

# Flint Hills Wildland Fire Update

April 9, 2021

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



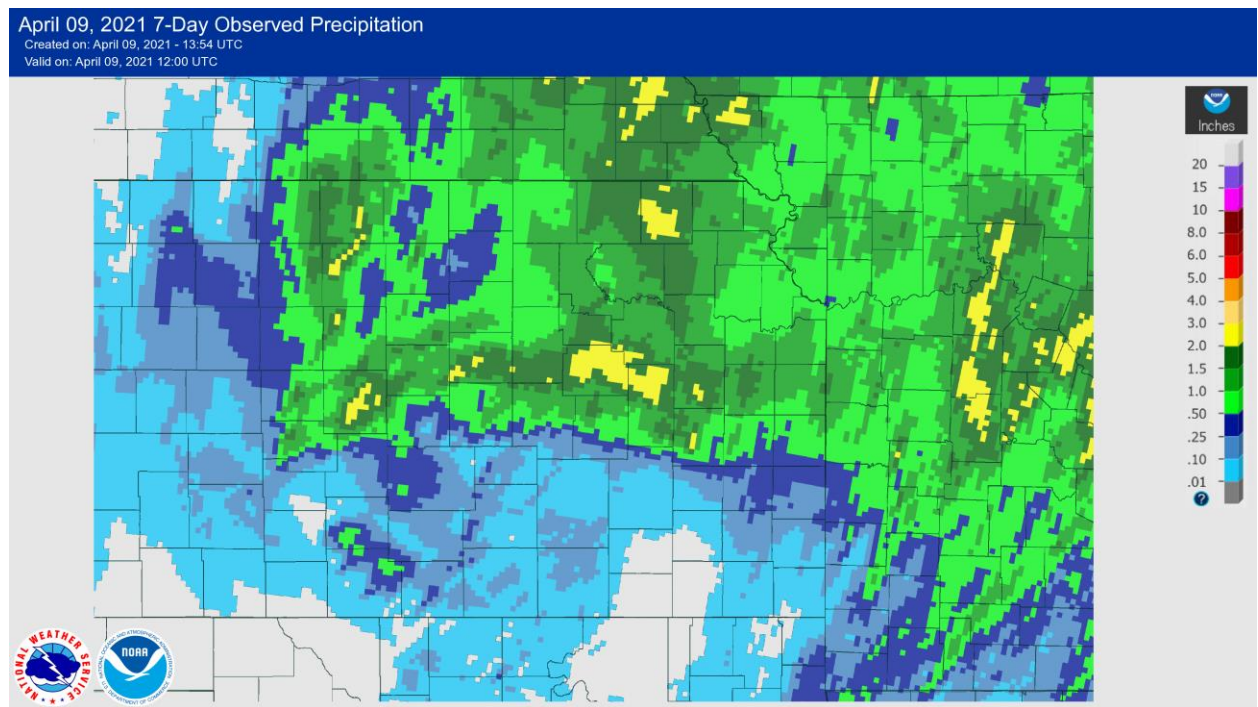


## Meteorology

Well above normal temperatures were seen much of the prior week with highs in the 70s and 80s across the area. Temperatures have since returned closer to normal with the influence of a slow-moving storm system which also brought rain to the area from late Tuesday (April 6) into Thursday (April 8). Rainfall amounts varied from no precipitation in the southern Flint Hills to a widespread one to two inches for much of the central and northern Flint Hills.

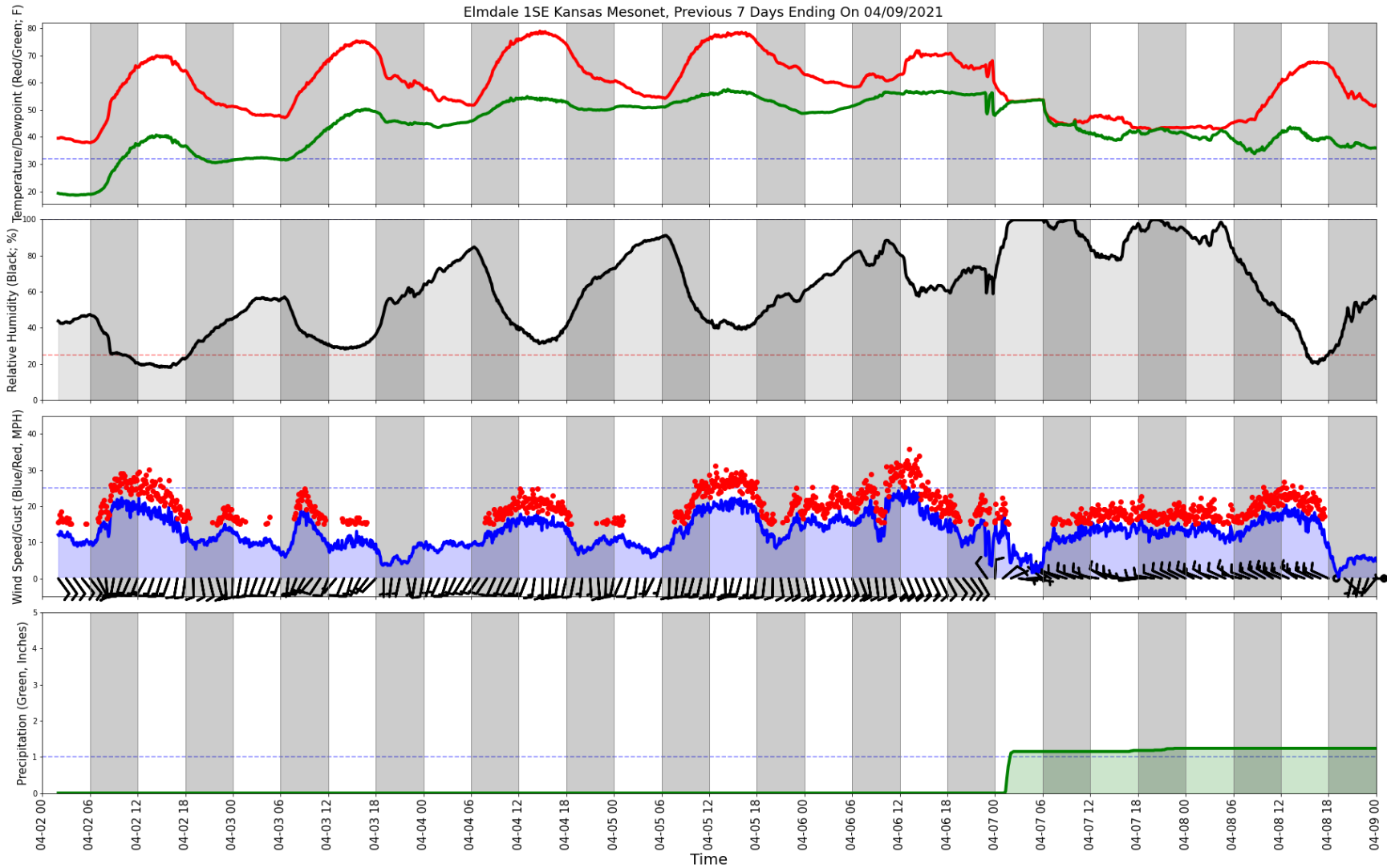
With well above normal temperatures and the influence of a storm system the winds were strong at times in the prior week. Wind gusts above 40 mph were observed on Friday (April 2) and Monday (April 5) with gusts above 50 mph on Tuesday (April 6). Even on those days not mentioned there was not a day in the prior week that did not see wind gusts above 30 mph.

## Precipitation



NOAA/NWS Observed Total Precipitation for April 2-8, 2021.

# Flint Hills Wildland Fire Update



7-day (April 2-8, 2021) Observed Weather from Kansas Mesonet station near Elmdale, Kansas  
<https://mesonet.k-state.edu/>



## Air Quality Data

Air quality data for the period of April 2-8, 2021:

**Ozone:** Preliminary data indicates **one** exceedances of the NAAQS daily 8-hour average maximum of 70 ppb.

**On April 3, 2021 the monitor in/near Copan, OK measured an 8-hour average value of 71 ppb.**

**PM<sub>2.5</sub>:** Preliminary data indicates **five** exceedances of the NAAQS daily 24-hour average maximum of 35  $\mu\text{g}/\text{m}^3$ .

**On April 2, 2021 the monitor in/near Copan, OK measured a 24-hour average value of 35.7  $\mu\text{g}/\text{m}^3$ .**

**On April 2, 2021 the monitor in/near Ponca City, OK measured a 24-hour average value of 37.7  $\mu\text{g}/\text{m}^3$ .**

**On April 3, 2021 the monitor in/near Cedar Rapids, IA measured a 24-hour average value of 39.2  $\mu\text{g}/\text{m}^3$ .**

**On April 4, 2021 the monitor in/near Cedar Rapids, IA measured a 24-hour average value of 38.3  $\mu\text{g}/\text{m}^3$ .**

**On April 4, 2021 the monitor in/near Iowa City, IA measured a 24-hour average value of 35.9  $\mu\text{g}/\text{m}^3$ .**

Air quality images on the following pages for each day show preliminary data, courtesy Air Now Tech.

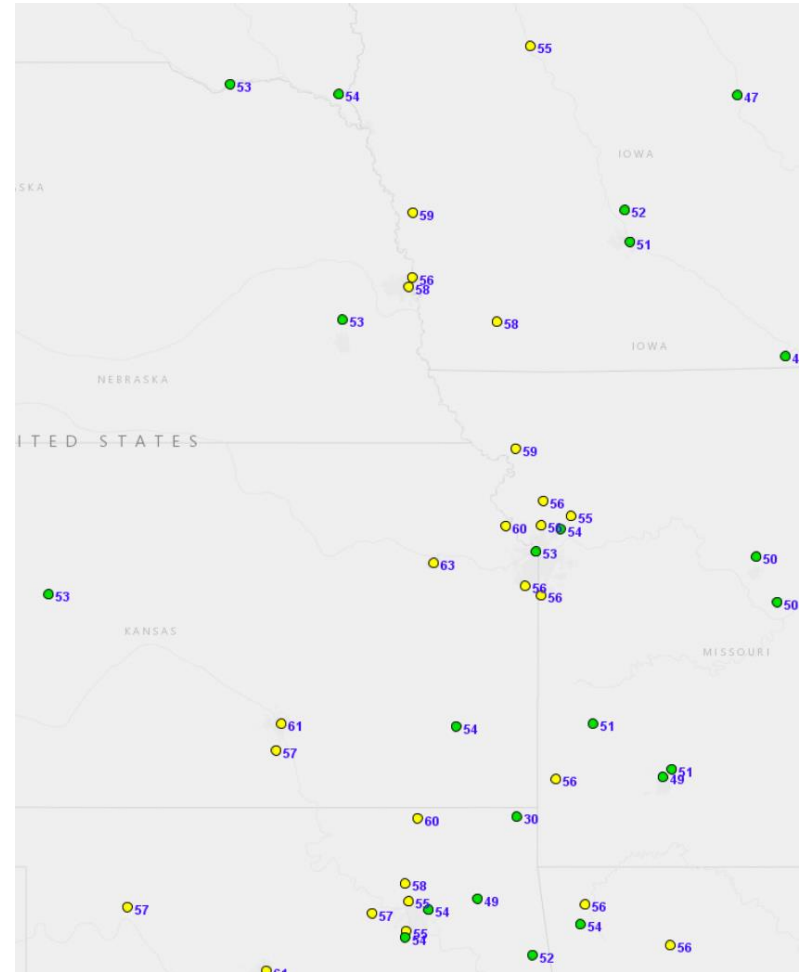
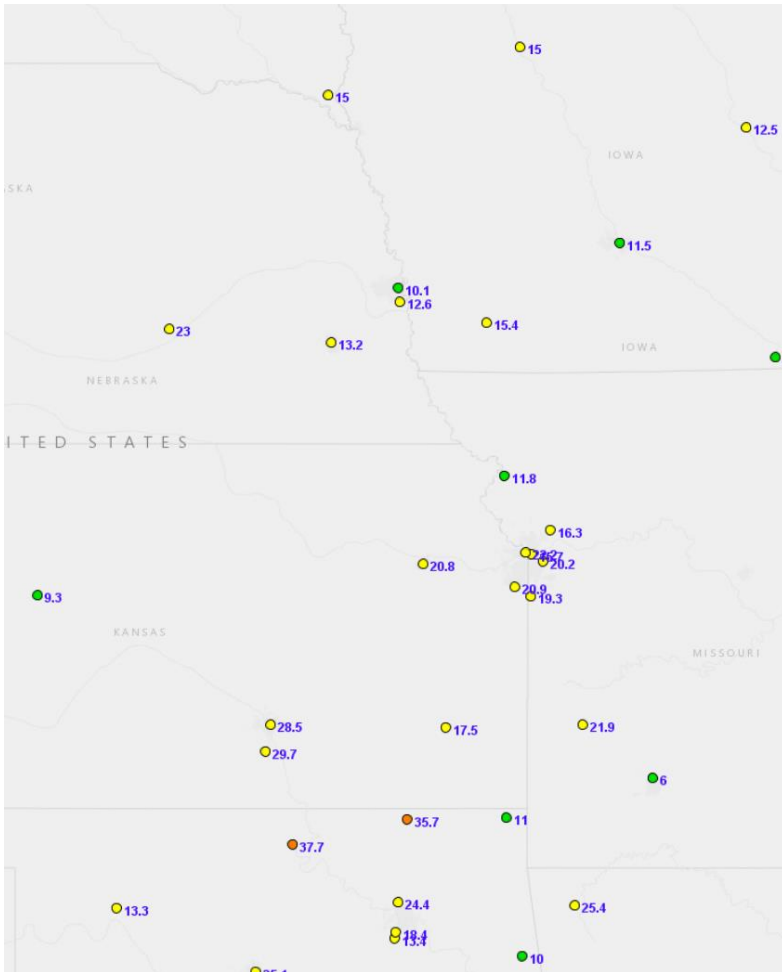
# Flint Hills Wildland Fire Update



Friday, April 2, 2021

PM2.5 (24-hour average)

Ozone (8-hour average maximum)

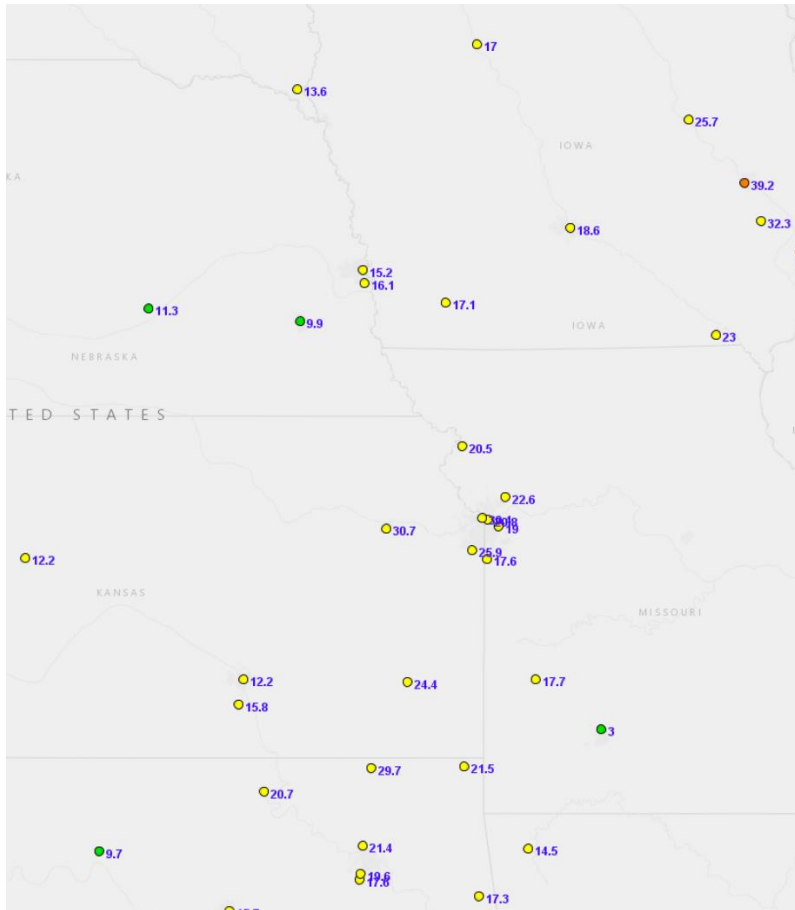


# Flint Hills Wildland Fire Update

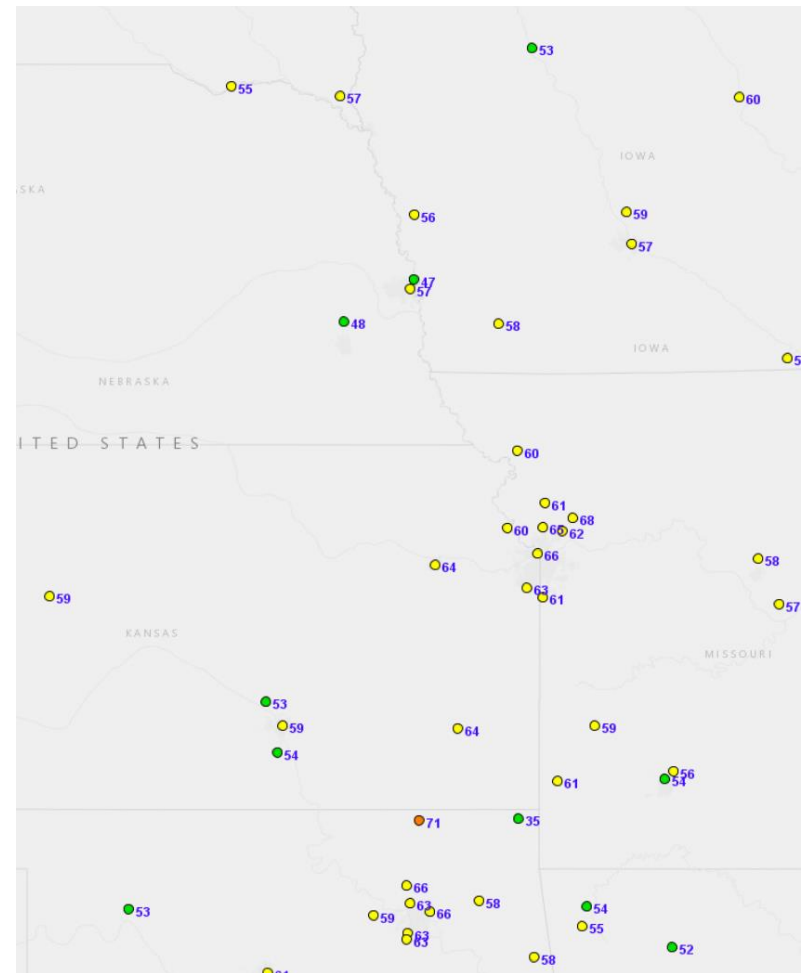


Saturday, April 3, 2021

PM2.5 (24-hour average)



Ozone (8-hour average maximum)





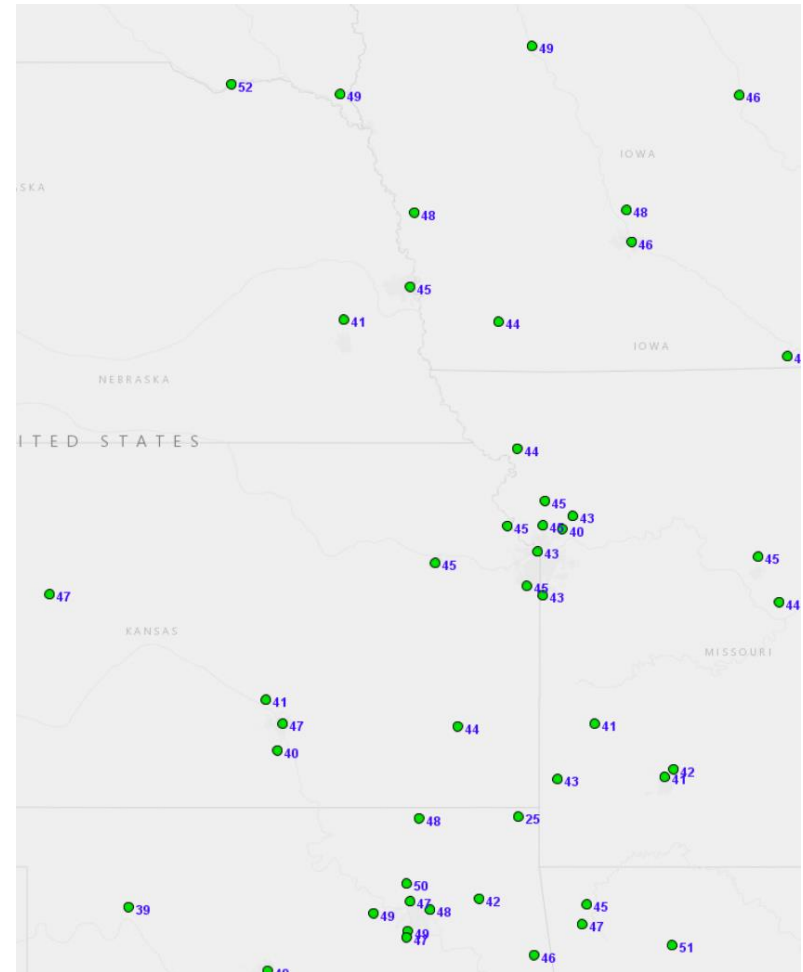
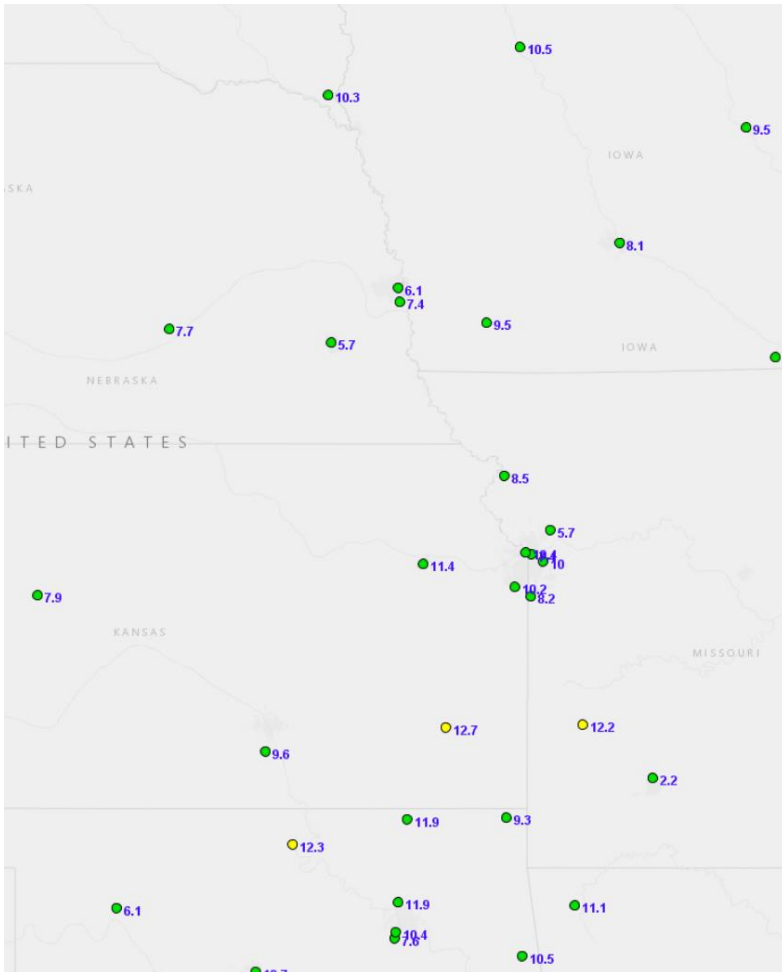
# Flint Hills Wildland Fire Update



Monday, April 5, 2021

PM2.5 (24-hour average)

Ozone (8-hour average maximum)





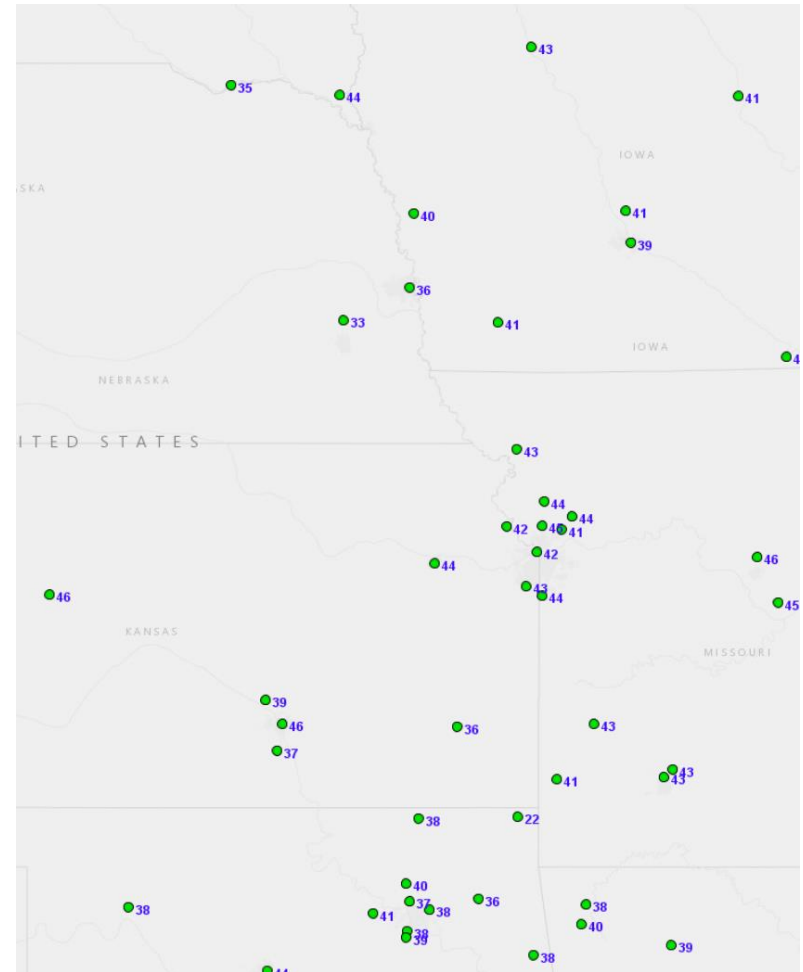
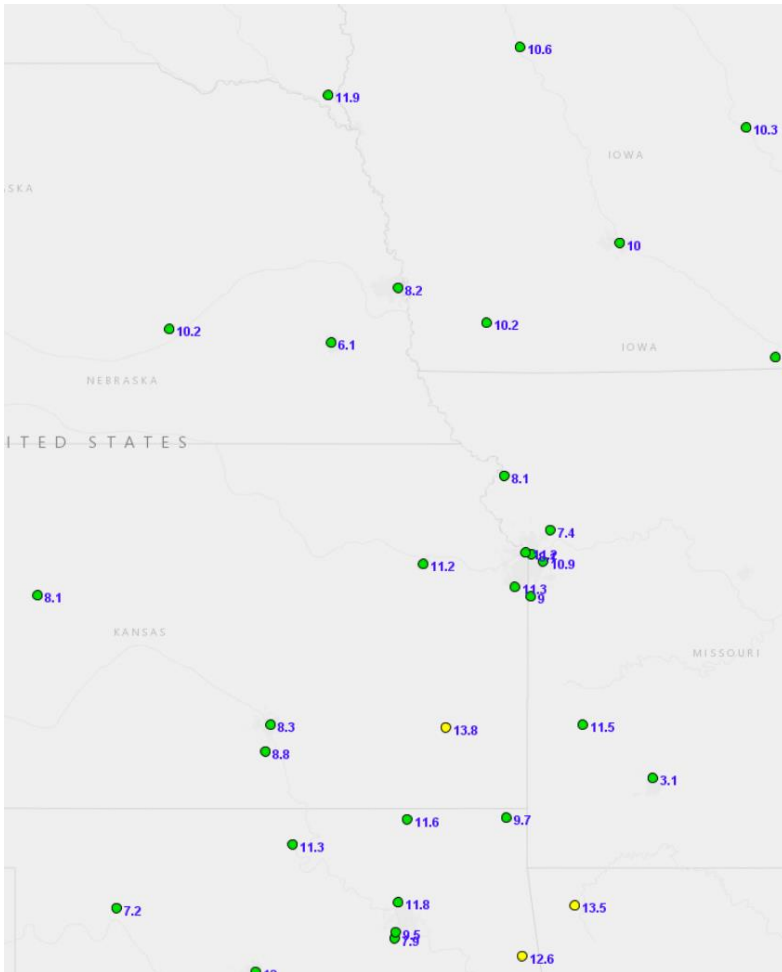
# Flint Hills Wildland Fire Update



Tuesday, April 6, 2021

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



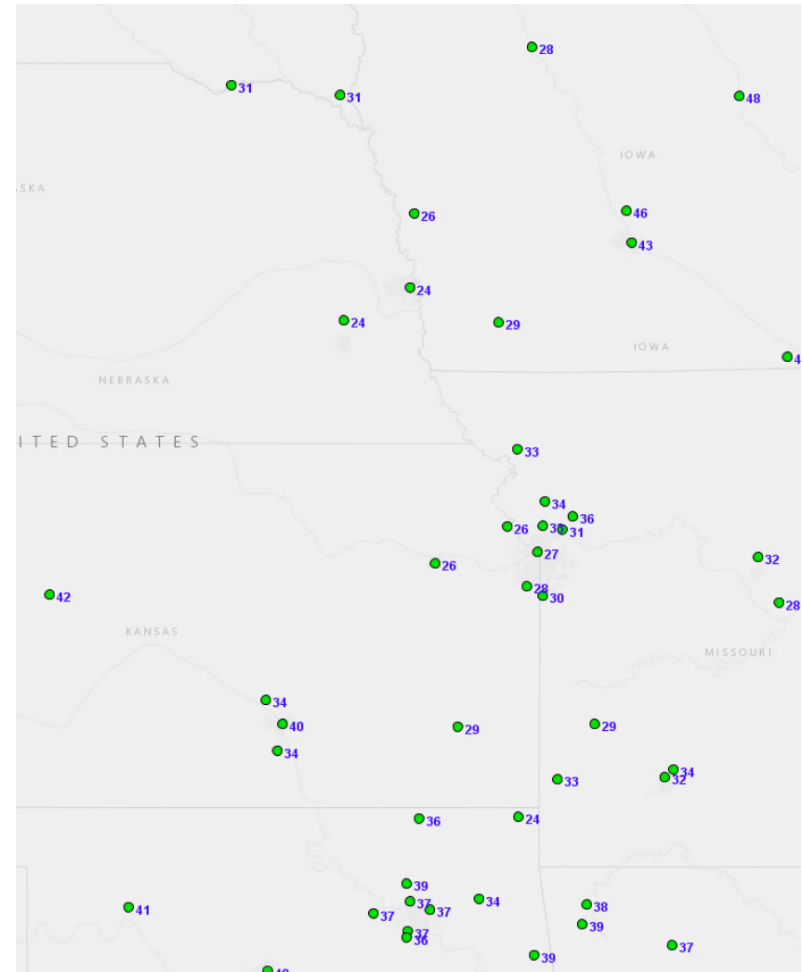
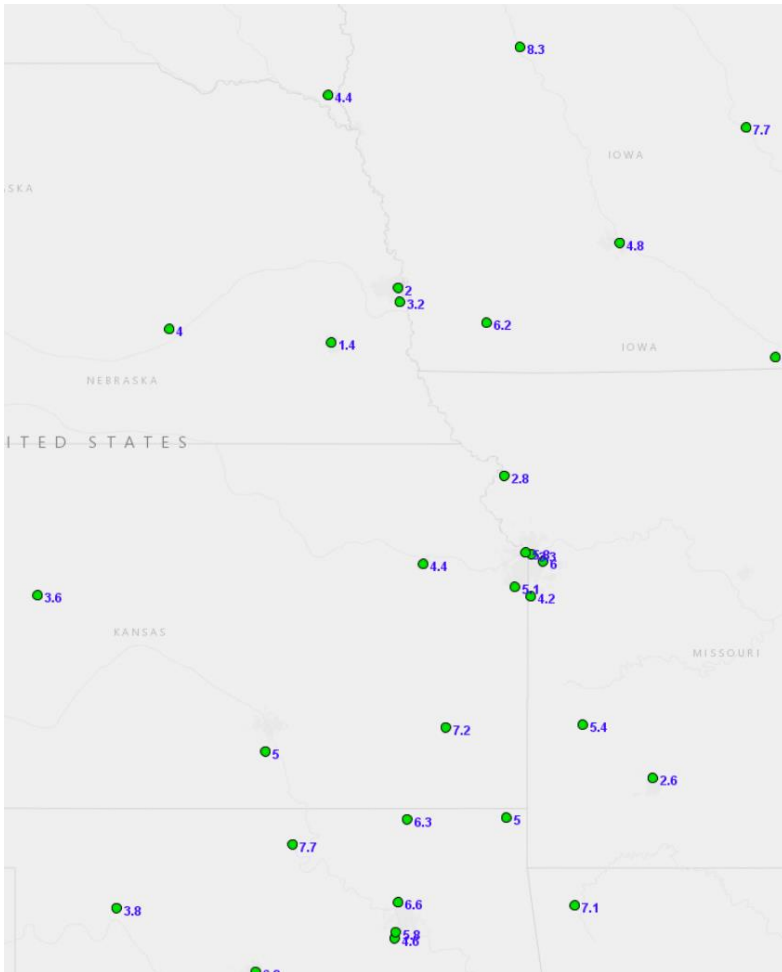
# Flint Hills Wildland Fire Update



Wednesday, April 7, 2021

PM2.5 (24-hour average)

Ozone (8-hour average maximum)

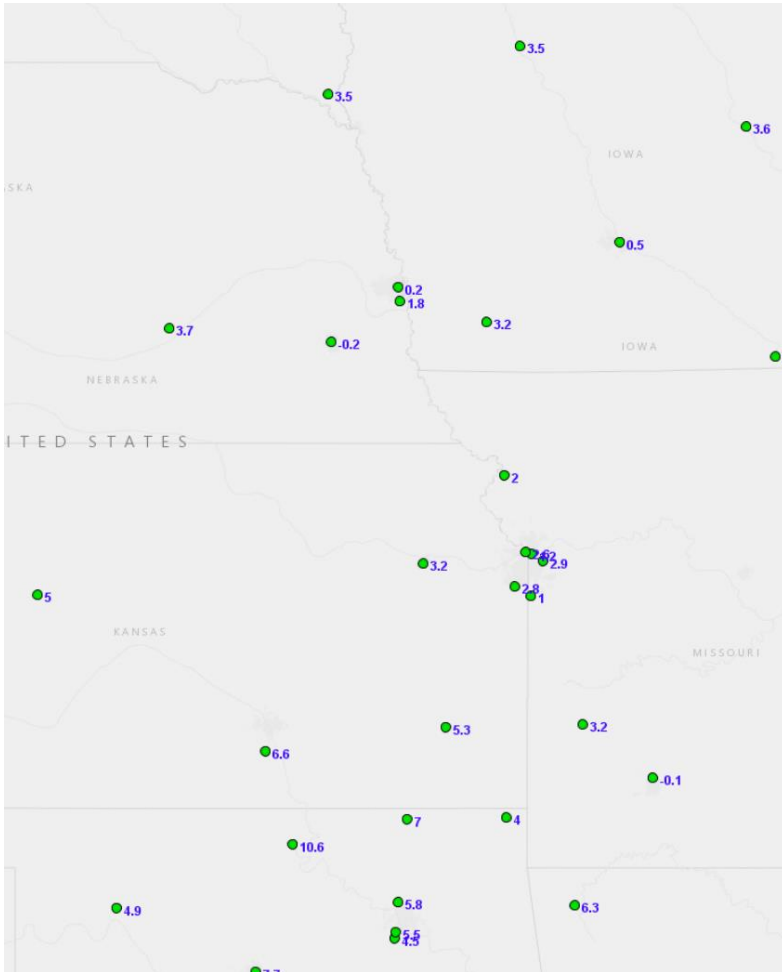


# Flint Hills Wildland Fire Update

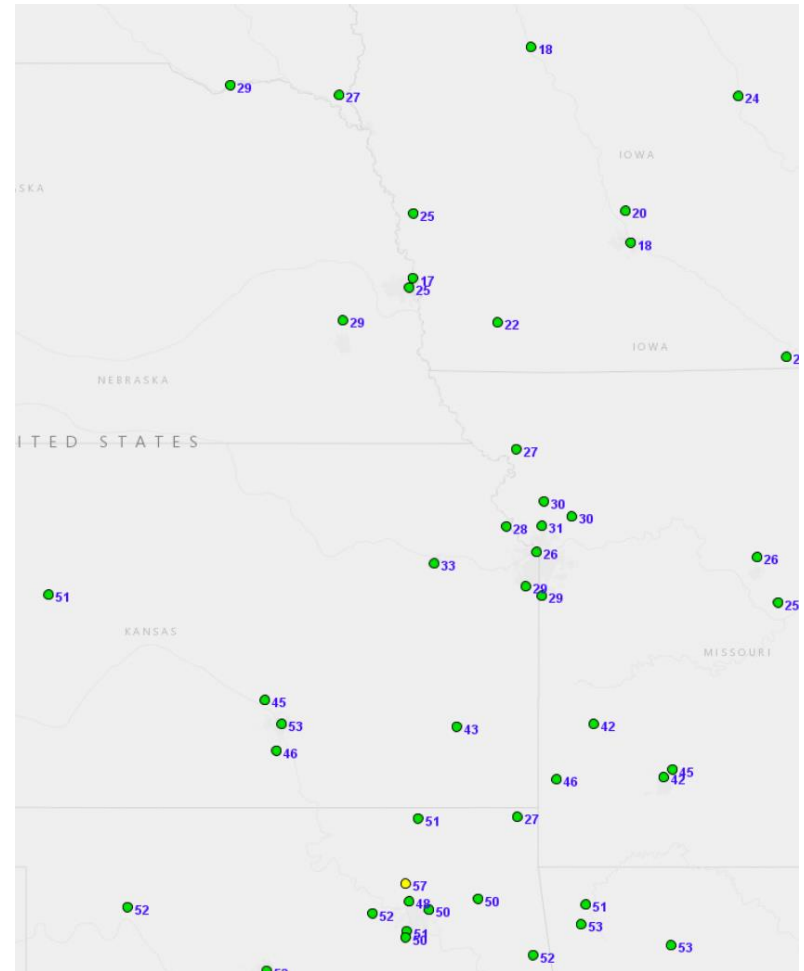


Thursday, April 8, 2021

PM2.5 (24-hour average)

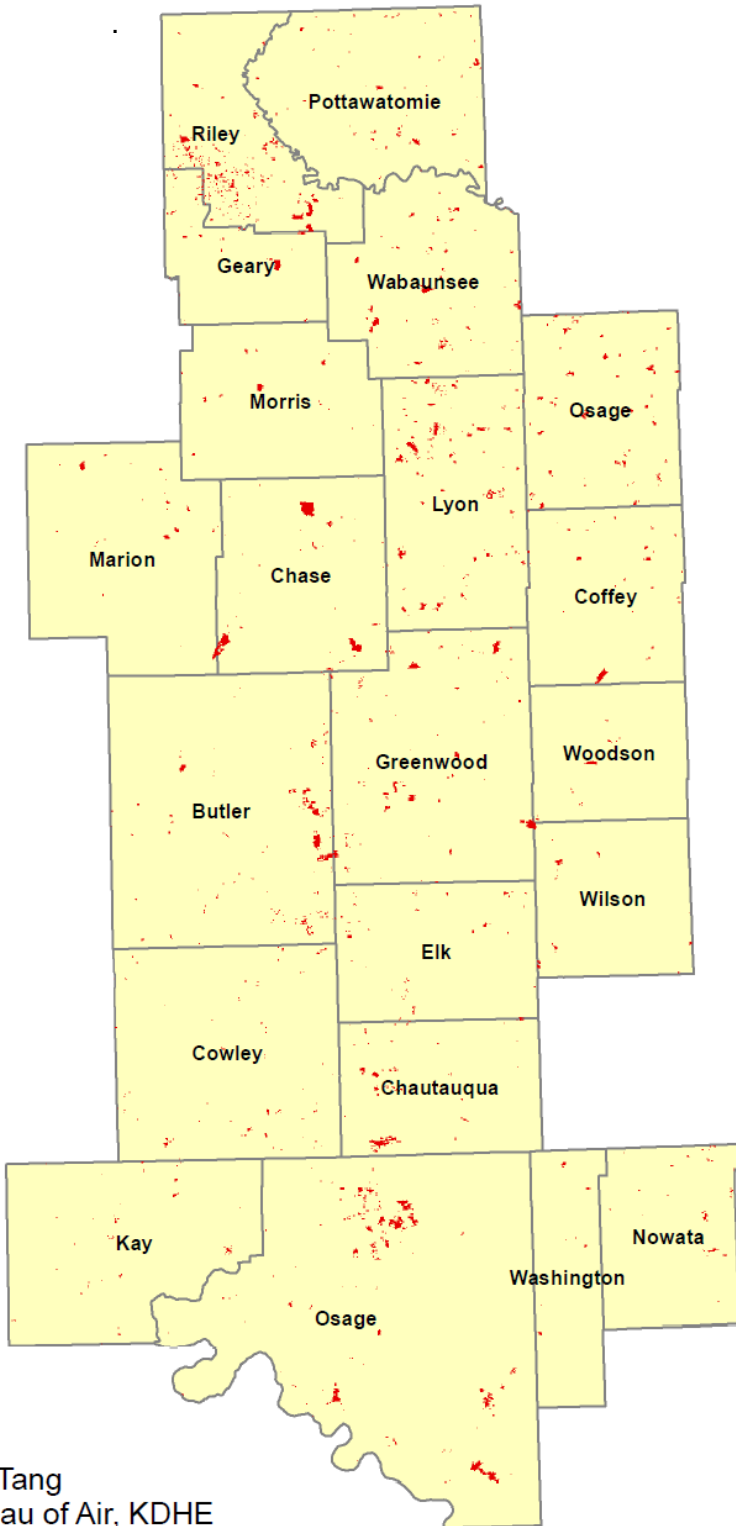


Ozone (8-hour average maximum)





**Flint Hills Acreage Burned (February 23 – March 19, 2021)**



<u>Counties</u>	<u>Acres Burned</u>	
Butler	7,382	
Chase	6,734	
Chautauqua	4,371	
Coffey	2,533	
Cowley	2,425	*
Elk	1,931	
Geary	2,471	
Greenwood	6,811	
Lyon	9,622	
Marion	2,193	
Morris	1,359	
Osage (KS)	5,668	
Pottawatomie	3,336	
Riley	10,410	
Wabaunsee	5,499	
Wilson	1,405	
Woodson	834	
Nowata (OK)	1,359	*
Osage (OK)	13,452	*
Washington (OK)	633	*
Kay (OK)	1,436	*
<b>Total</b>	<b>91,864</b>	
* Denotes county was partly or completely covered by clouds during latest analysis.		

Yao Tang  
Bureau of Air, KDHE



## Fires and Smoke

After a very active prescribed fire day last Thursday (April 1) the combination of breezy southwest winds and low relative humidity brought (very) high fire danger for much of the Flint Hills on Friday (April 2) and resulted in fewer prescribed fires and multiple wildfires. The winds subsided for Saturday (April 3) which resulted in another busy prescribed fire day across the entire region. Winds again increased for Sunday (April 4) which once again prompted numerous wildfires and some prescribed fires, primarily in the southern Flint Hills.

The busy stretch of fire activity throughout the region during April 1-4 resulted in several air quality exceedances not only within or near the Flint Hills but regionally as smoke was pushed north and east by strong winds. Satellite analysis depicted smoke from the Plains moving across the Great Lakes, through the Ohio Valley, and even beyond the East Coast by April 4. Air quality was impacted by regional fire activity in all these locations, with five additional air quality exceedances in Wisconsin and Michigan where fire activity throughout the region likely contributed too.

Windy conditions returned for Monday (April 5) where gusts above 50 mph were recorded in several locations. A slow-moving storm system then brought clouds, precipitation, and more wind to the area for Tuesday and Wednesday (April 6-7). With rain departing and clouds decreasing we saw a return to some fire activity for the southern Flint Hills on Thursday (April 8) with westerly winds.

## KSFIRE.ORG



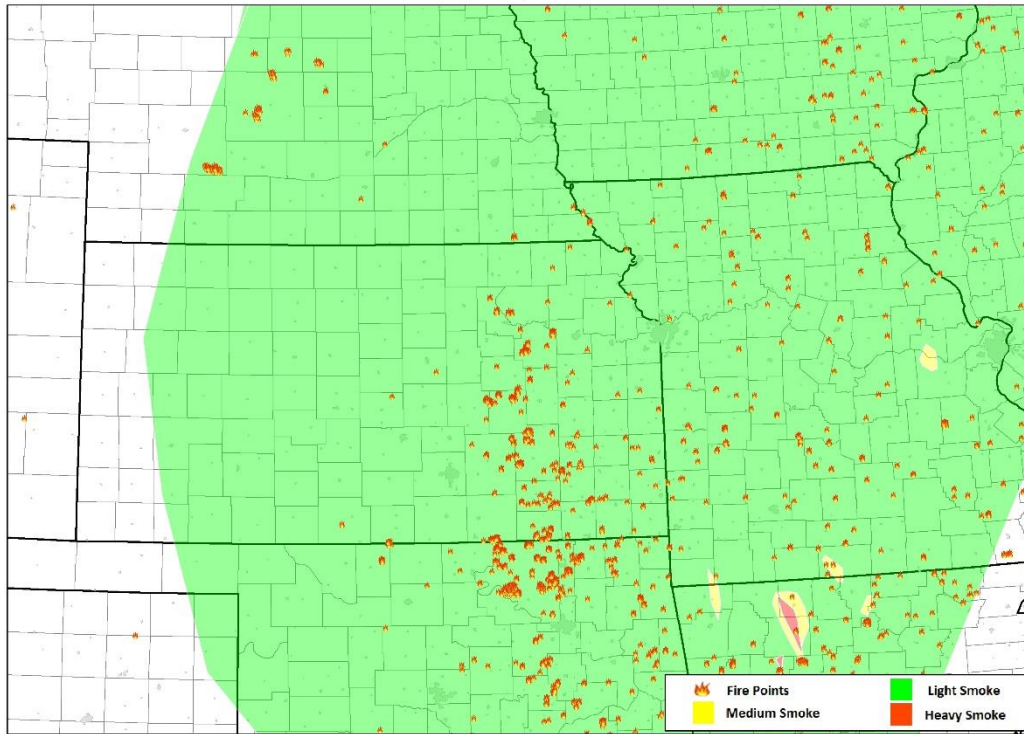
This website was developed as part of the development of the Kansas Flint Hills Smoke Management Plan. Kansas State University hosts the webpage and it includes important information for ranchers and others who might be interested in the Flint Hills. It provides training, regulations, policies, publications,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



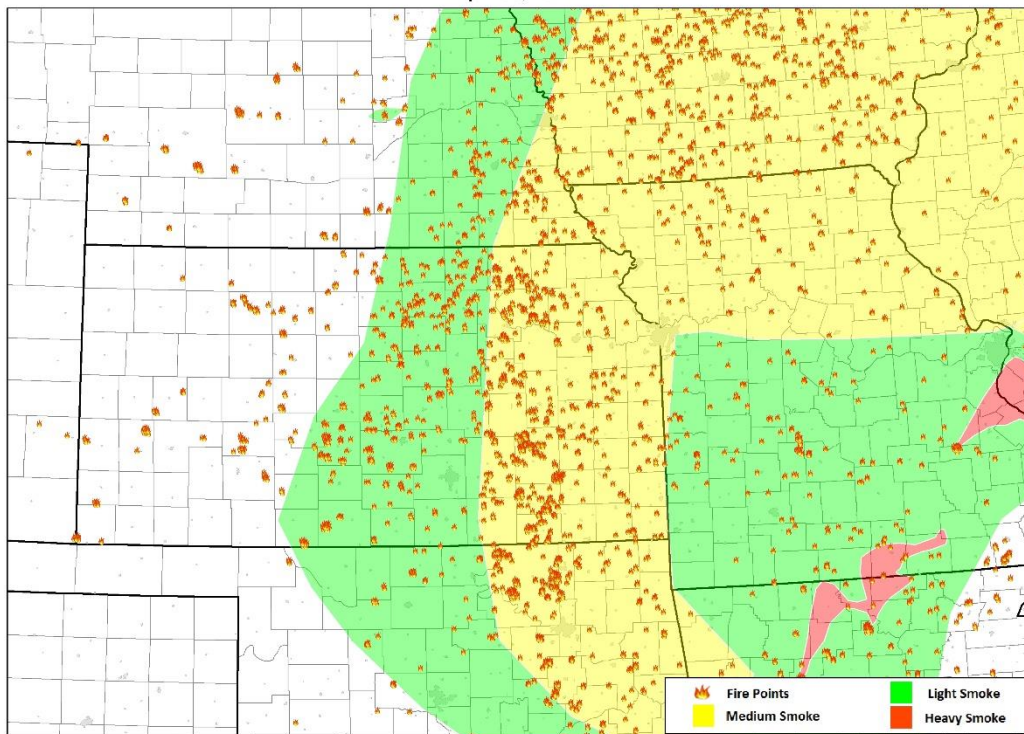
## Satellite Fire & Smoke Analysis

April 02, 2021



## Satellite Fire & Smoke Analysis

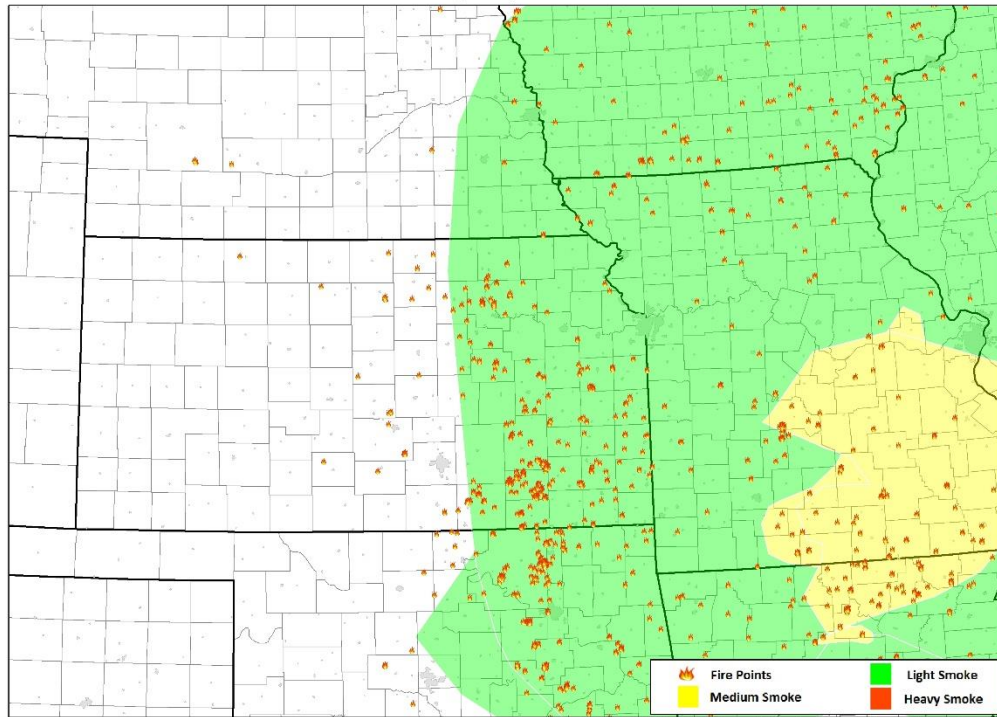
April 03, 2021



# Flint Hills Wildland Fire Update



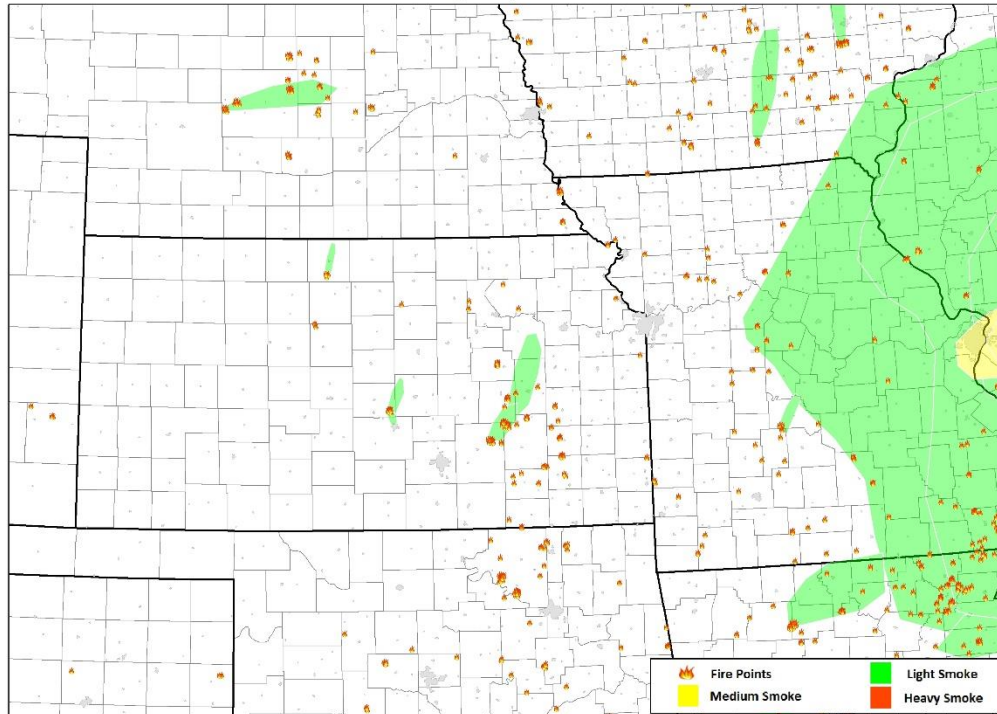
## Satellite Fire & Smoke Analysis April 04, 2021



Map: Jayson Prentice, KDHE Bureau of Air

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

## Satellite Fire & Smoke Analysis April 05, 2021



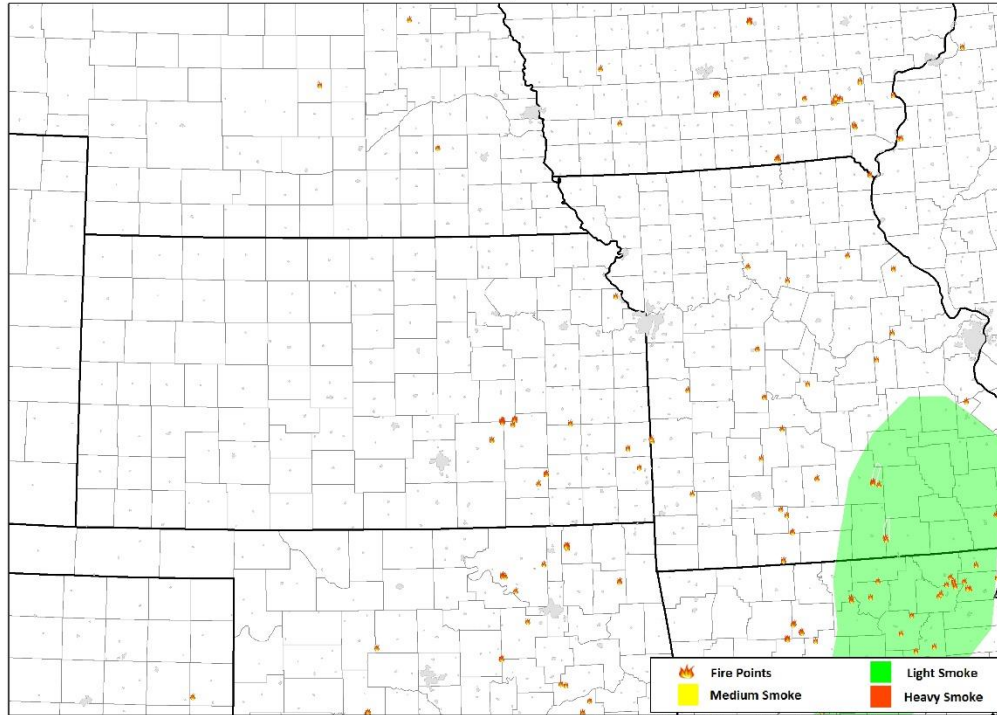
Map: Jayson Prentice, KDHE Bureau of Air

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

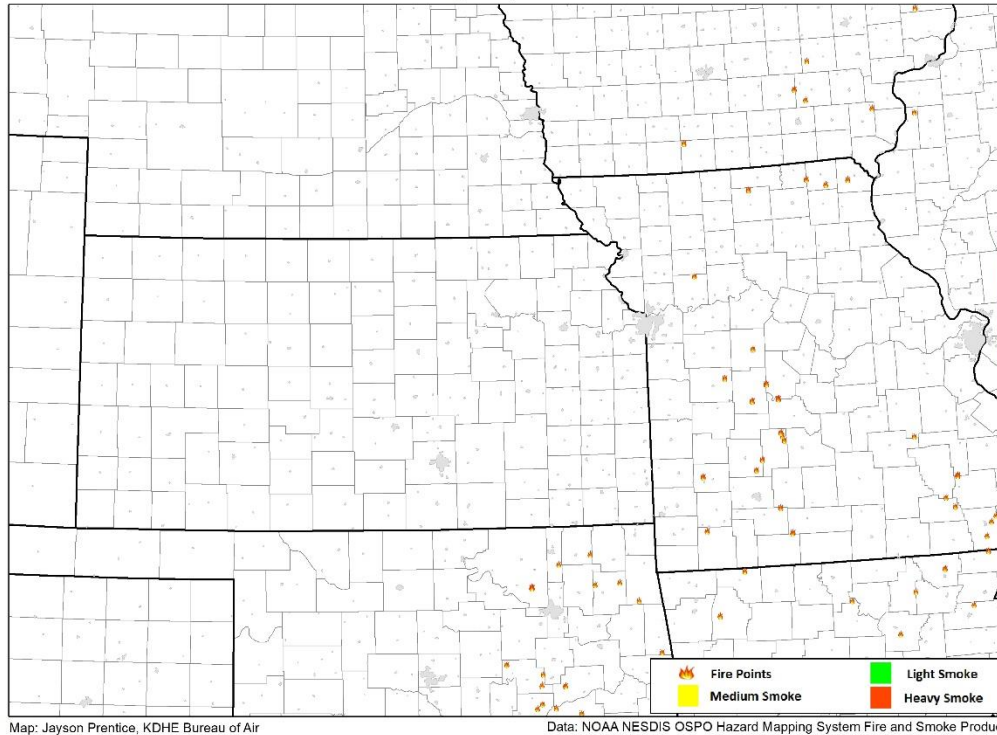
# Flint Hills Wildland Fire Update



## Satellite Fire & Smoke Analysis April 06, 2021



## Satellite Fire & Smoke Analysis April 07, 2021

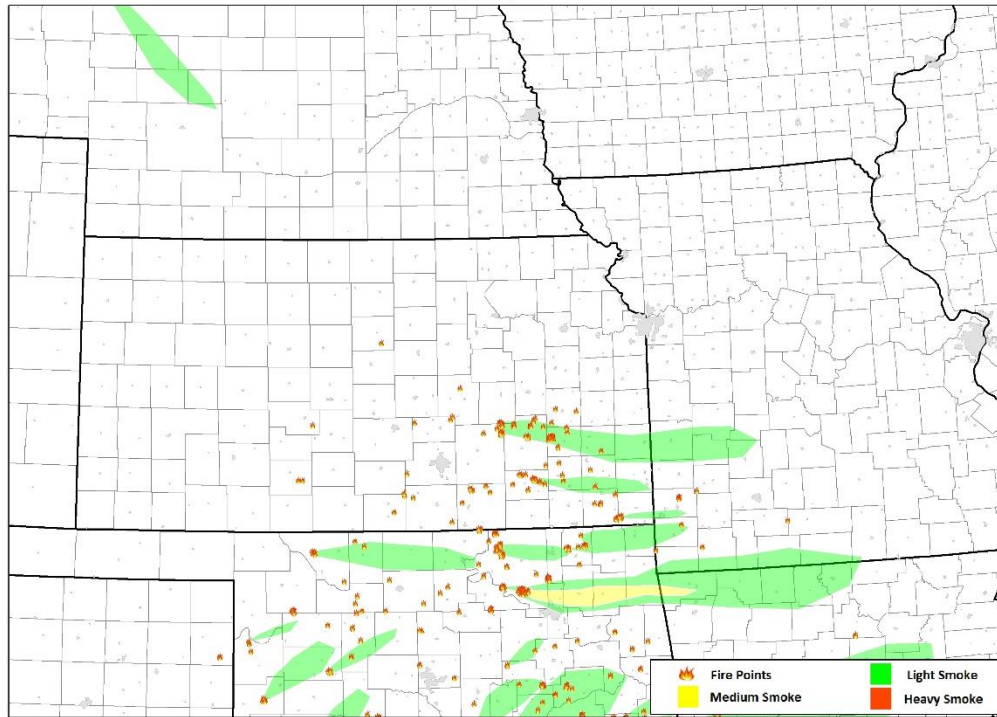




# Flint Hills Wildland Fire Update



## Satellite Fire & Smoke Analysis April 08, 2021



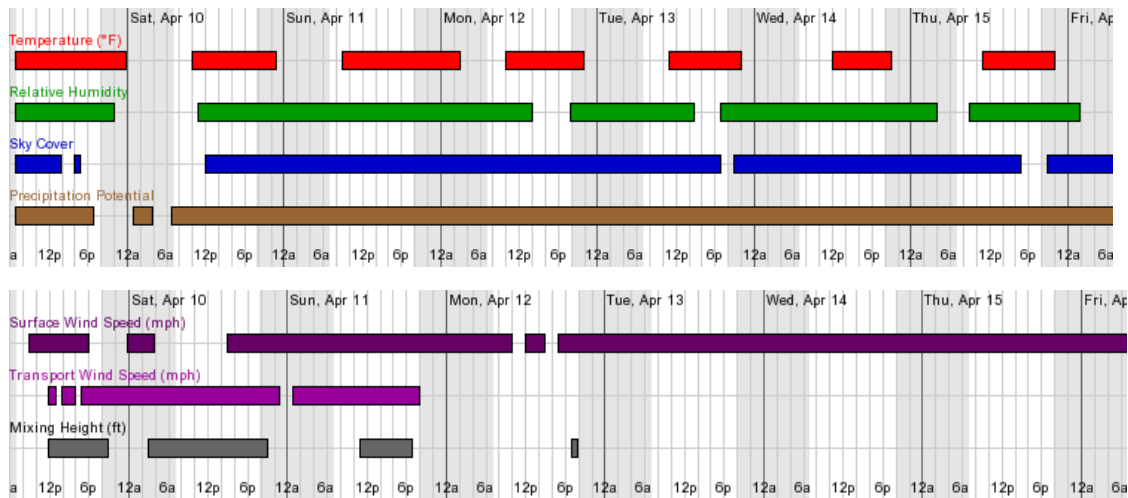


## Upcoming Look at Fires and Smoke

Temperatures will remain seasonable throughout the next week with afternoon conditions being a bit on the dry side with relative humidity values dipping below 30 percent on Monday (April 12) and Tuesday (April 13). Another round of rainfall is expected for much of the region tonight into Saturday (April 10) with otherwise dry conditions currently expected. Though there may be rain chances that move into the forecast for Wednesday (April 14) and Thursday (April 15) too. It is not a week in Kansas without some breezy conditions, and currently late today (April 9), Saturday (April 10), and Monday (April 12) look to feature these breezy conditions.

Some prescribed burning may be possible today (April 9) ahead of rain chances, otherwise look for many more opportunities throughout the next week provided rain chances remain low.

### 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 April 9, 2021.*

For more information, contact:

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