

# Flint Hills Prescribed Fire Update

May 3, 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.

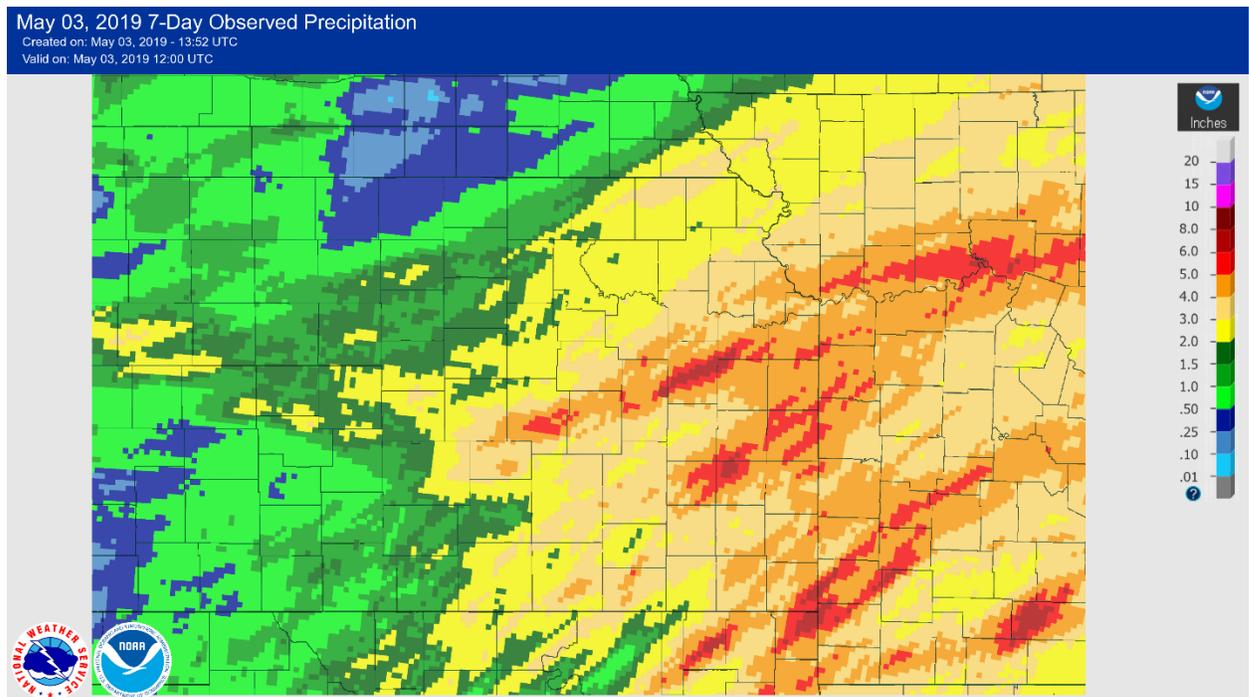




## Meteorology

Warm temperatures under an increasing south wind led to temperatures in the 70s last Friday (April 26) under mostly sunny skies. Winds shifted to the north on Saturday (April 27) and became gusty, with wind gusts as high as 40 mph; Temperatures also began to drop throughout the day after the cold front passed through. Temperatures attempted to rebound on Sunday (April 28) as the prior days cold front moved back north across the Flint Hills as a warm front. This also led to some showers and thunderstorms across primarily the northern Flint Hills Sunday afternoon/evening. Temperatures flattened in the 50s and 60s for Monday-Wednesday (April 29 – May 1) with periods of showers and thunderstorms, some severe and many with heavy rain. Some light rain lingered into Thursday (May 2) as the sun peaked through at times, but conditions overall began to dry. Precipitation totals were very heavy across the Flint Hills over the past seven days with totals ranging from approximately two to six inches of rain.

## Precipitation

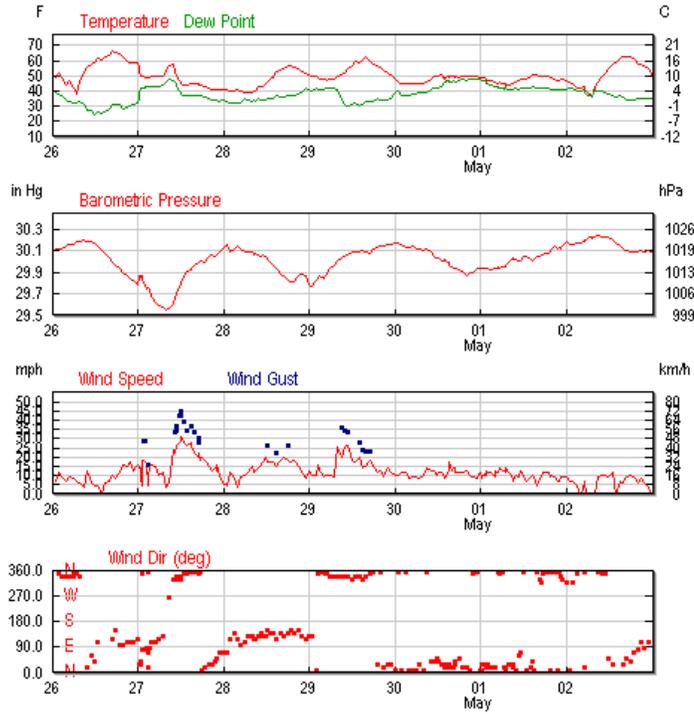


NOAA/NWS Observed Total Precipitation for April 26 – May 2, 2019.

# Flint Hills Prescribed Fire Update

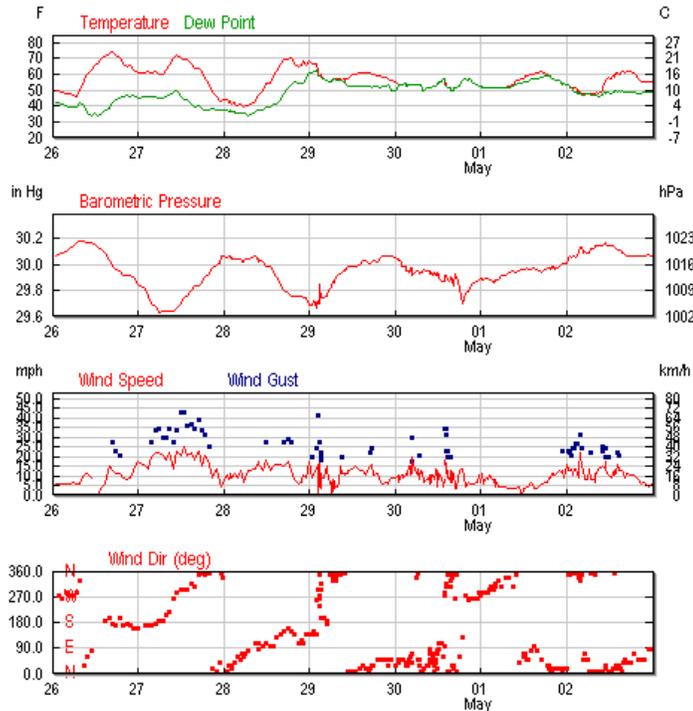


## Lincoln, NE



April 26 – May 2, 2019 Observed Weather from KLNK. Graphic: Weather Underground, Inc.

## Emporia, KS



April 26 – May 2, 2019 Observed Weather from KEMP. Graphic: Weather Underground, Inc.



## Air Quality Data

Air quality data for the period of April 26 – May 2, 2019:

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

**PM<sub>2.5</sub>:** 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.

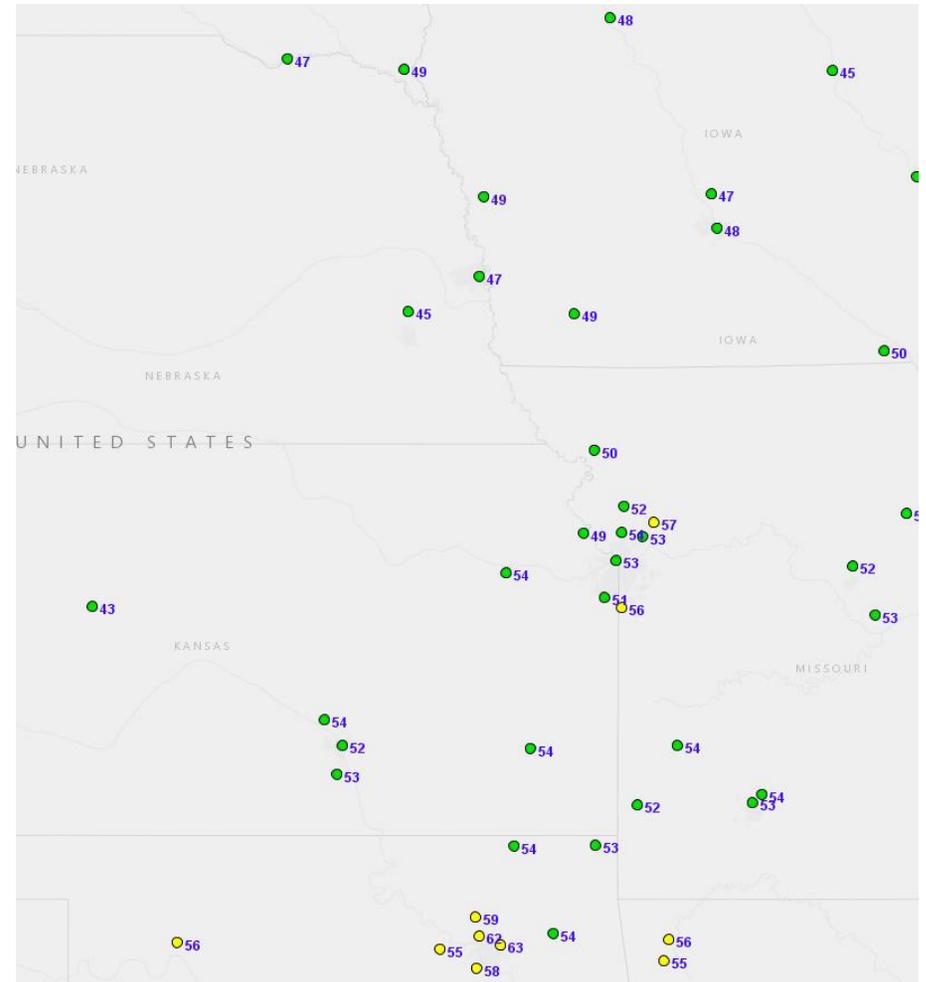
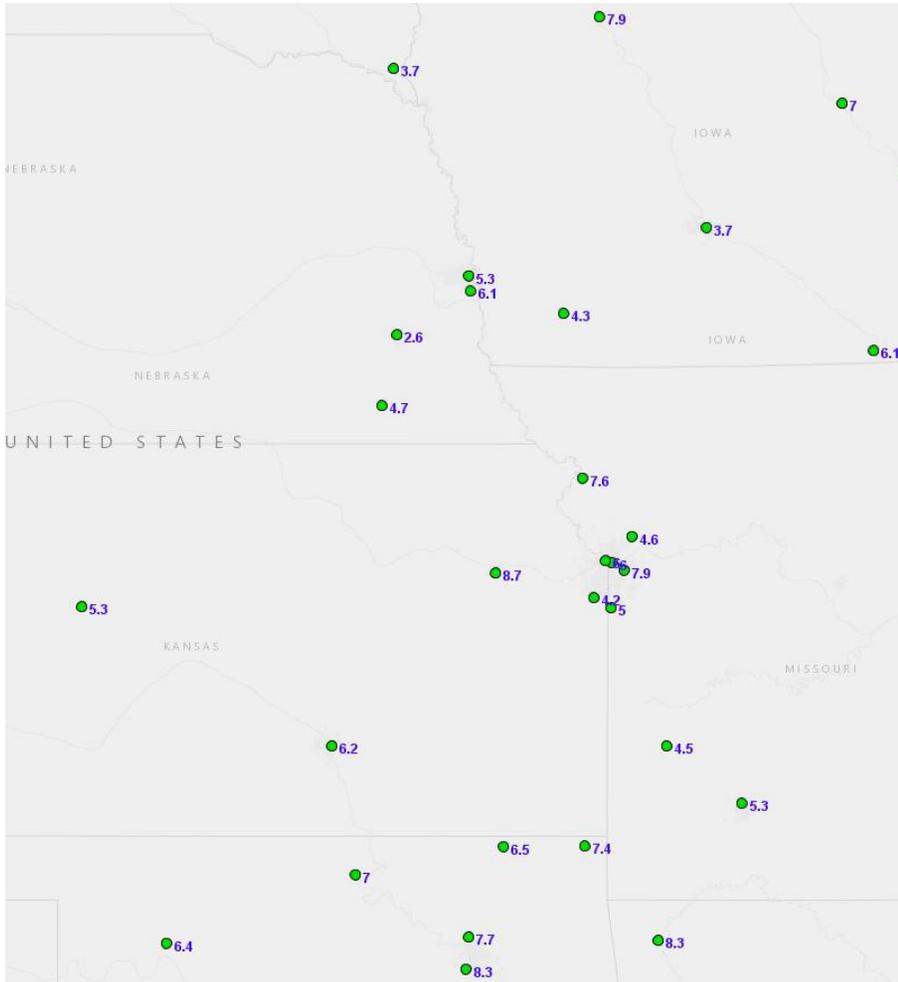
# Flint Hills Prescribed Fire Update



Friday, April 26, 2019

PM2.5 (24-hour average)

Ozone (8-hour average maximum)

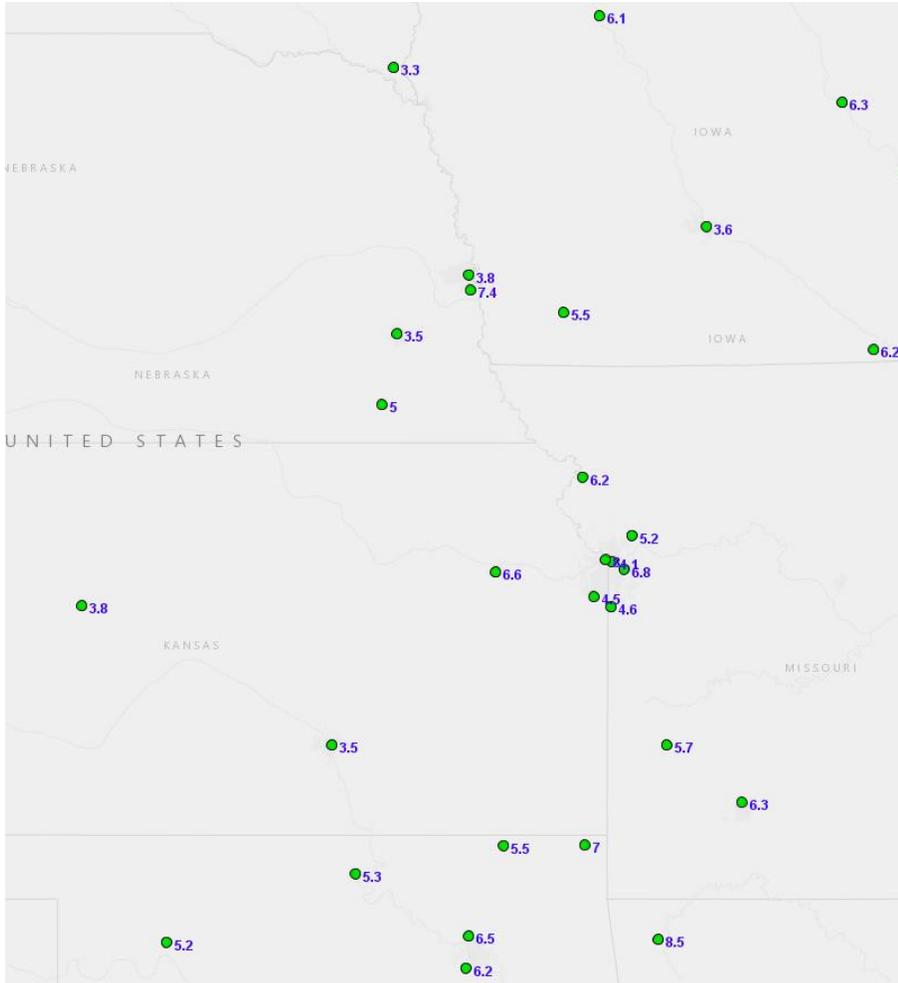


# Flint Hills Prescribed Fire Update

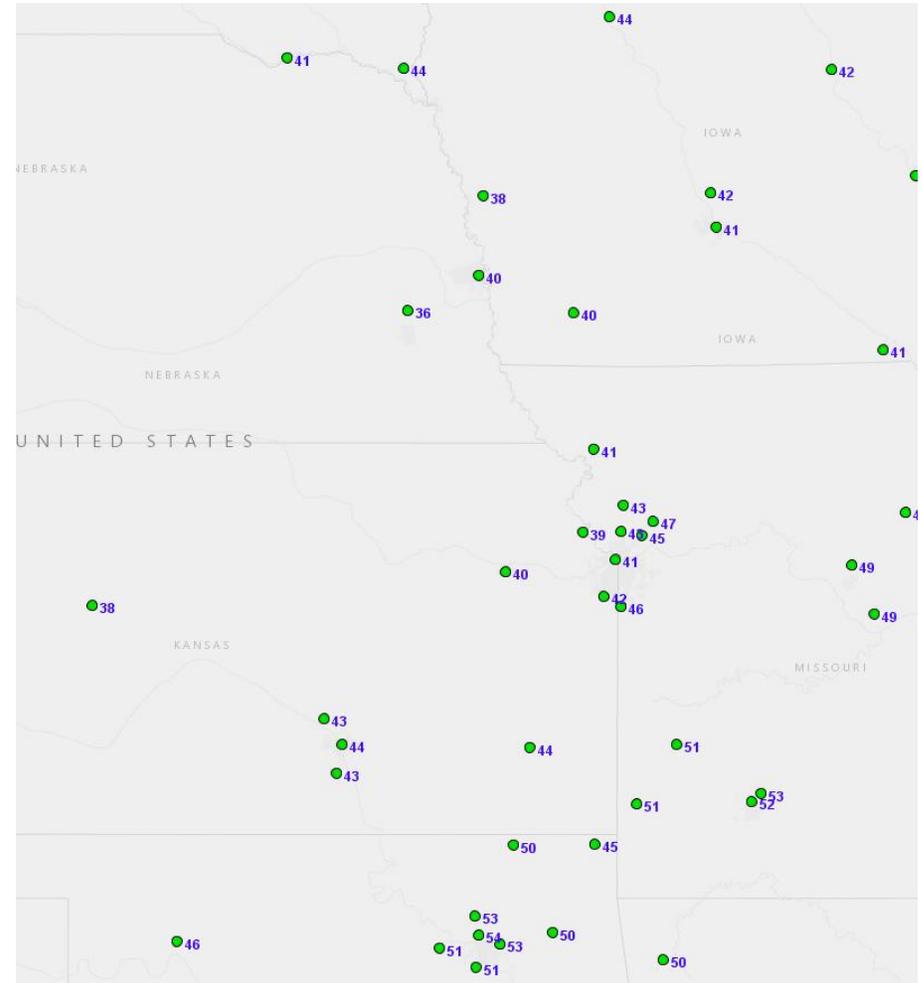


Saturday, April 27, 2019

PM2.5 (24-hour average)



Ozone (8-hour average maximum)



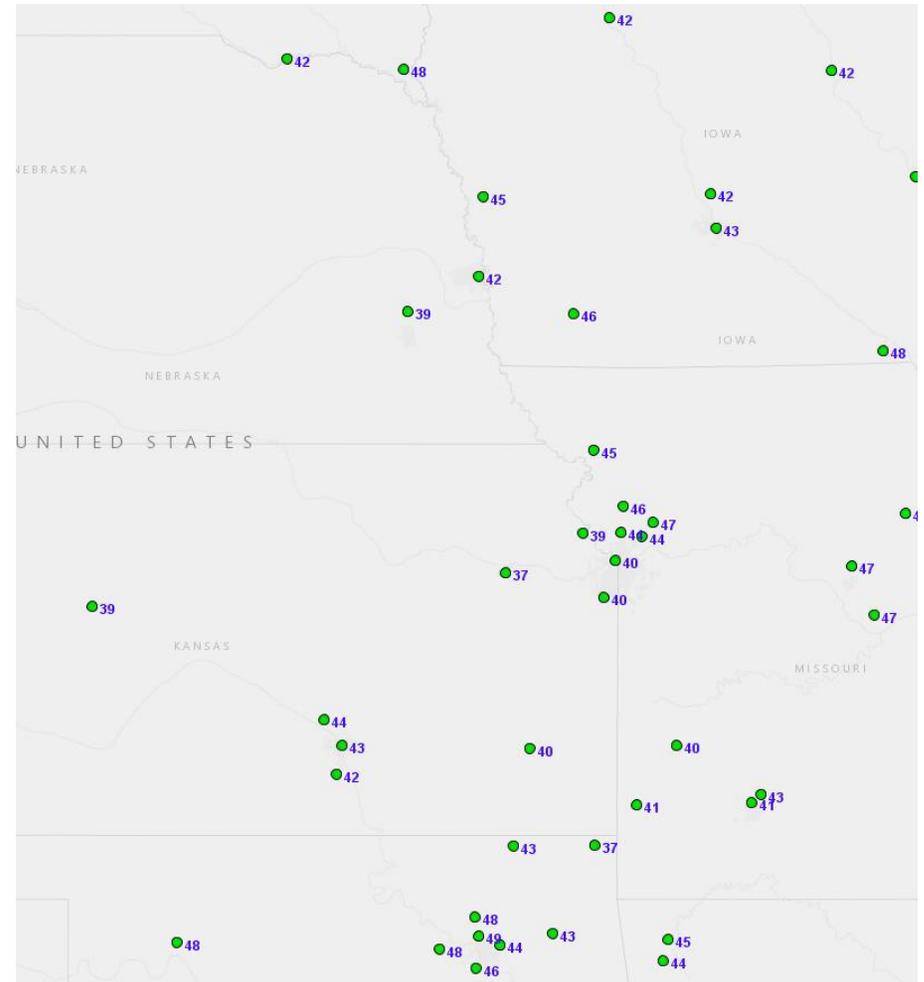
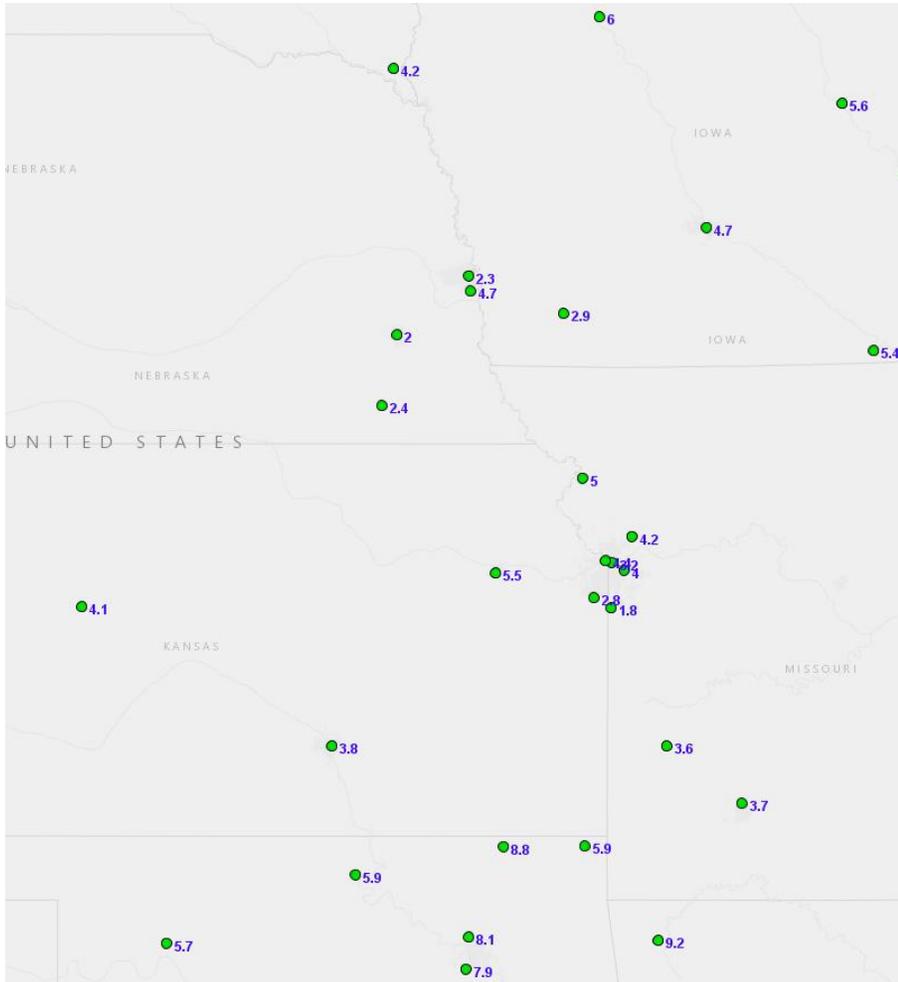
# Flint Hills Prescribed Fire Update



Sunday, April 28, 2019

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



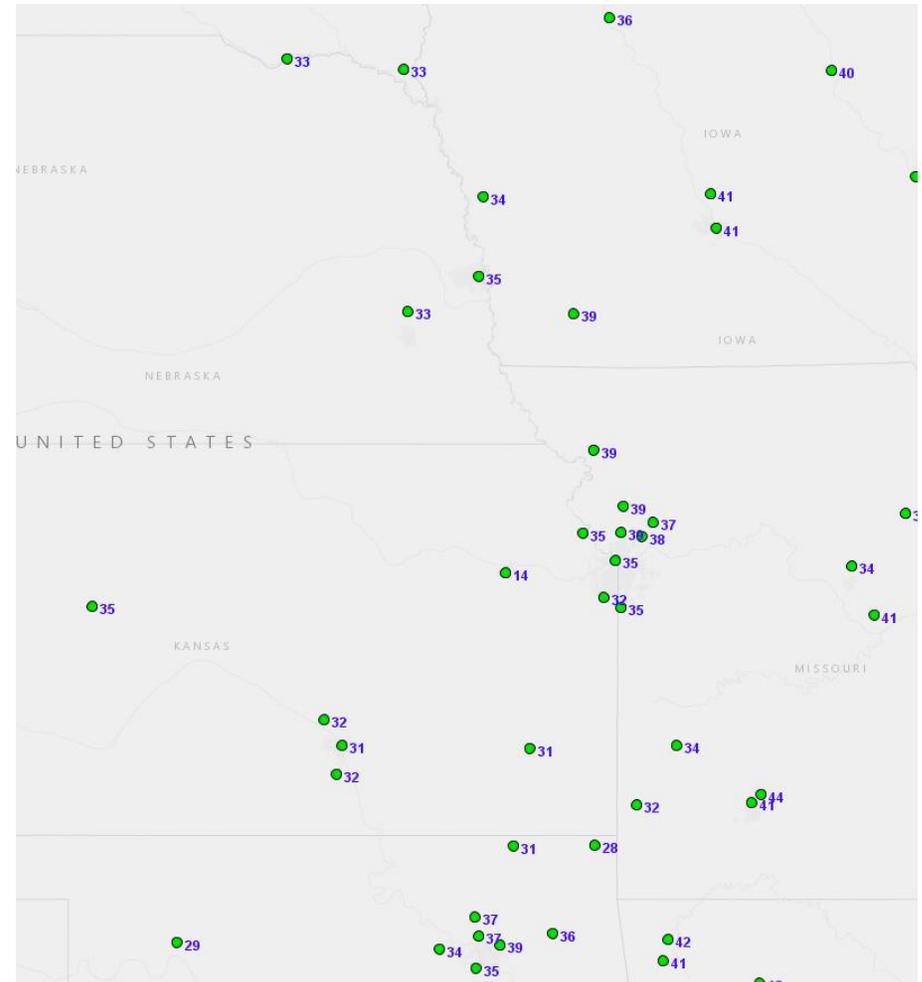
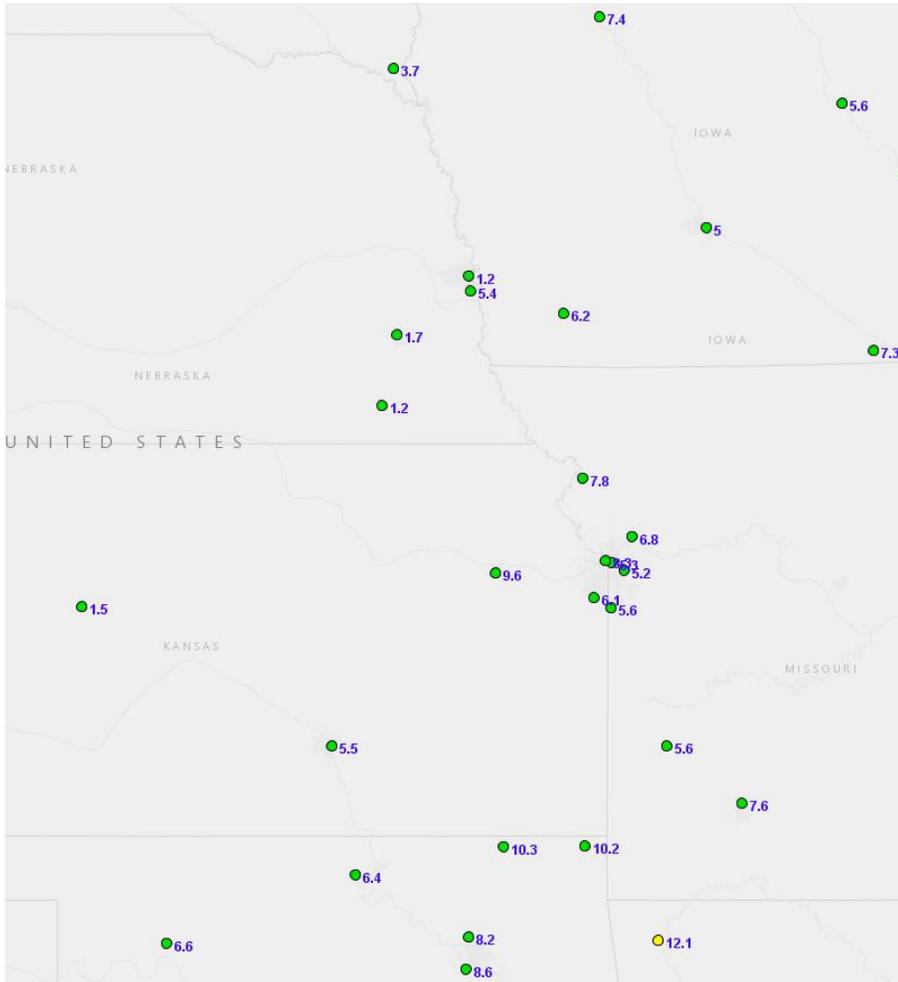
# Flint Hills Prescribed Fire Update



Monday, April 29, 2019

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



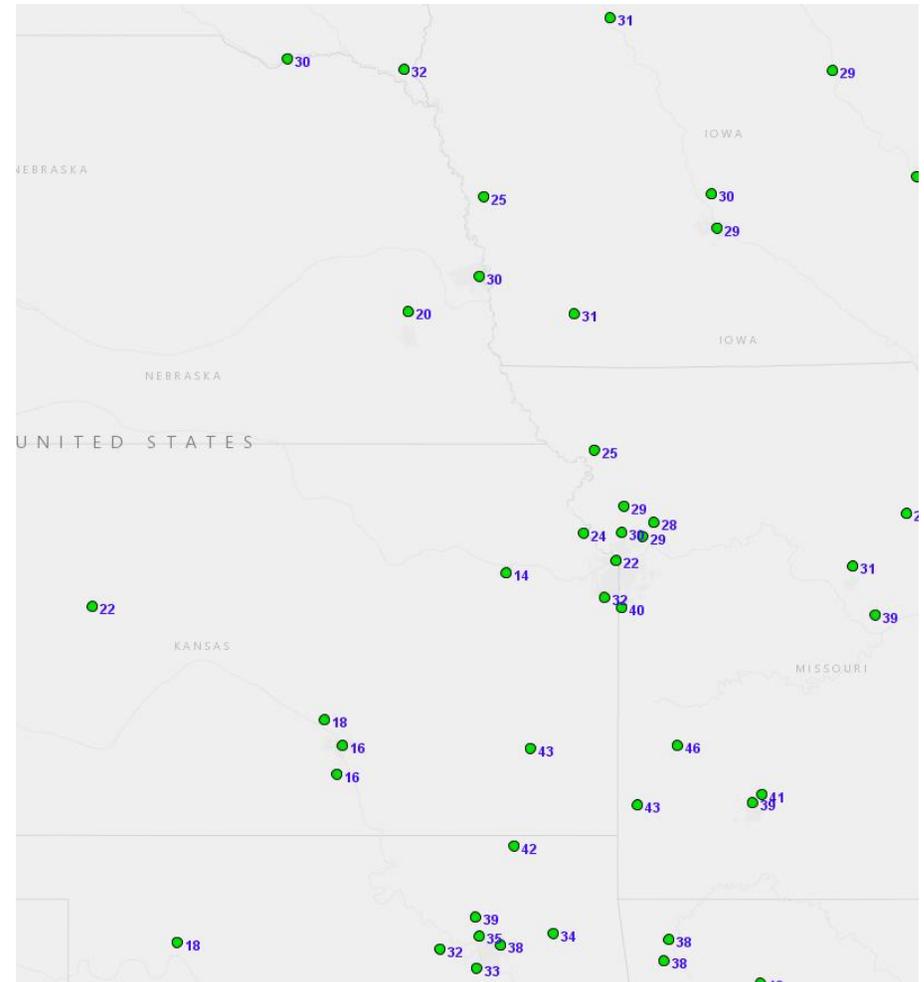
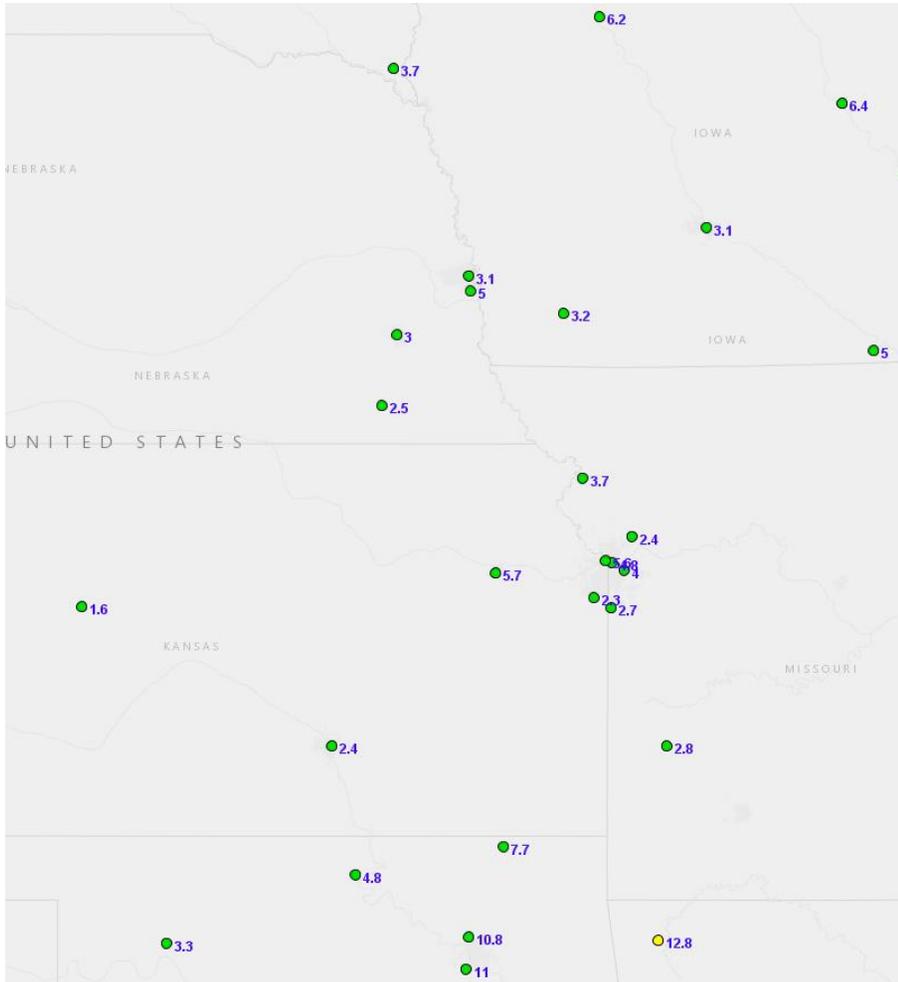
# Flint Hills Prescribed Fire Update



Tuesday, April 30, 2019

PM2.5 (24-hour average)

Ozone (8-hour average maximum)

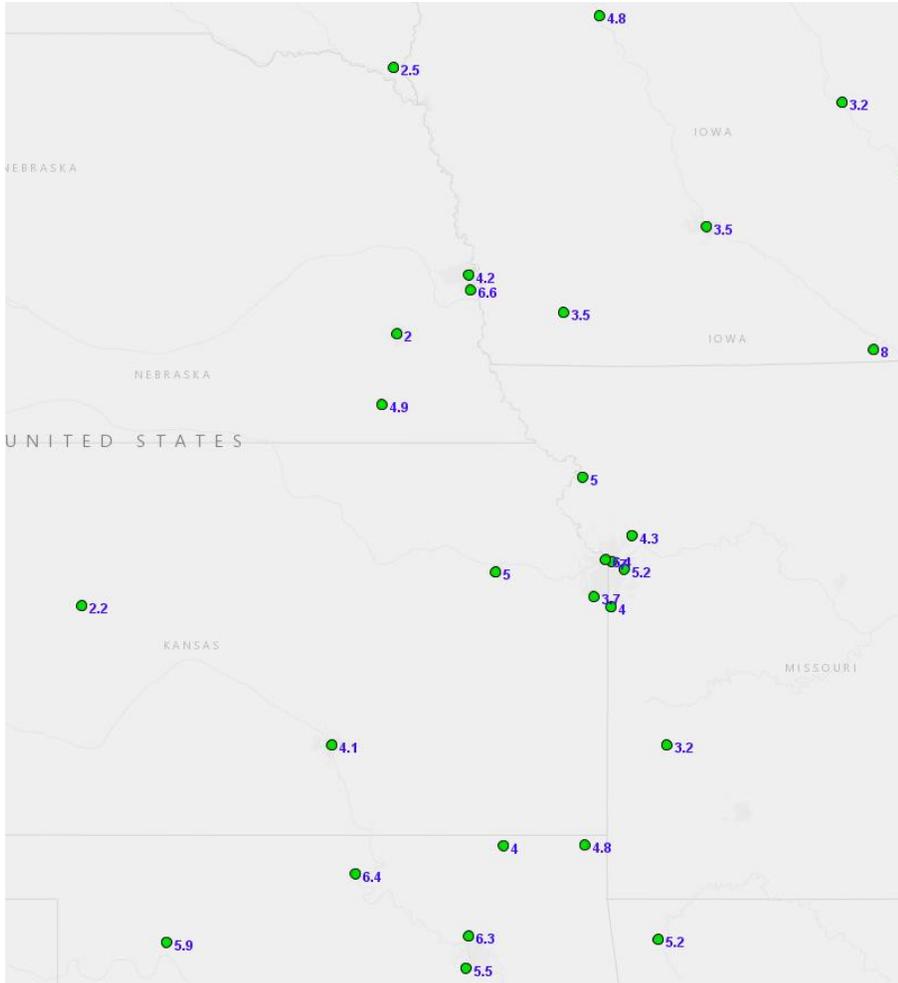


# Flint Hills Prescribed Fire Update

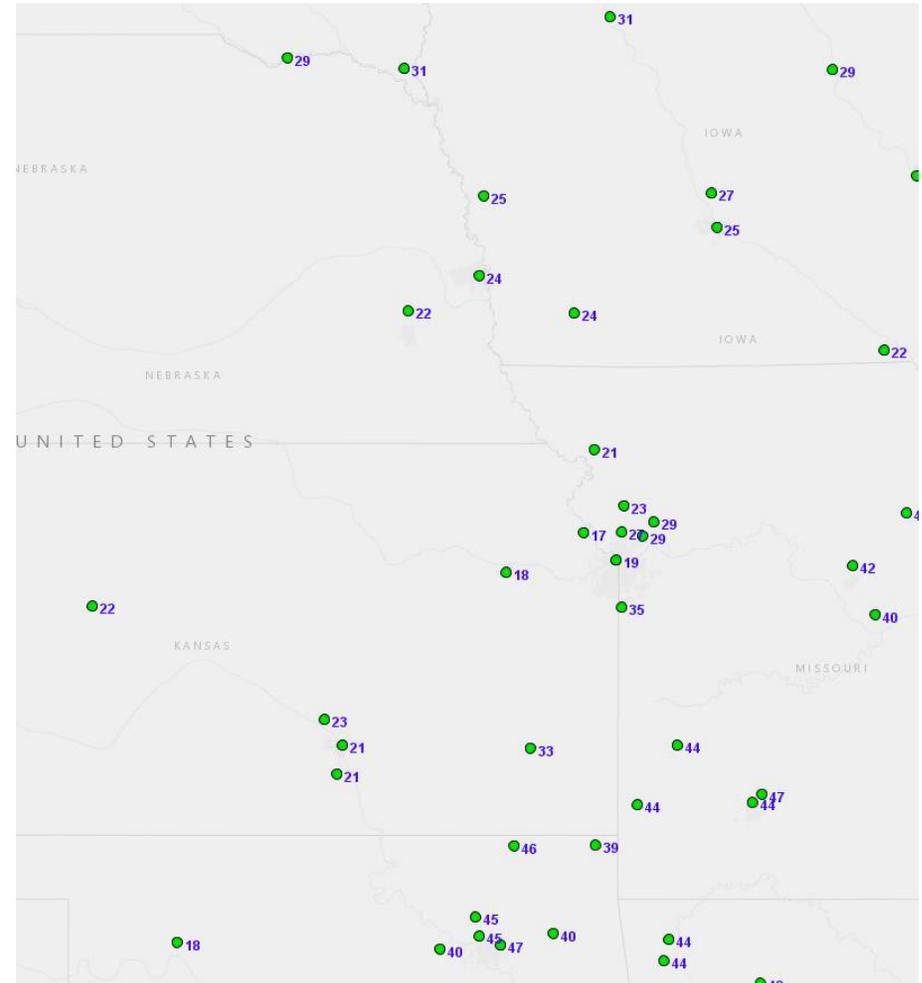


Wednesday, May 1, 2019

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

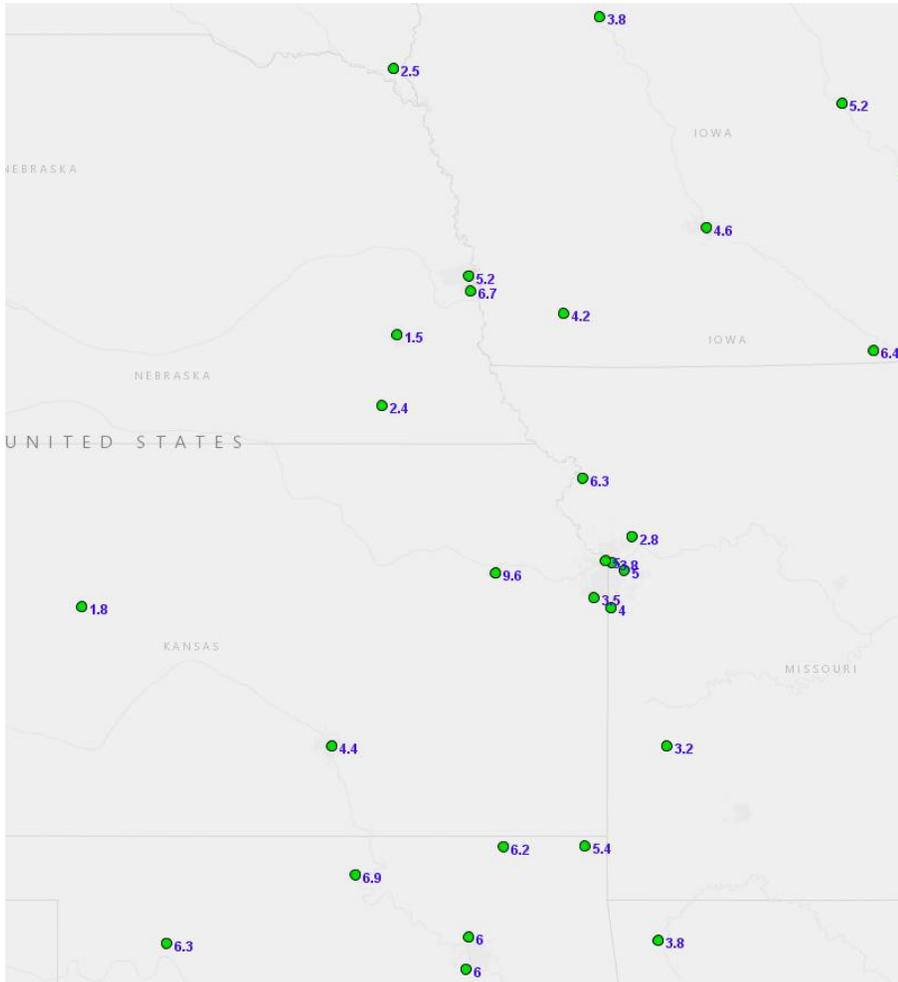


# Flint Hills Prescribed Fire Update

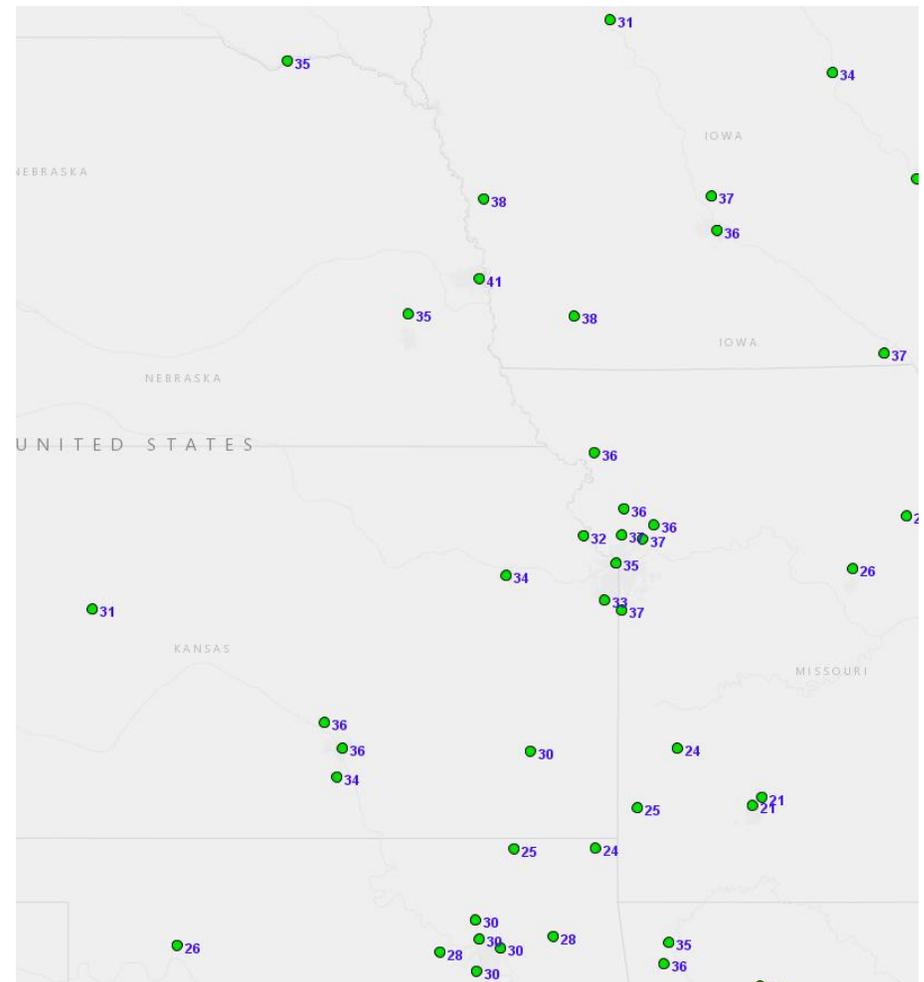


Thursday, May 2, 2019

PM2.5 (24-hour average)



Ozone (8-hour average maximum)





## Fires and Smoke

A handful of fires were observed last Friday (April 26) across the Flint Hills with smoke generally transported northward. Good mixing conditions and increasing winds aided with good dispersion of smoke. A few fires were also observed on Saturday (April 27) and Sunday (April 28) despite strong winds on Saturday and the risk of scattered showers and thunderstorms on Sunday. Smoke impacts were likely only localized over the weekend.

Minimal fire activity within the Flint Hills was observed for the remainder of the period, Monday-Thursday (April 29 – May 2) with periods of heavy rain, cooler temperatures, and occasionally breezy conditions under shifting wind directions.

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

## KSFIRE.ORG

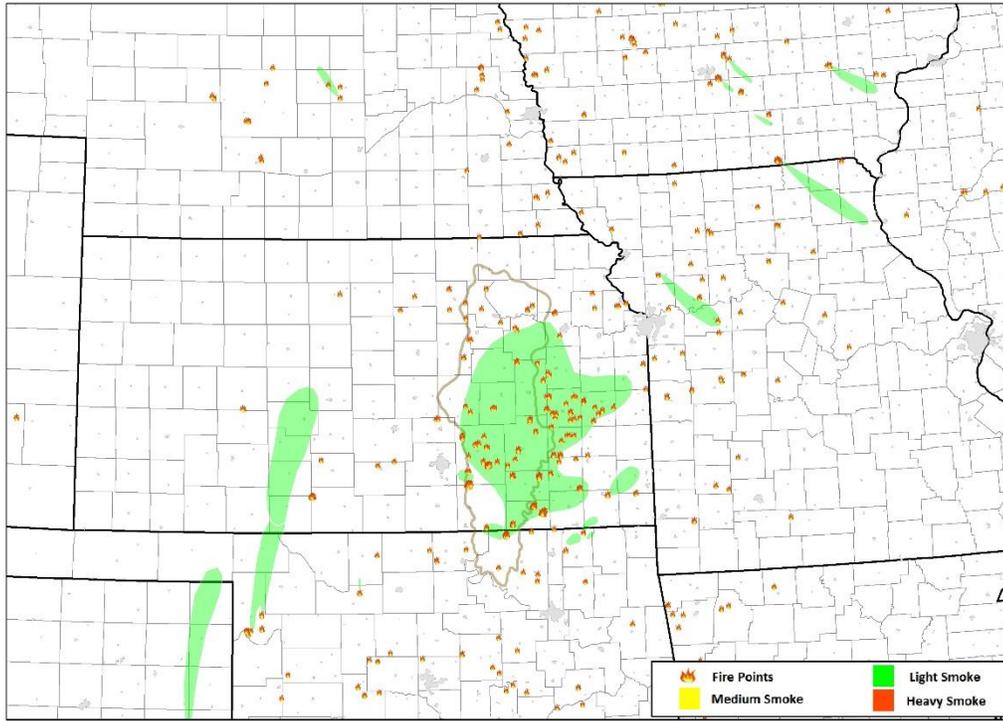


This website was developed as part of the development of the Kansas Flint Hills Smoke Management Plan. Kansas State University hosts the webpage and it includes important information for ranchers and others who might be interested in the Flint Hills. It provides training, regulations, policies, publications,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

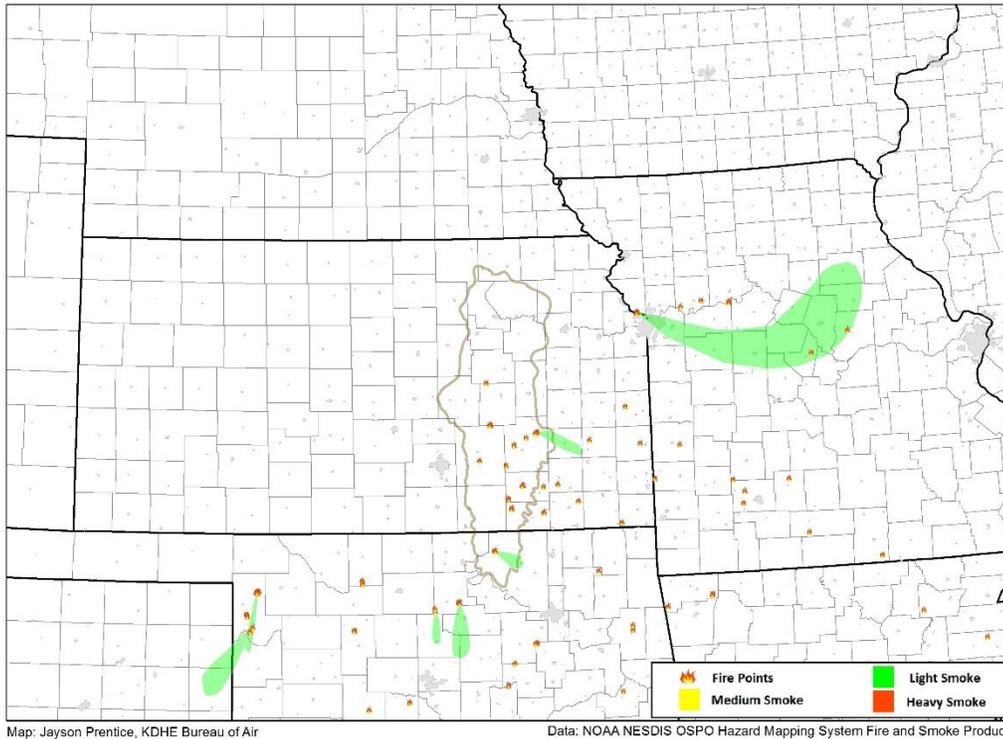
# Flint Hills Prescribed Fire Update



## HMS Fire & Smoke Analysis April 26, 2019



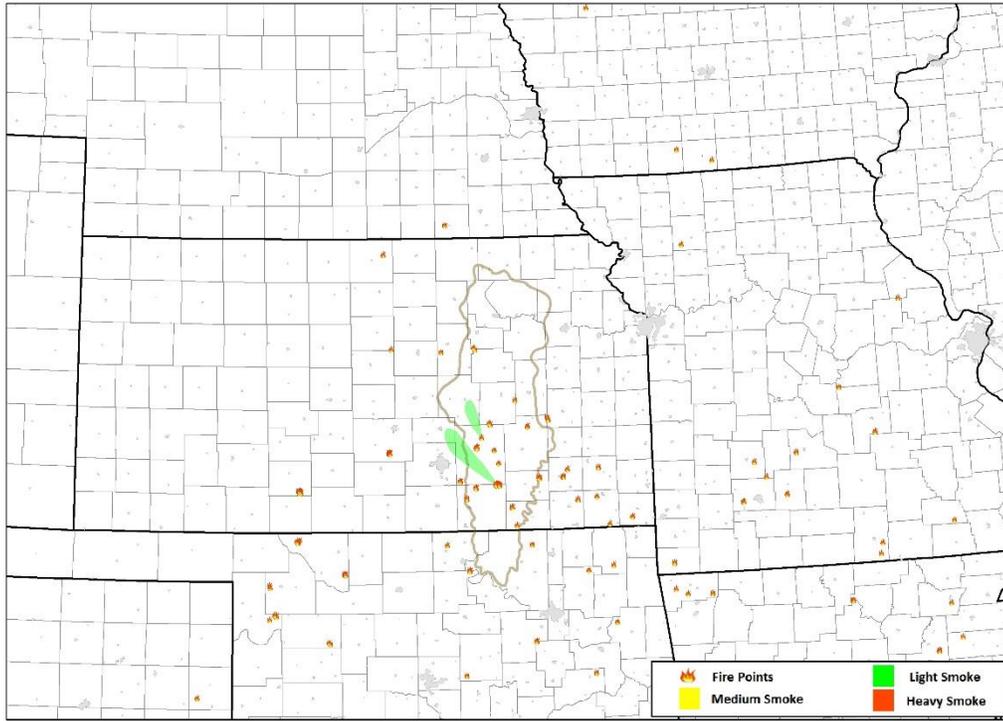
## HMS Fire & Smoke Analysis April 27, 2019



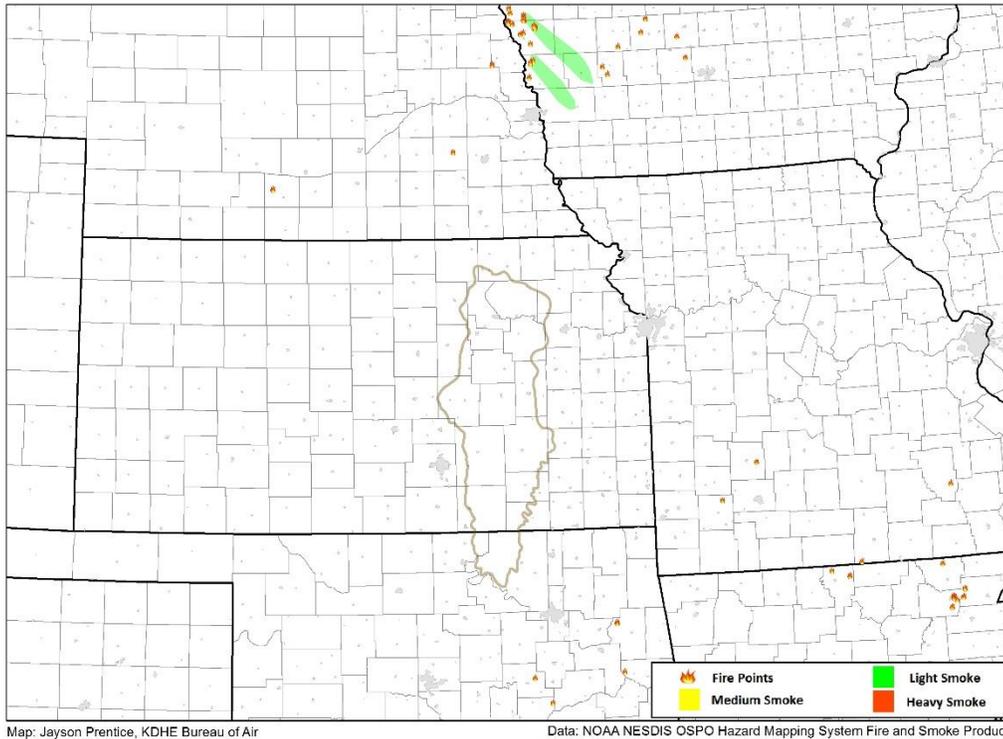
# Flint Hills Prescribed Fire Update



## HMS Fire & Smoke Analysis April 28, 2019



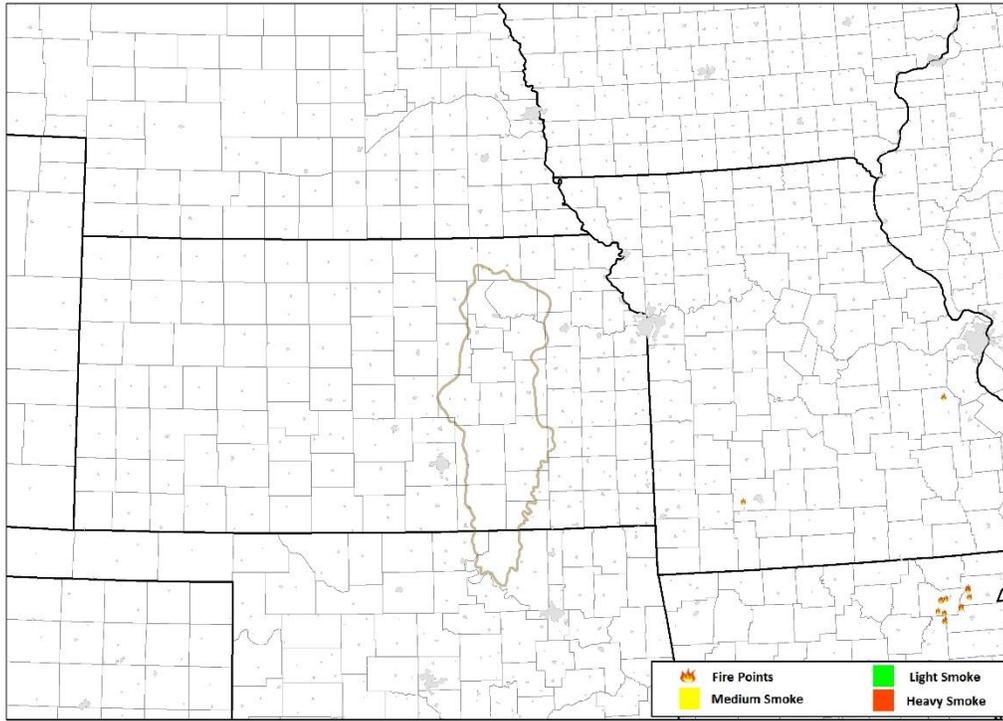
## HMS Fire & Smoke Analysis April 29, 2019



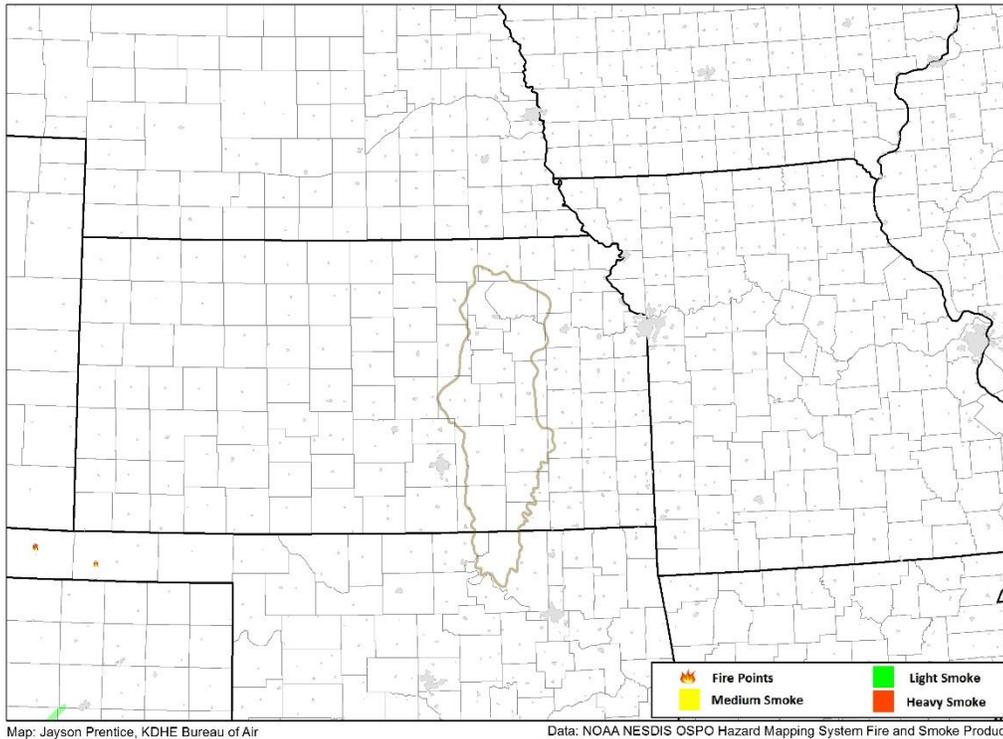
# Flint Hills Prescribed Fire Update



## HMS Fire & Smoke Analysis April 30, 2019



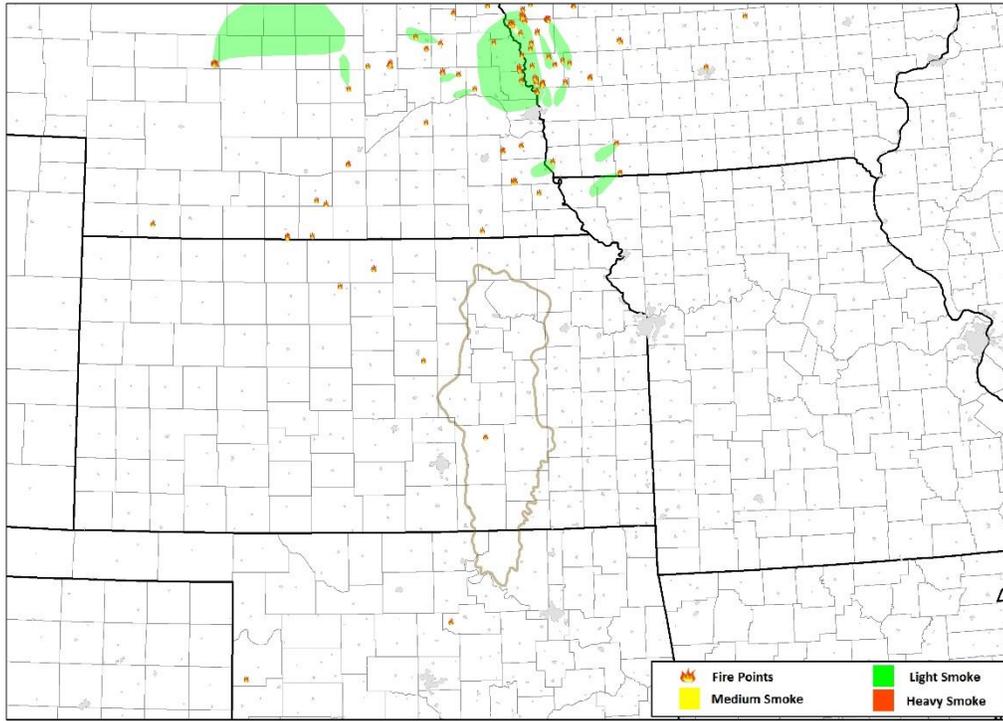
## HMS Fire & Smoke Analysis May 01, 2019



# Flint Hills Prescribed Fire Update



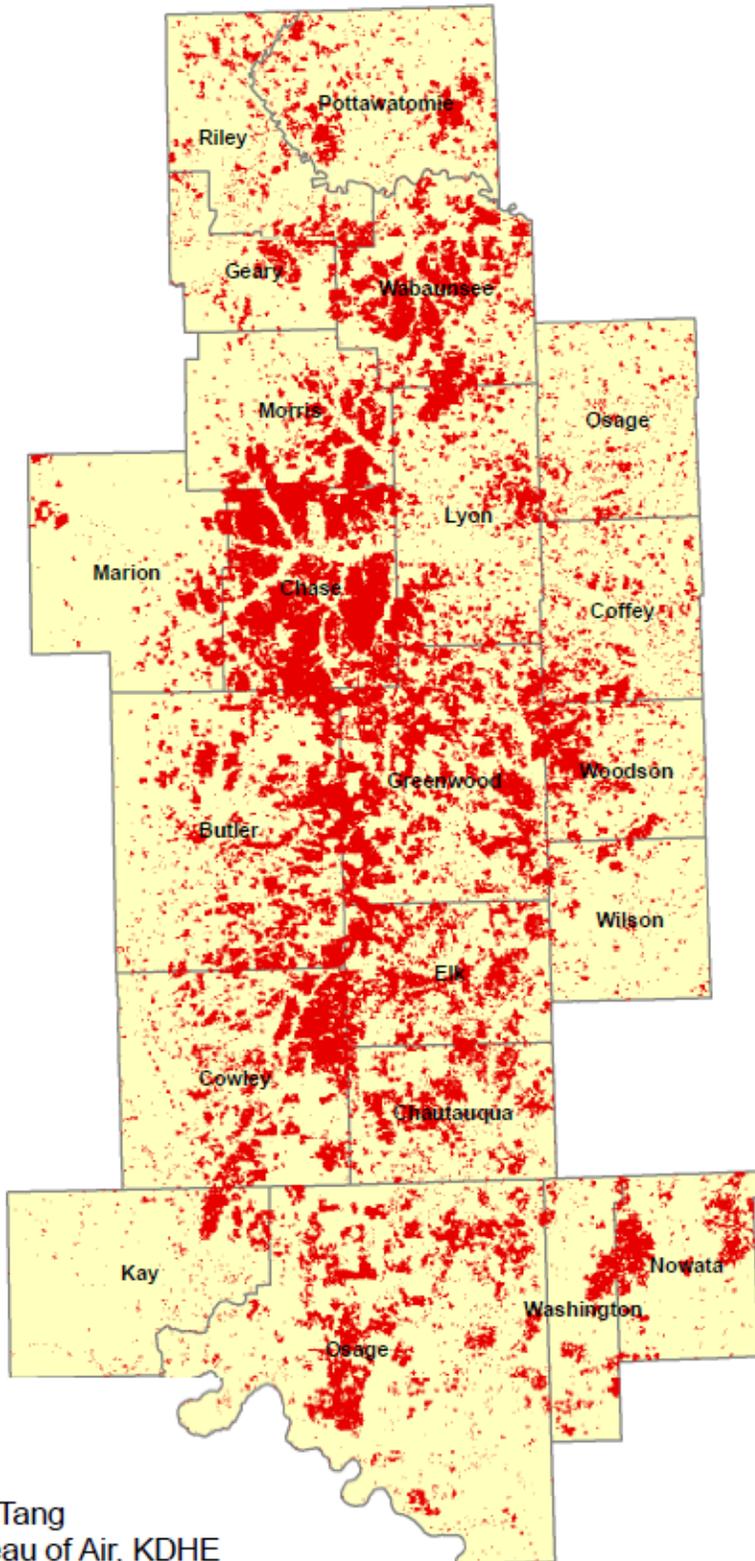
## HMS Fire & Smoke Analysis May 02, 2019



# Flint Hills Prescribed Fire Update



## Flint Hills Acreage Burned (March 15 – April 27, 2019)



<u>Counties</u>	<u>Acres Burned</u>	
<b>Butler</b>	240,021	*
<b>Chase</b>	329,521	*
<b>Chautauqua</b>	109,284	
<b>Coffey</b>	70,179	*
<b>Cowley</b>	186,383	*
<b>Elk</b>	155,417	*
<b>Geary</b>	39,013	*
<b>Greenwood</b>	306,524	*
<b>Lyon</b>	126,783	*
<b>Marion</b>	51,723	*
<b>Morris</b>	108,358	*
<b>Osage (KS)</b>	44,650	*
<b>Pottawatomie</b>	83,245	*
<b>Riley</b>	57,391	*
<b>Wabaunsee</b>	187,139	*
<b>Wilson</b>	25,885	*
<b>Woodson</b>	77,500	*
<b>Nowata (OK)</b>	66,951	
<b>Osage (OK)</b>	241,071	*
<b>Washington (OK)</b>	37,097	*
<b>Kay (OK)</b>	35,800	
<b>Total</b>	<b>2,579,935</b>	
<i>* Denotes county was partly or completely covered by clouds during latest analysis.</i>		

Yao Tang  
Bureau of Air, KDHE

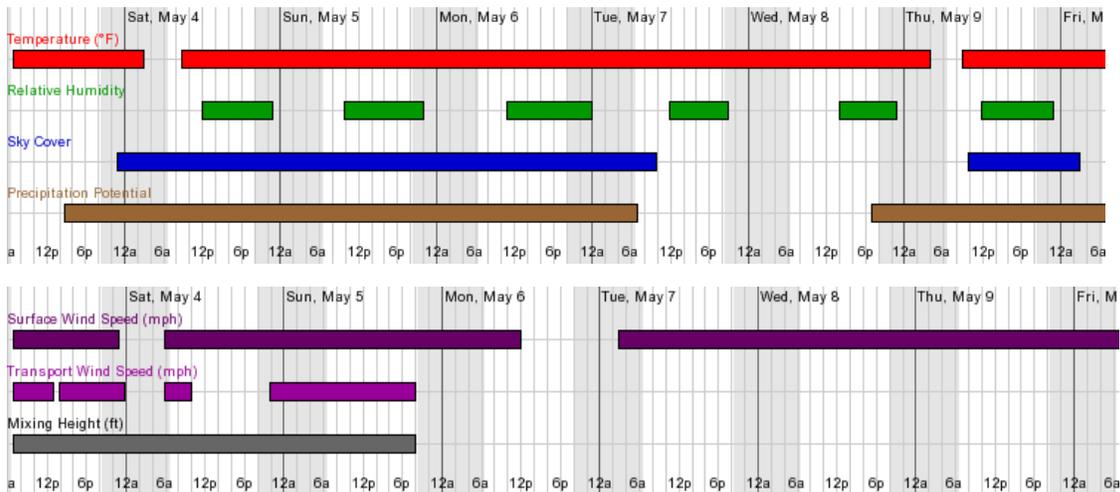


## Upcoming Look at Fires and Smoke

Temperatures will remain warm enough despite some cooler mornings anticipated for Saturday (May 4) and Thursday (May 9) and overnight relative humidity values will be close to saturated – look for dew and/or fog during the morning hours throughout the week ahead. A few rain showers are possible today (May 3) and again look for rain showers or thunderstorms, and the potential for more heavy rain, on Tuesday (May 7) and Wednesday (May 8). Wind speeds will remain reasonable for each day except for Monday where gusty winds are expected ahead of the next storm system.

Overall despite any weather conditions look for most of the prescribed burning to be completed due to the very wet conditions and warmer temperatures, and a complete green-up of vegetation throughout the region.

### 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](http://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 May 3, 2019.*

For more information, contact:

**Jayson Prentice**

Chief, Technical Resources & Projects Unit  
 Monitoring & Planning Section, Bureau of Air  
 Kansas Department of Health & Environment  
 785-291-3782  
 Jayson.Prentice@ks.gov