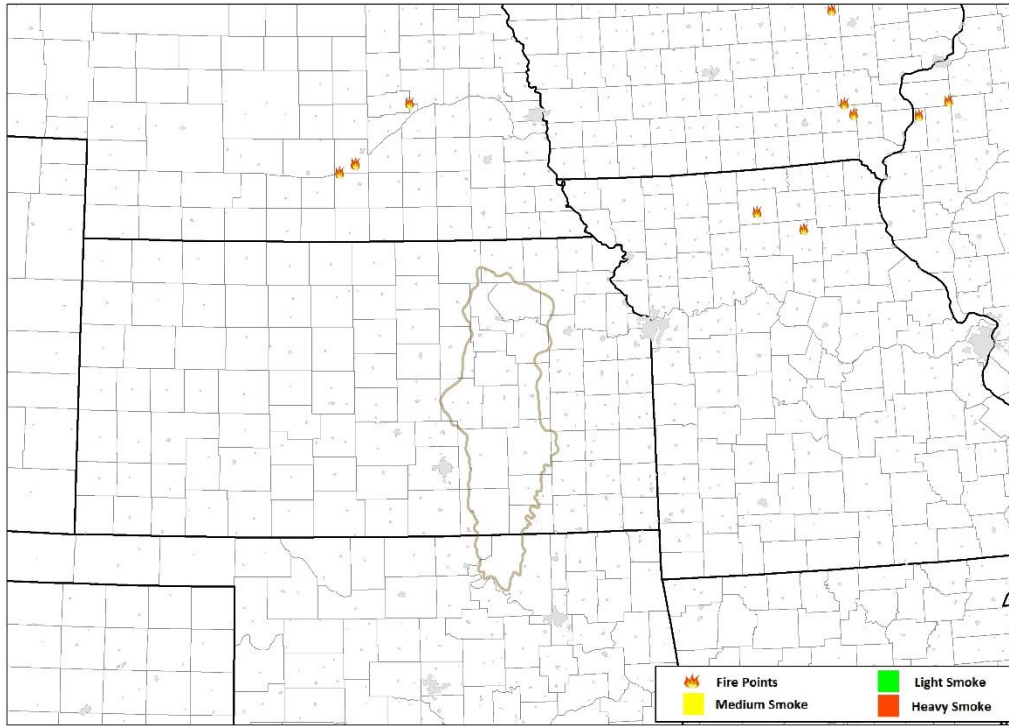


This website was developed as part of the development of the Kansas Flint Hills Smoke Management Plan. Kansas State University hosts the webpage and it includes important information for ranchers and others who might be interested in the Flint Hills. It provides training, regulations, policies, publications,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



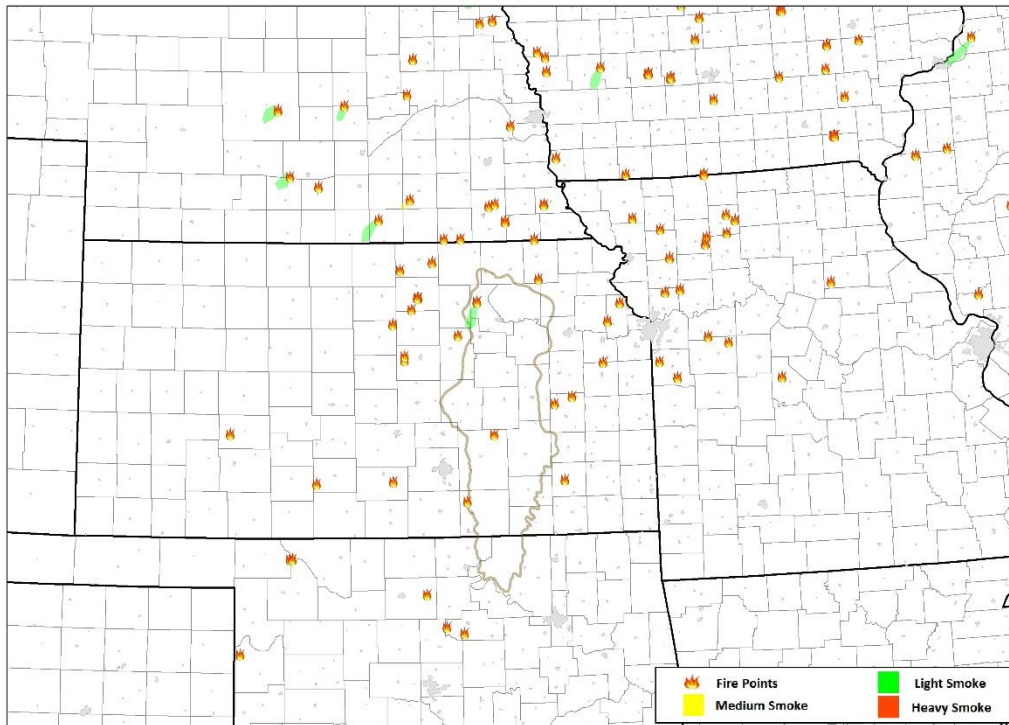
HMS Fire & Smoke Analysis April 21, 2017



Map: Jayson Prentice, KDHE Bureau of Air

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

HMS Fire & Smoke Analysis April 22, 2017



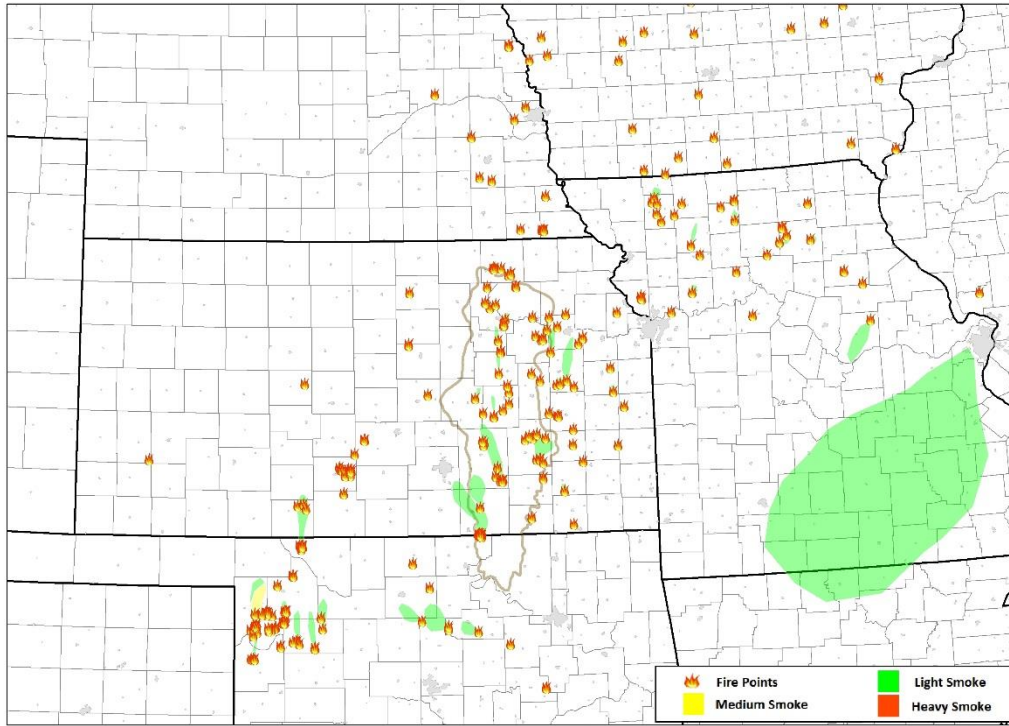
Map: Jayson Prentice, KDHE Bureau of Air

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

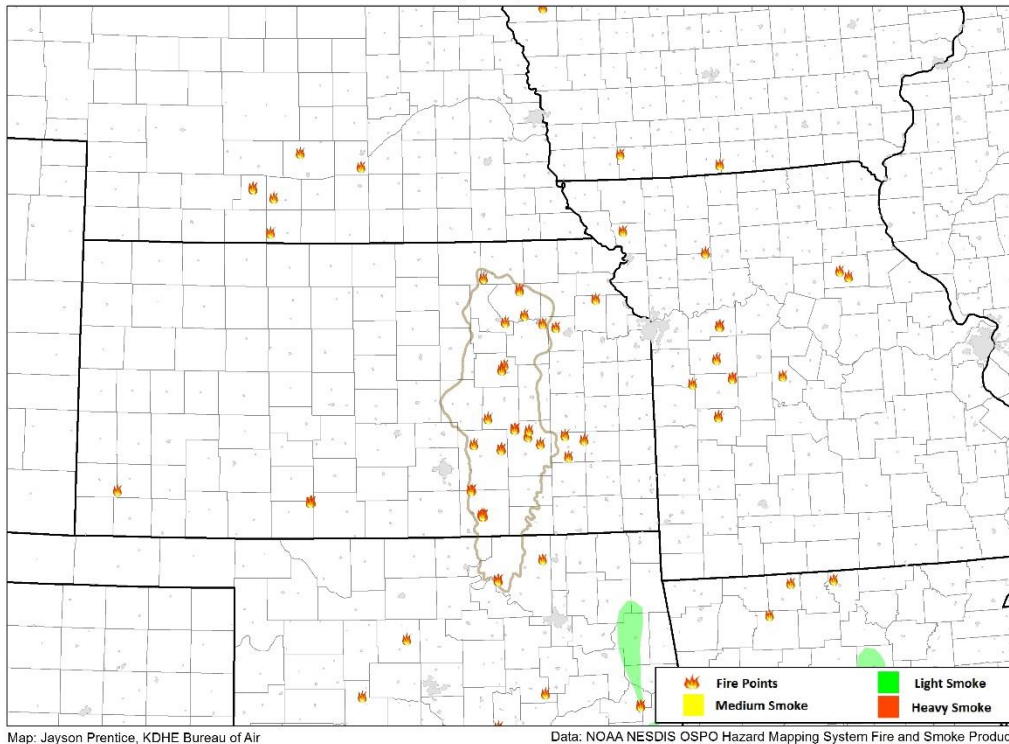
Flint Hills Prescribed Fire Update



HMS Fire & Smoke Analysis April 23, 2017



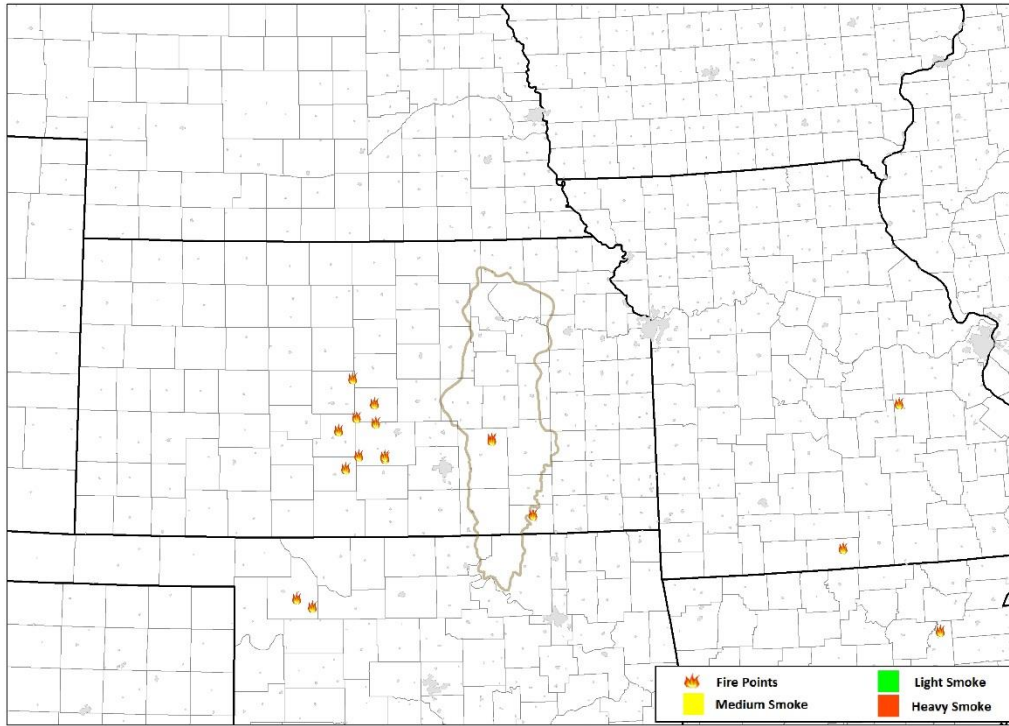
HMS Fire & Smoke Analysis April 24, 2017



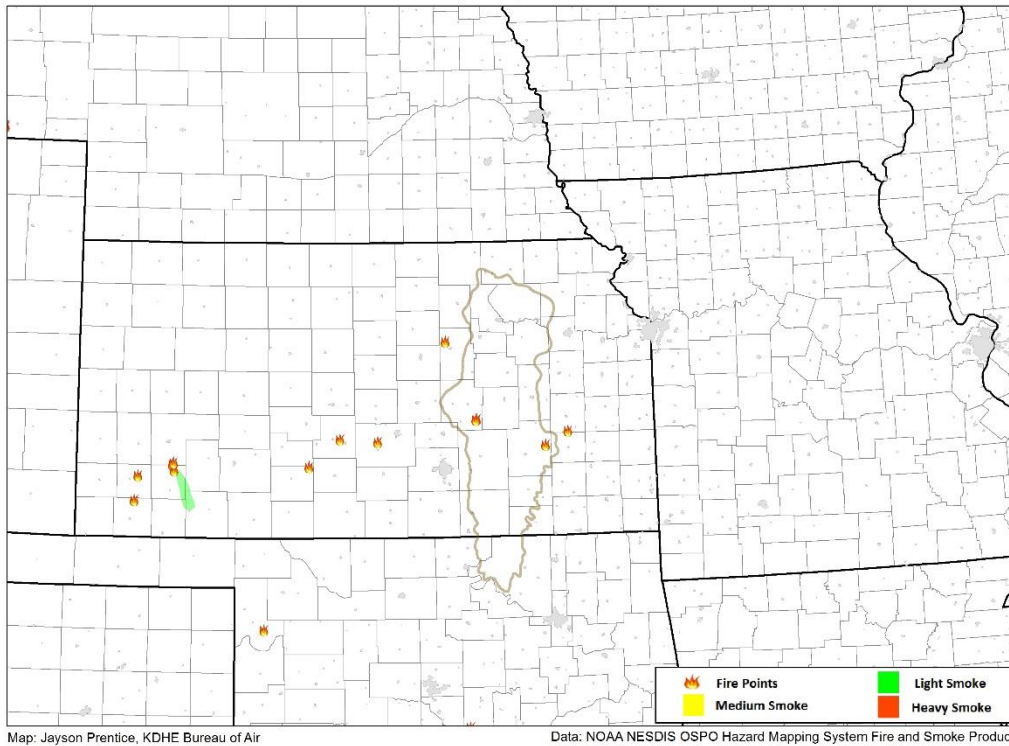
Flint Hills Prescribed Fire Update



HMS Fire & Smoke Analysis April 25, 2017



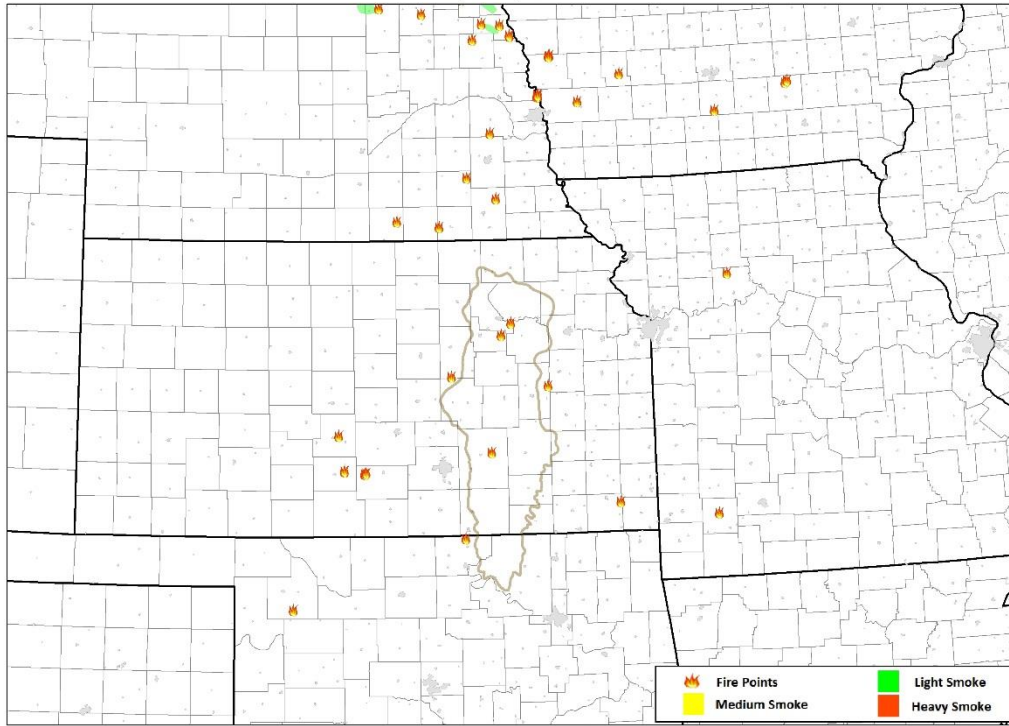
HMS Fire & Smoke Analysis April 26, 2017



Flint Hills Prescribed Fire Update



HMS Fire & Smoke Analysis April 27, 2017



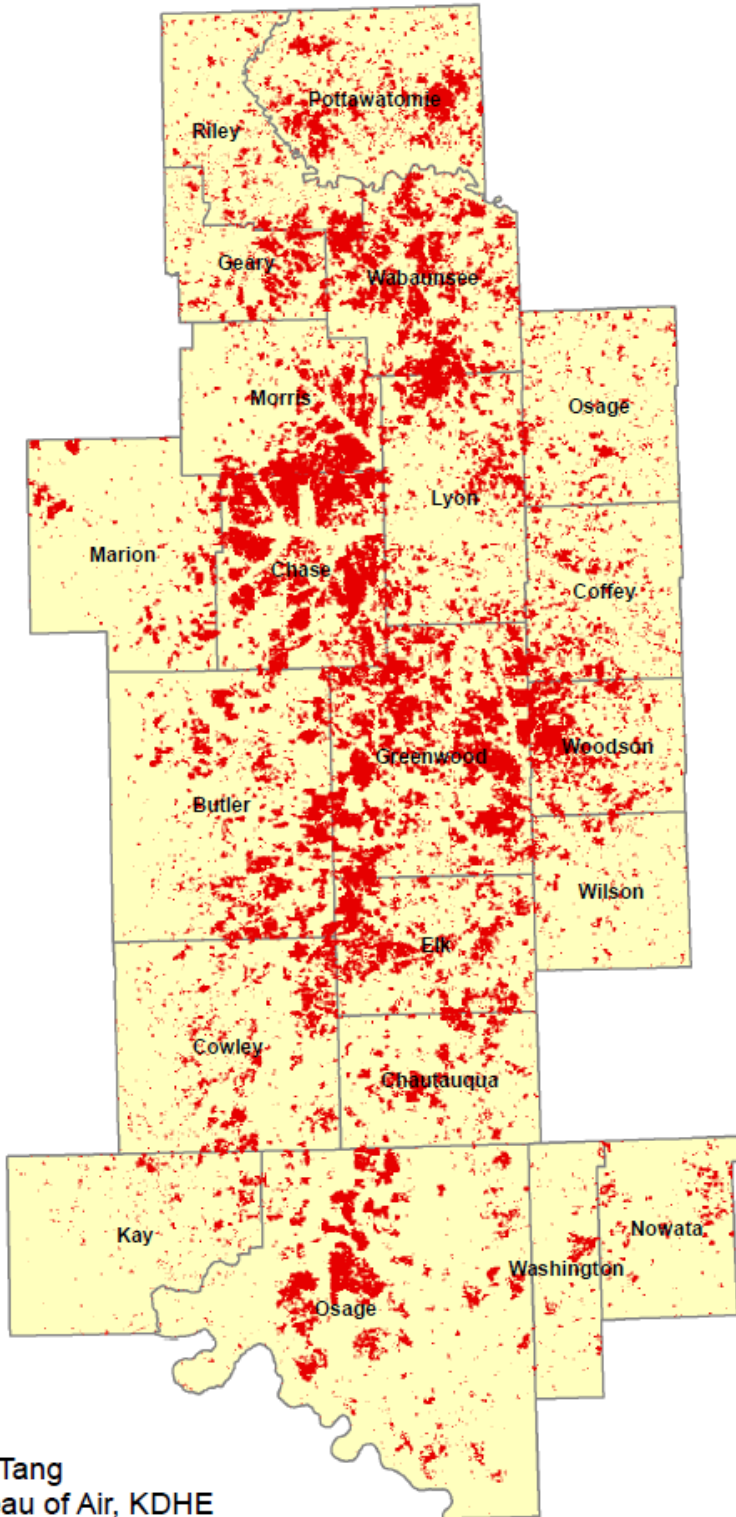
Map: Jayson Prentice, KDHE Bureau of Air

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

Flint Hills Prescribed Fire Update



Flint Hills Acreage Burned (February 15 – April 18, 2017)

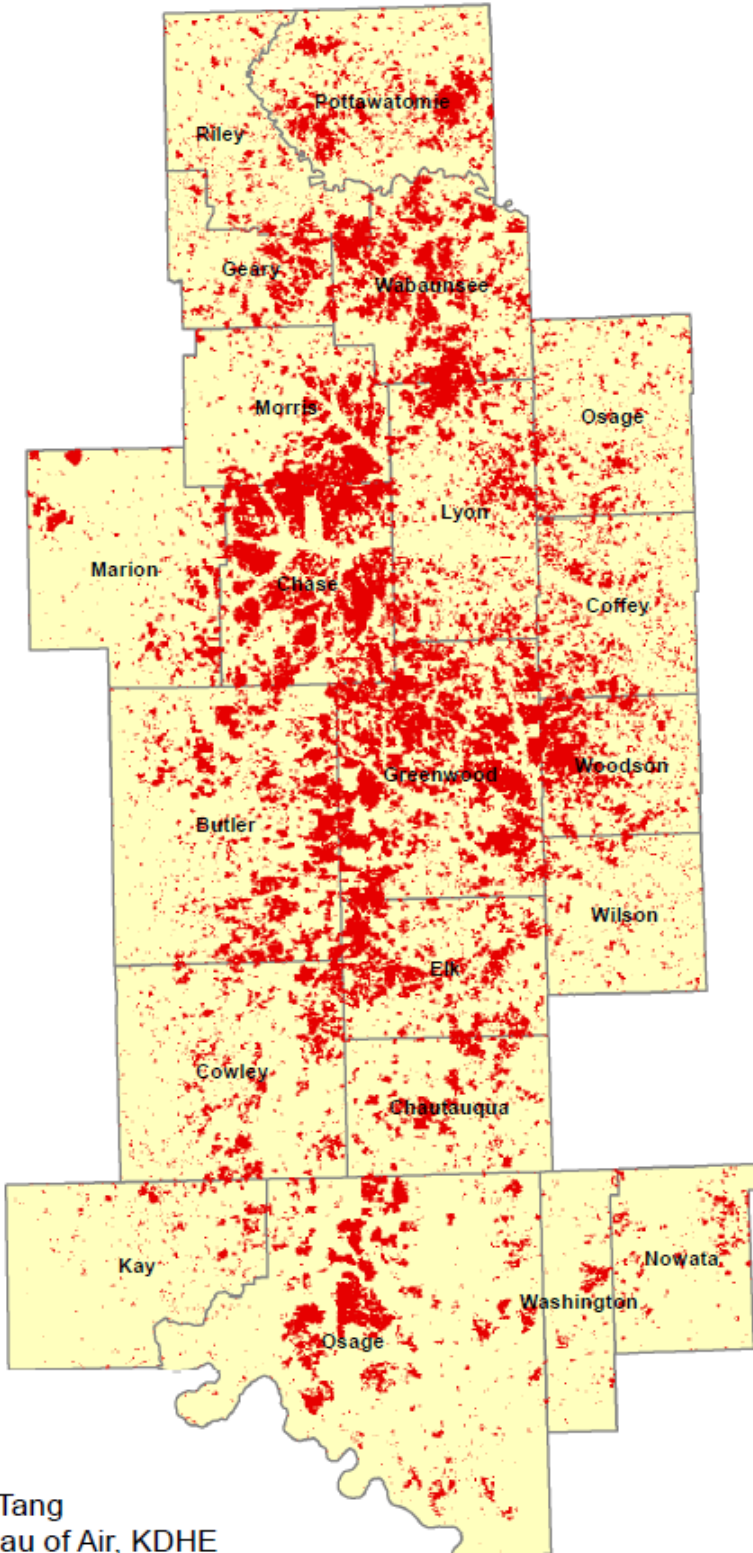


<u>Counties</u>	<u>Acres Burned</u>	
Butler	157,533	
Chase	222,538	
Chautauqua	57,438	
Coffey	63,384	
Cowley	92,388	
Elk	119,524	
Geary	53,531	
Greenwood	295,142	
Lyon	111,076	
Marion	48,712	
Morris	101,439	
Osage (KS)	41,422	*
Pottawatomie	106,365	*
Riley	49,514	*
Wabaunsee	172,946	
Wilson	23,089	*
Woodson	89,299	
Nowata (OK)	22,842	
Osage (OK)	169,579	*
Washington (OK)	13,498	
Kay (OK)	25,931	
Total	2,037,190	
<i>* Denotes county was partly or completely covered by clouds during analysis.</i>		

Yao Tang
Bureau of Air, KDHE



Flint Hills Acreage Burned (February 15 – April 23, 2017)



<u>Counties</u>	<u>Acres Burned</u>
Butler	191,387
Chase	248,655
Chautauqua	58,472
Coffey	74,921
Cowley	96,002
Elk	123,215
Geary	55,616
Greenwood	333,027
Lyon	130,907
Marion	56,866
Morris	107,323
Osage (KS)	55,909
Pottawatomie	109,408
Riley	51,491
Wabaunsee	179,324
Wilson	29,035
Woodson	97,423
Nowata (OK)	24,047
Osage (OK)	170,861
Washington (OK)	13,931
Kay (OK)	26,796
Total	2,234,616
* Denotes county was partly or completely covered by clouds during analysis.	

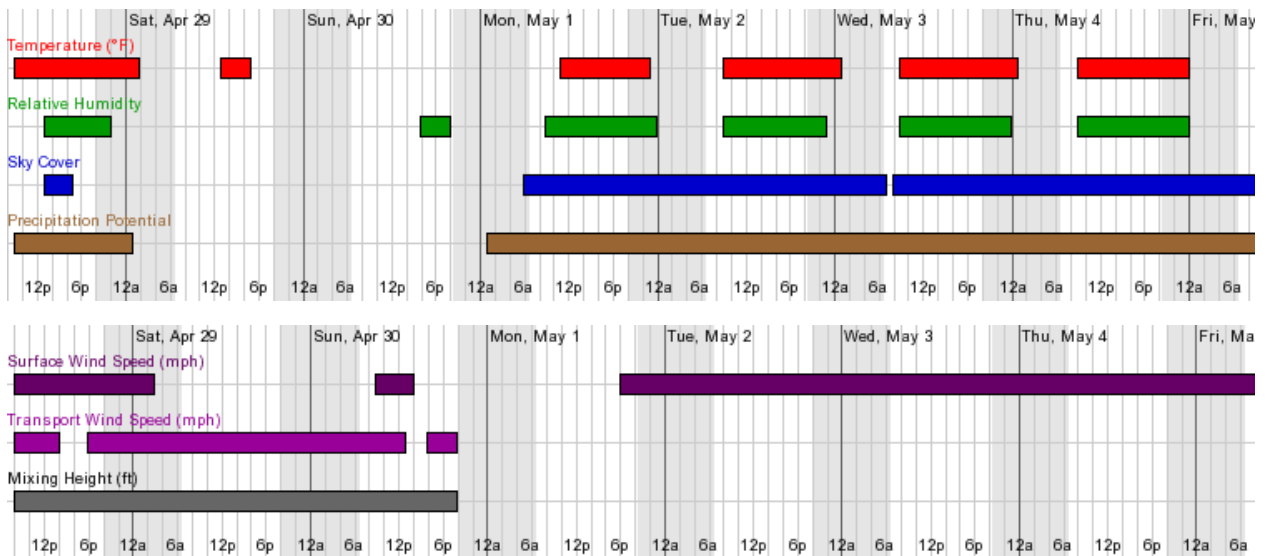
Yao Tang
Bureau of Air, KDHE



Upcoming Look at Fires and Smoke

An extended period of rain and chilly temperatures are expected this weekend before dry conditions return for Monday. Temperatures remain on the cool side, but gradually return to be more seasonable prior to mid-week. A low chance of rain returns for late Tuesday and early Wednesday. While opportunities exist for prescribed burns in the upcoming week it appears that wet conditions and new (green) growth are signaling the end of burn season across 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: 9am April 28, 2017.