

Flint Hills Prescribed Fire Update

March 13, 2020

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



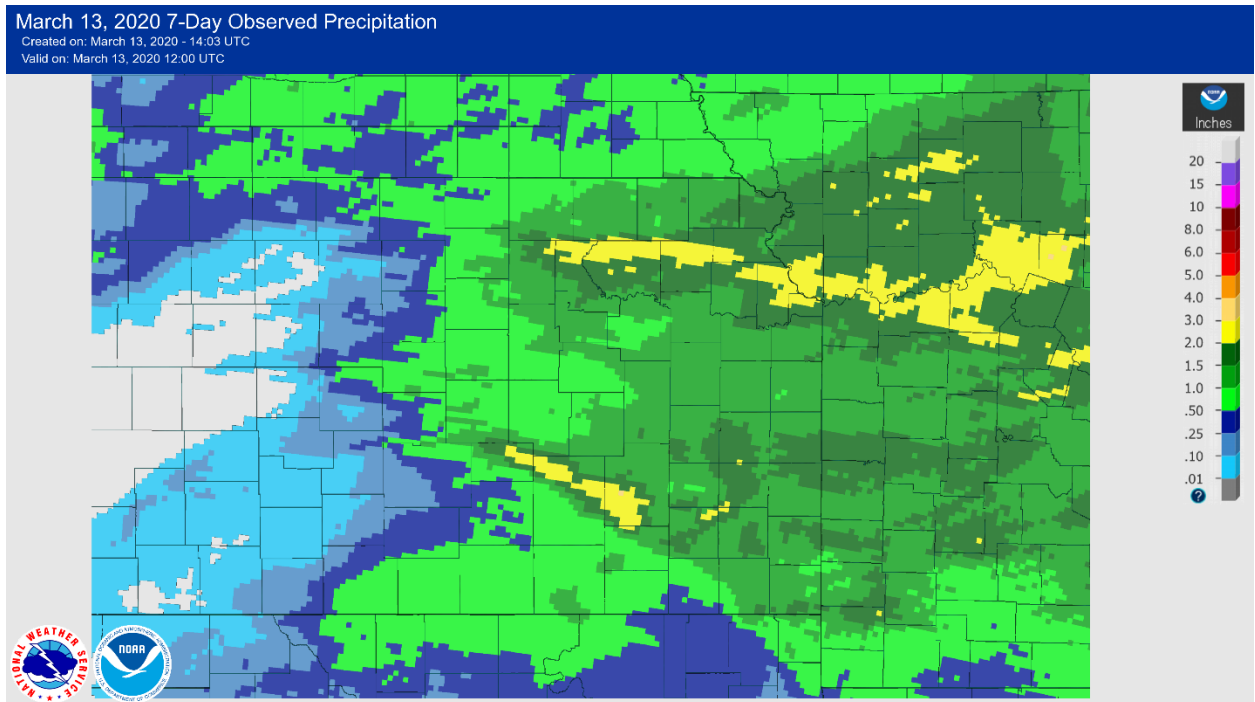


Meteorology

The entire Flint Hills area received at least one bout of precipitation over the last week, with many areas seeing two or three. Showers and occasional thunderstorms were observed Sunday into Monday (March 8-9) throughout the region, and more scattered activity on Wednesday (March 11) and Thursday (March 12). Rainfall amounts ranged from a half-inch to upwards of two inches over the Flint Hills.

Temperatures have remained near to above normal for the past week with the warmest days occurring last weekend (March 7-8) as highs were in the 60s and 70s. Wind speeds have remained gusty during the afternoon hours for many days, with the only days without wind gusts above 20 mph being Monday through Wednesday (March 9-11). Wind directions over the past week were initially steady, westerly on Friday (March 6), then southerly on Saturday and Sunday (March 7-8), however since then have varied widely for the remainder of the week.

Precipitation



NOAA/NWS Observed Total Precipitation for March 6-12, 2020.



Air Quality Data

Air quality data for the period of March 6-12, 2020:

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

PM_{2.5}: Preliminary data indicates no exceedance of the NAAQS daily 24-hour average maximum of 35 $\mu\text{g}/\text{m}^3$.

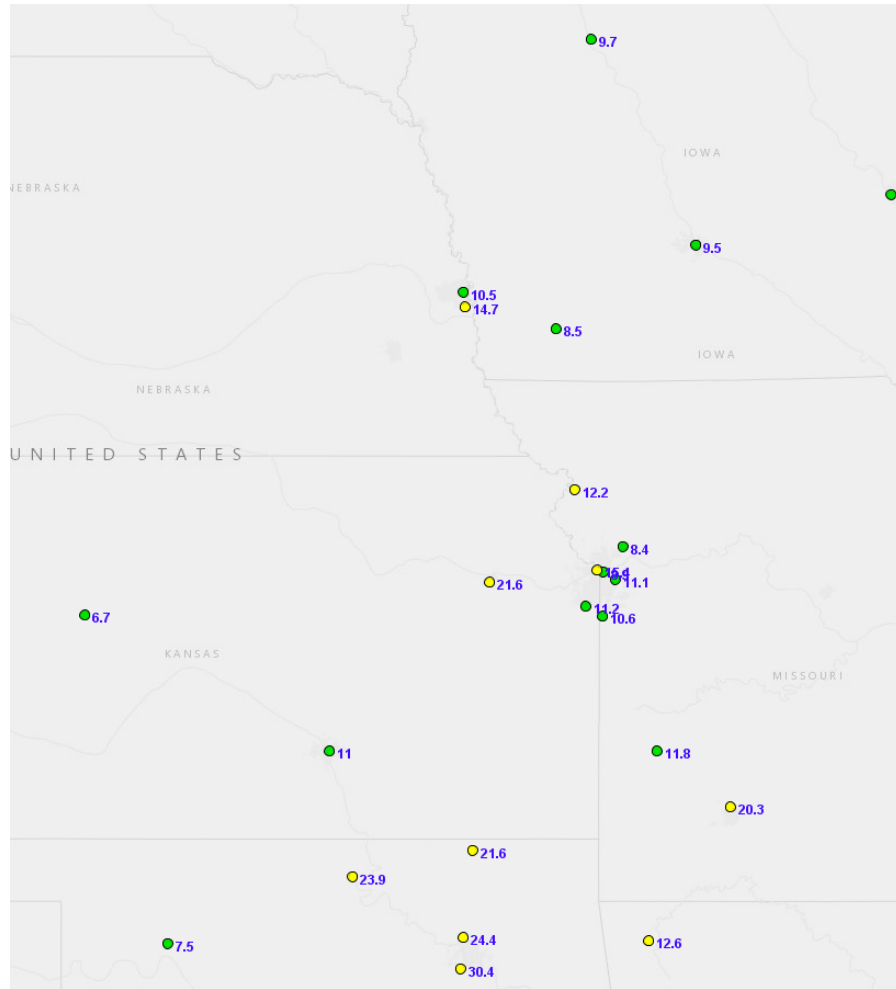
Air quality images on the following pages for each day show preliminary data, courtesy Air Now Tech.

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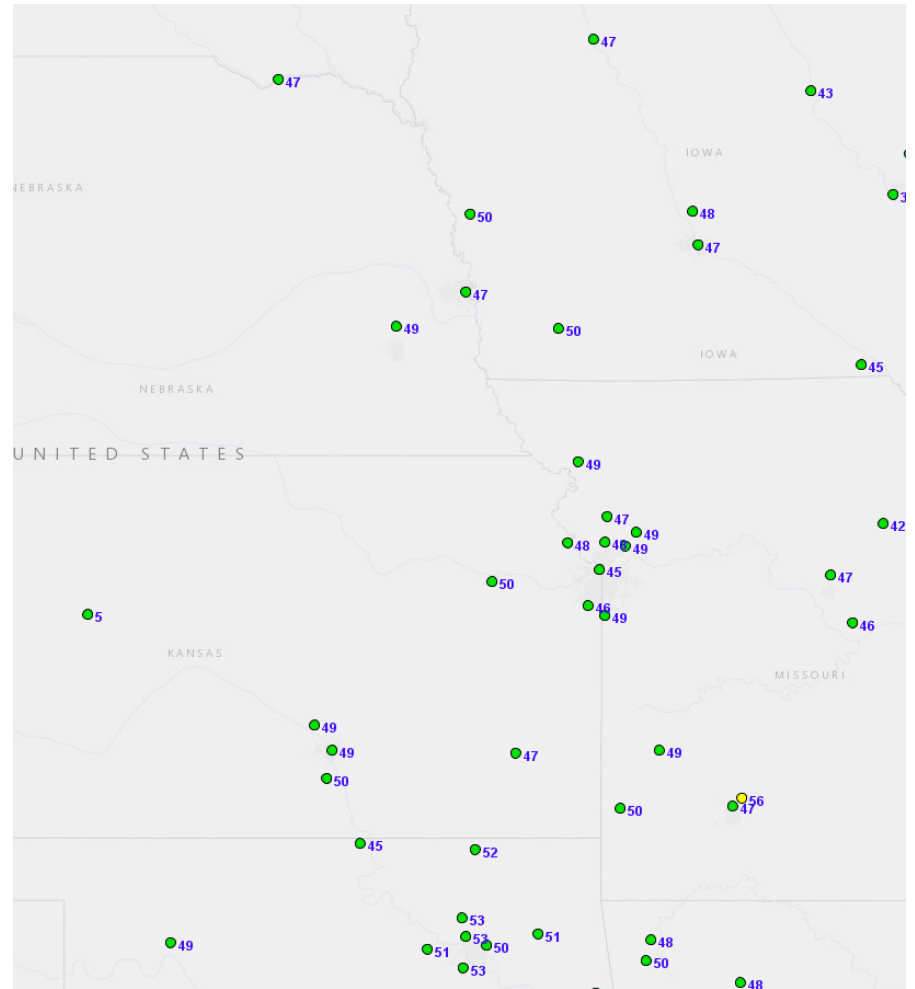


Saturday, March 7, 2020

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

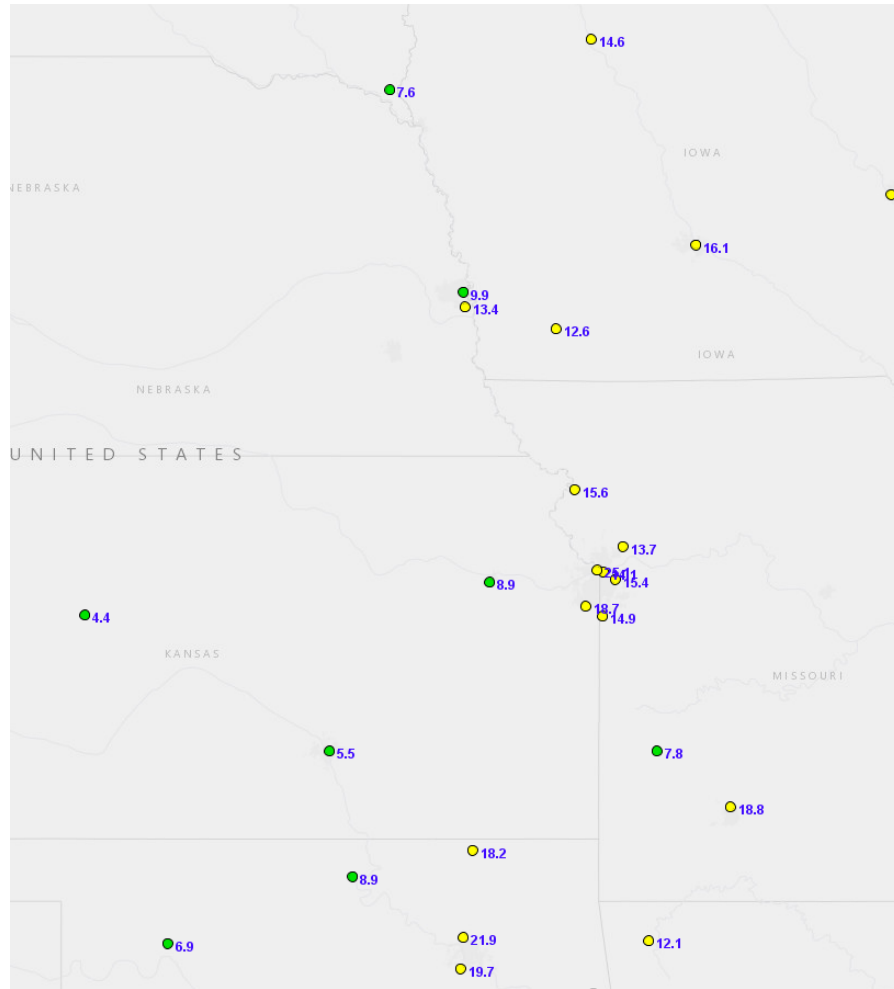


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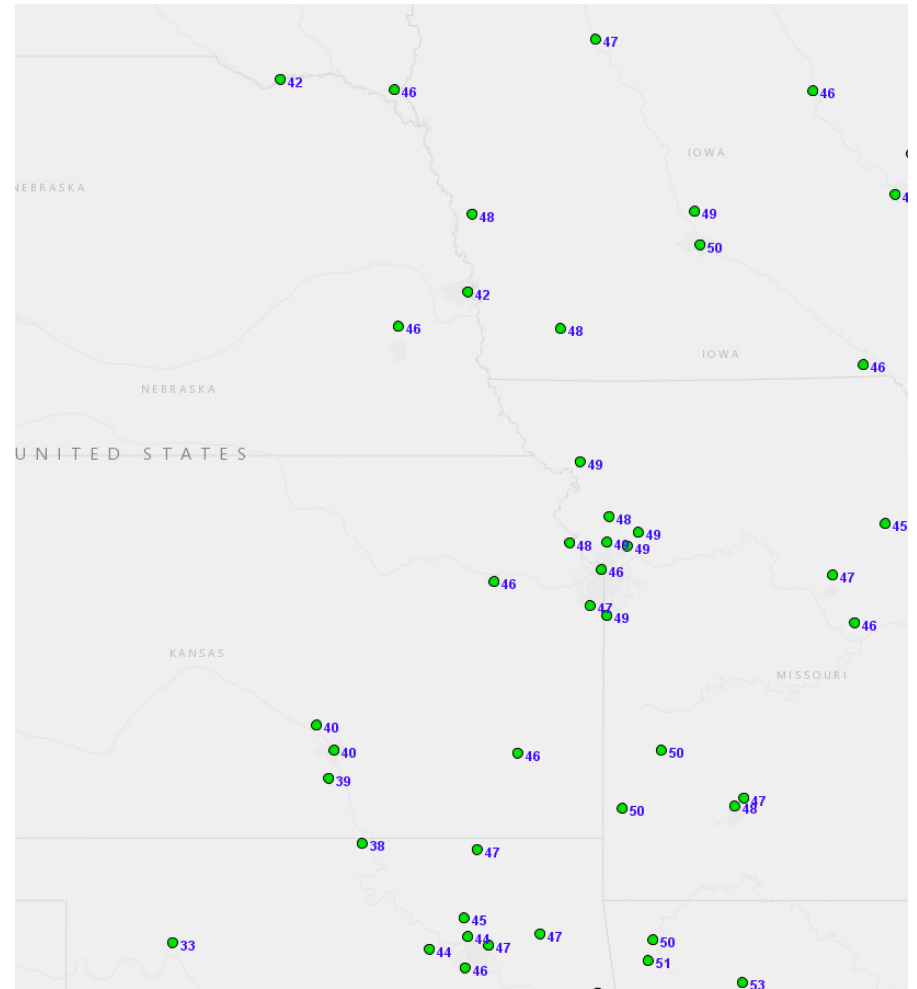


Sunday, March 8, 2020

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

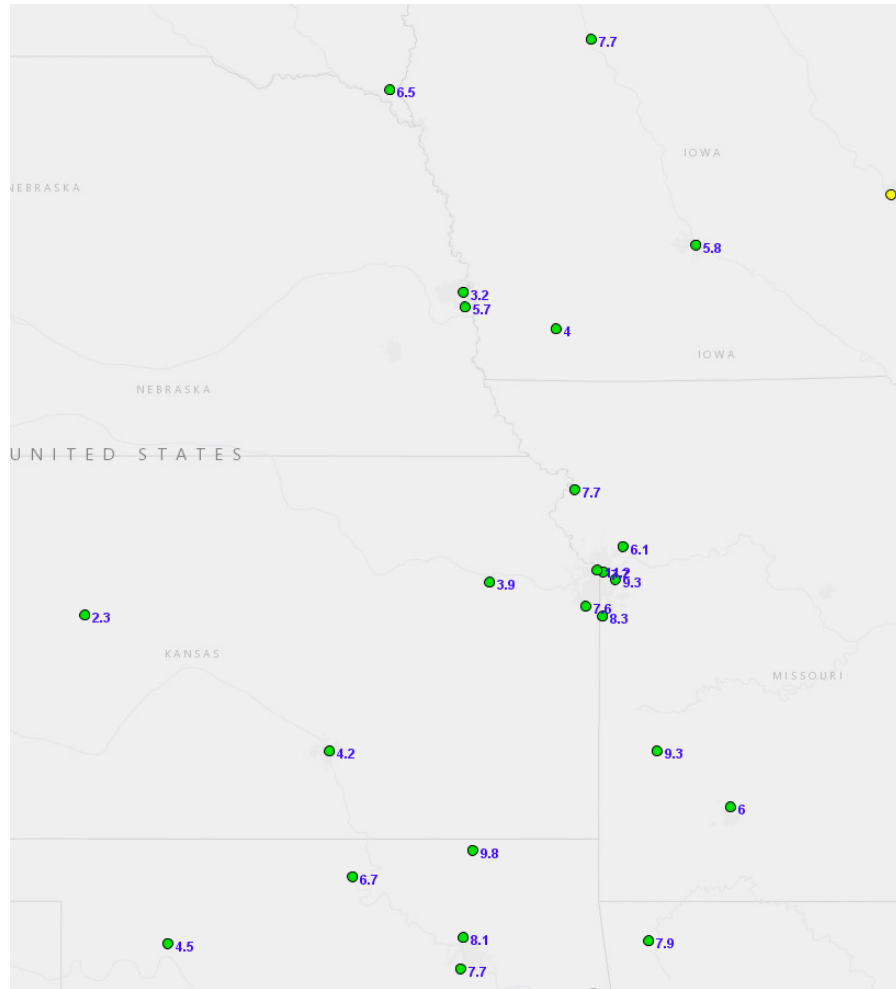


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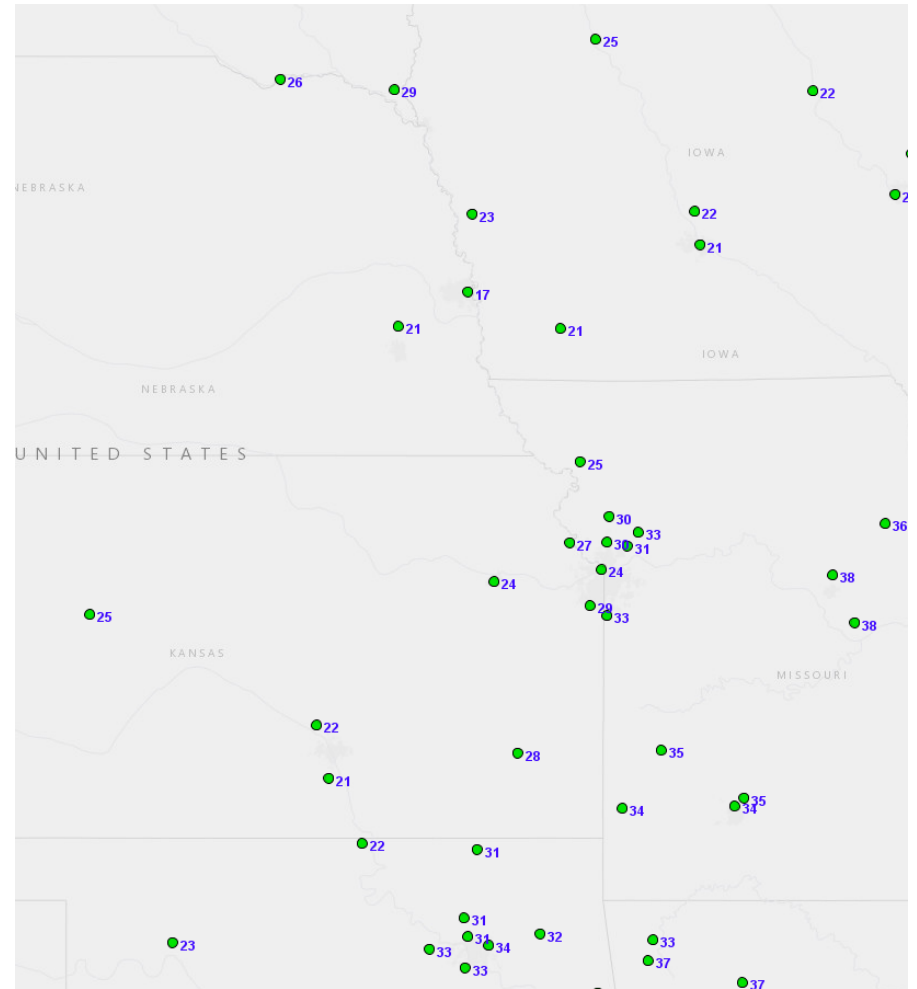


Monday, March 9, 2020

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

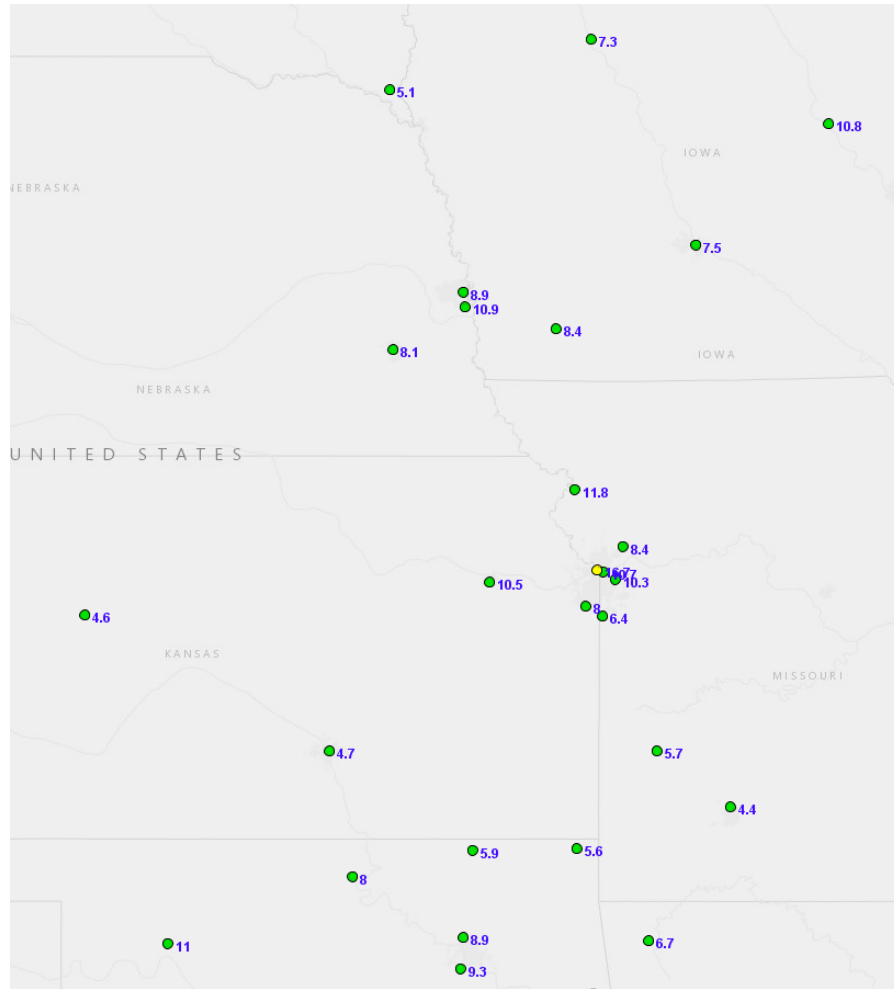


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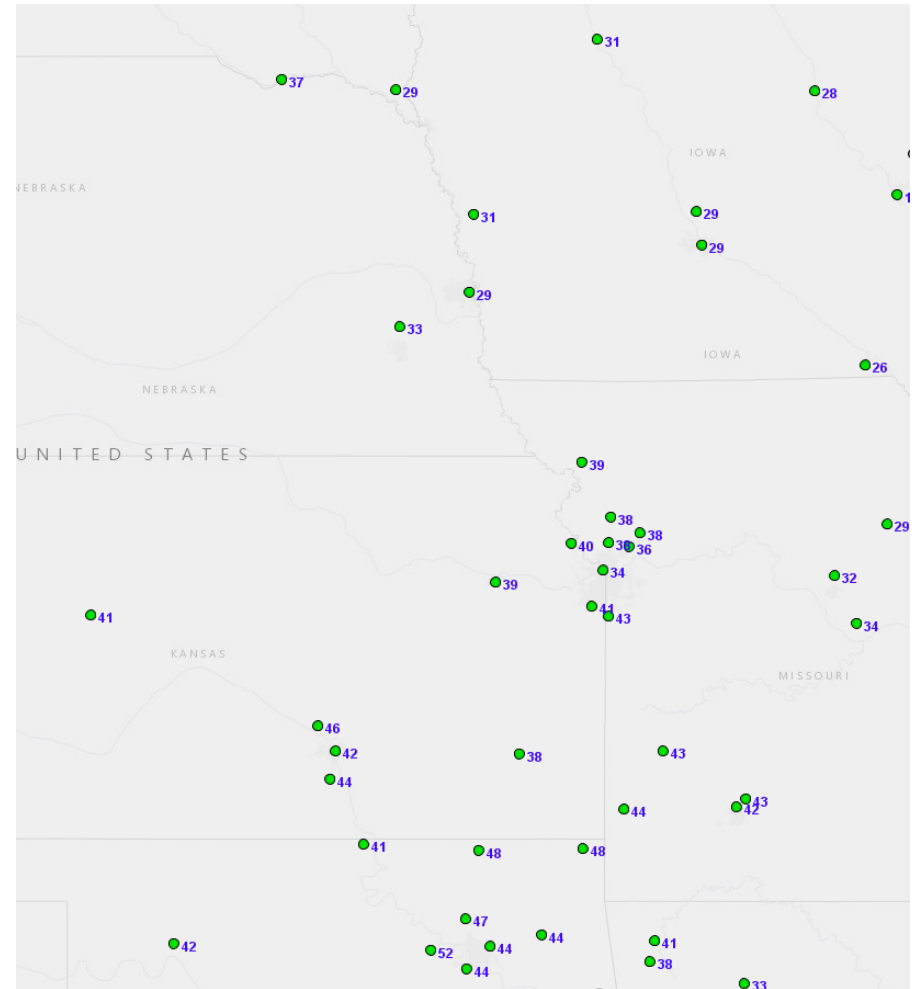


Wednesday, March 11, 2020

PM2.5 (24-hour average)



Ozone (8-hour average maximum)

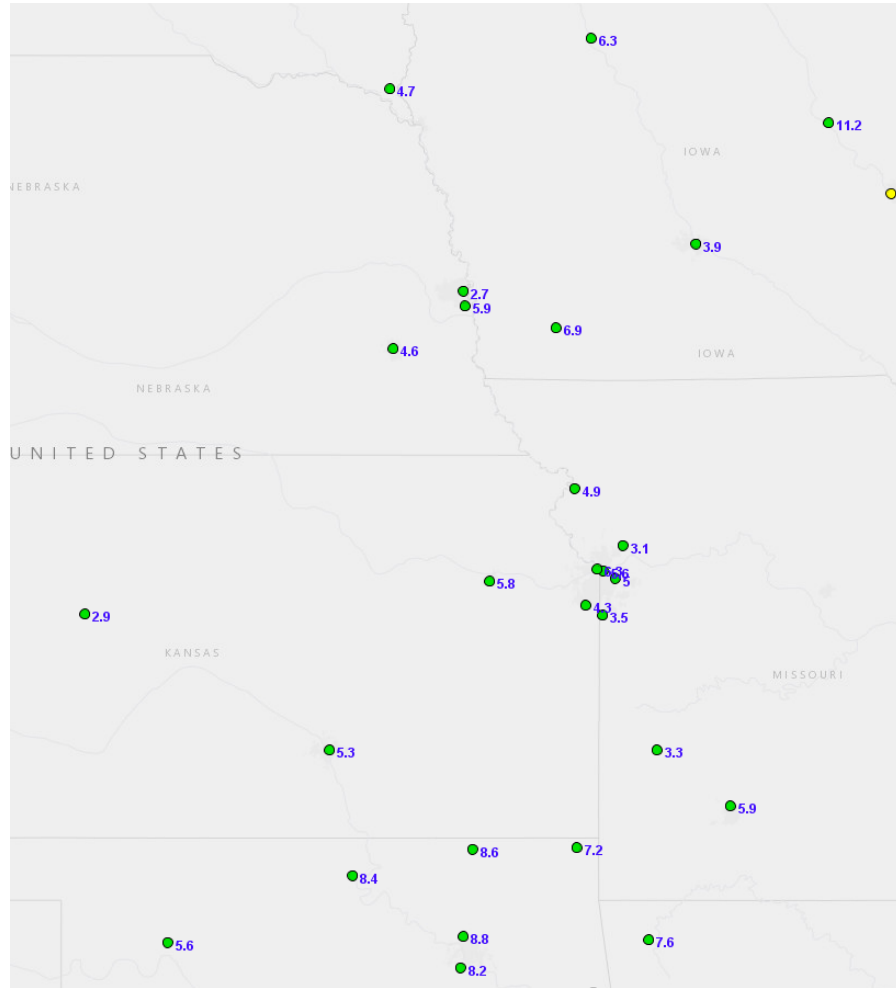


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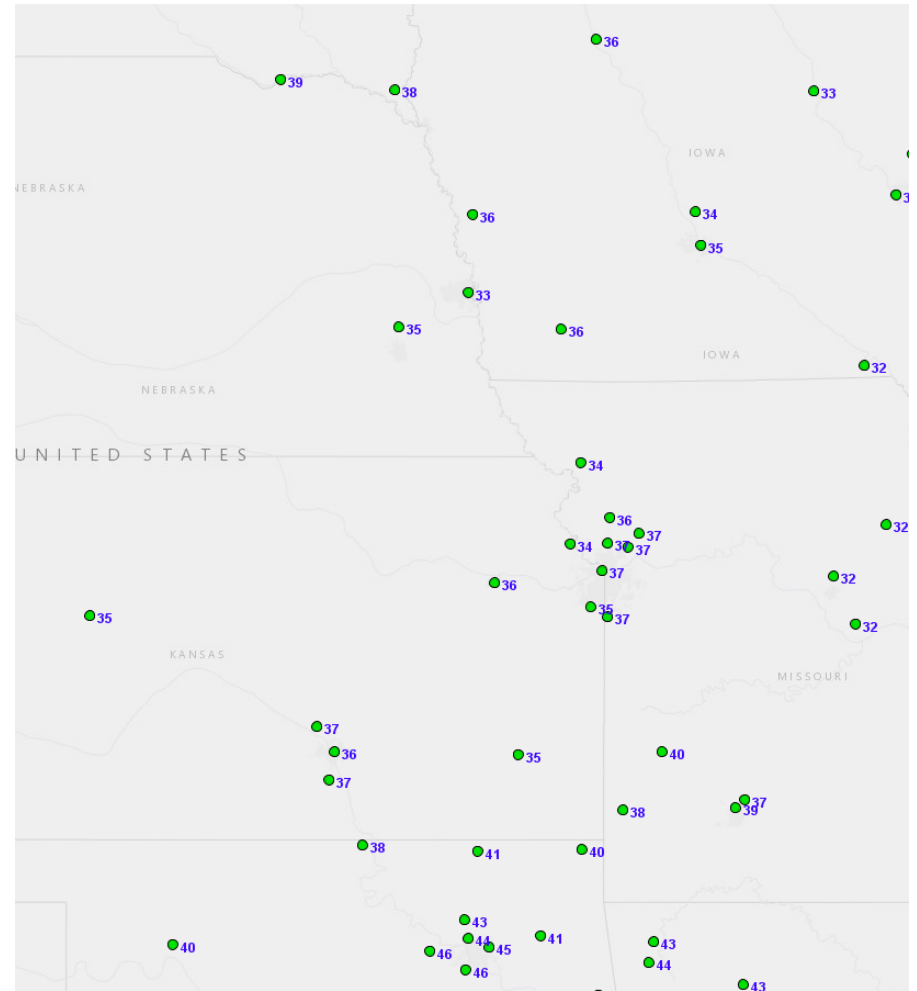


Thursday, March 12, 2020

PM2.5 (24-hour average)



Ozone (8-hour average maximum)





Fires and Smoke

Despite some breezy conditions early Friday, winds decreased as they switched from westerly to southerly late Friday and allowed for ample burning to occur throughout the region on March 6. The variable wind direction across the region allowed smoke over Nebraska, Kansas, and Oklahoma to drift slowly north while smoke over Missouri and Arkansas was spread south, west, then north.

Prior to winds increasing on Saturday (March 7) the smoke from the prior day and overnight settled into the region and led to elevated Air Quality Index (AQI) levels, especially over Oklahoma. Gusty winds and very high fire danger by Saturday afternoon led to minimal burning over the Flint Hills and to the west. Note the 412 Wildfire in the Oklahoma panhandle, and an additional fire in Nebraska that both boasted large smoke plumes. Lighter winds to the east allowed for continued prescribed burning across Missouri, Arkansas, and southeast Oklahoma.

Breezy and rainy conditions on Sunday precluded any prescribed fires for most locations. A large plume of light to moderate smoke was analyzed early Sunday ahead of the rainfall, remnants from fire activity the prior day, which led to a large area of Moderate AQI for Sunday (March 8).

Fire activity for the remainder of the week (March 9-12) has remained light with cooler temperatures, periods of rain, and breezy conditions at times.

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

KSFIRE.ORG

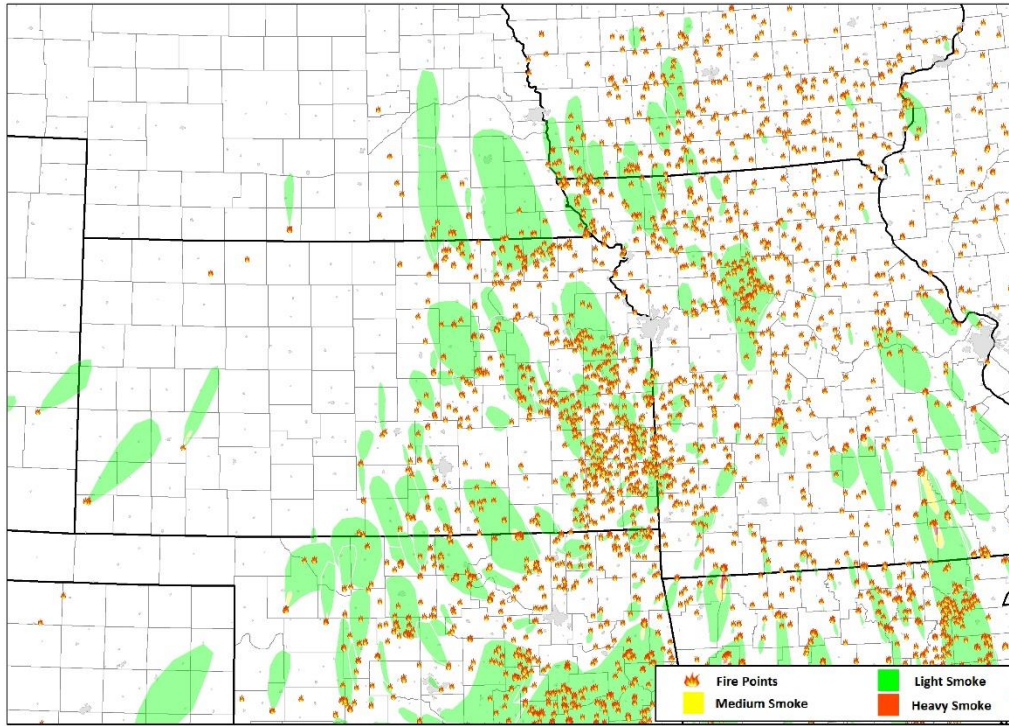


This website was developed as part of the development of the Kansas Flint Hills Smoke Management Plan. Kansas State University hosts the webpage and it includes important information for ranchers and others who might be interested in the Flint Hills. It provides training, regulations, policies, publications,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

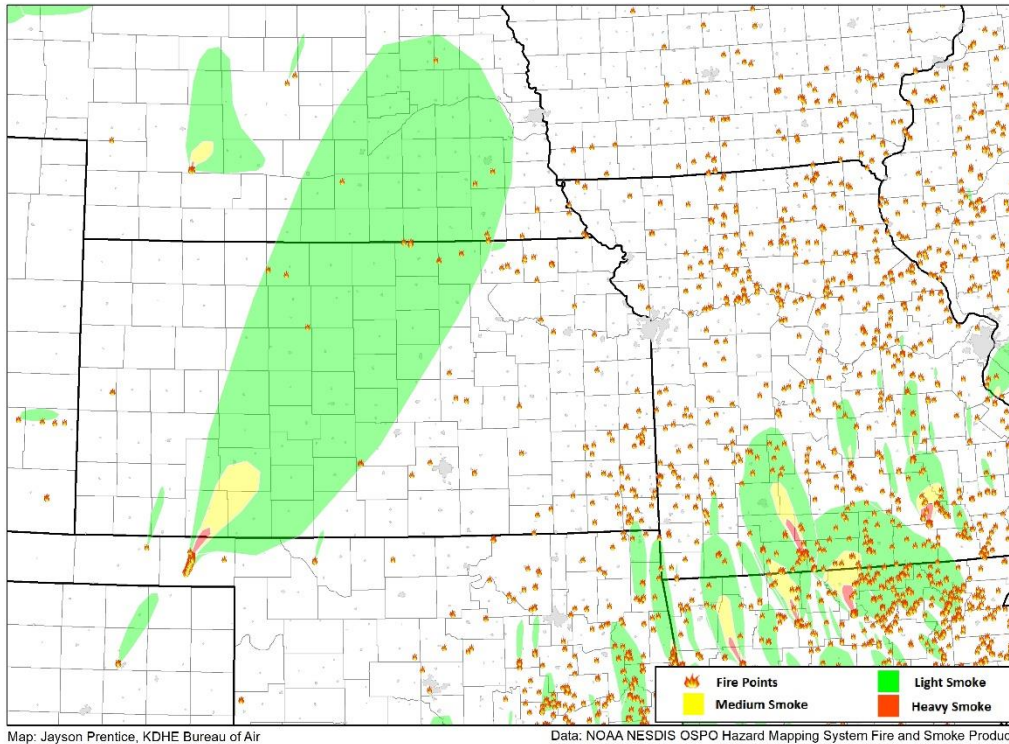
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HMS Fire & Smoke Analysis March 6, 2020



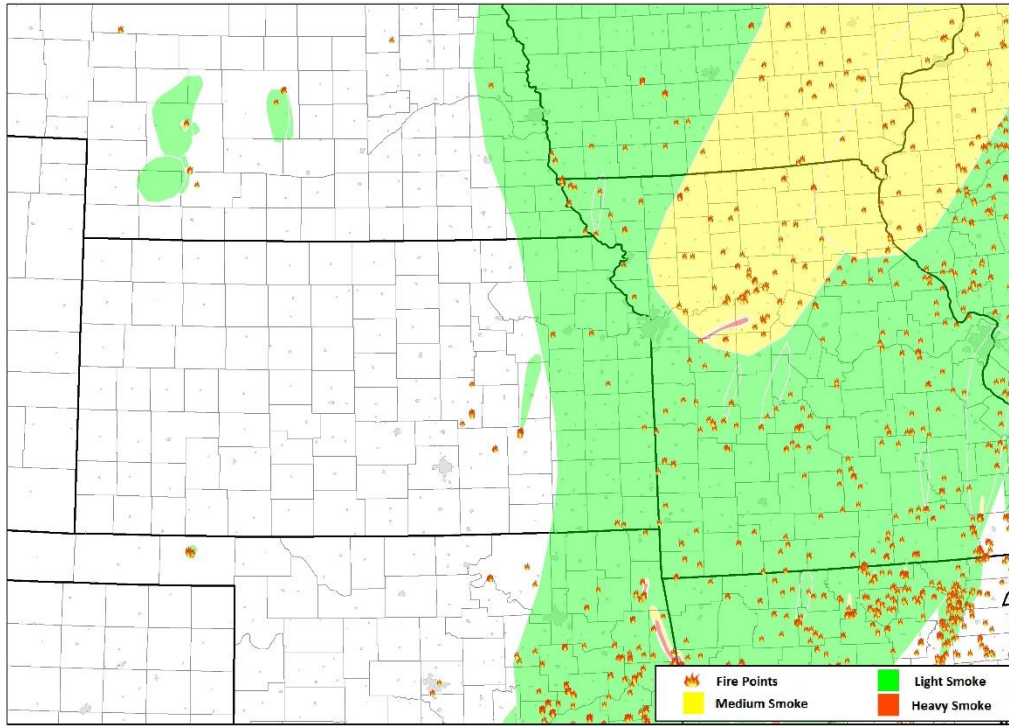
HMS Fire & Smoke Analysis March 07, 2020



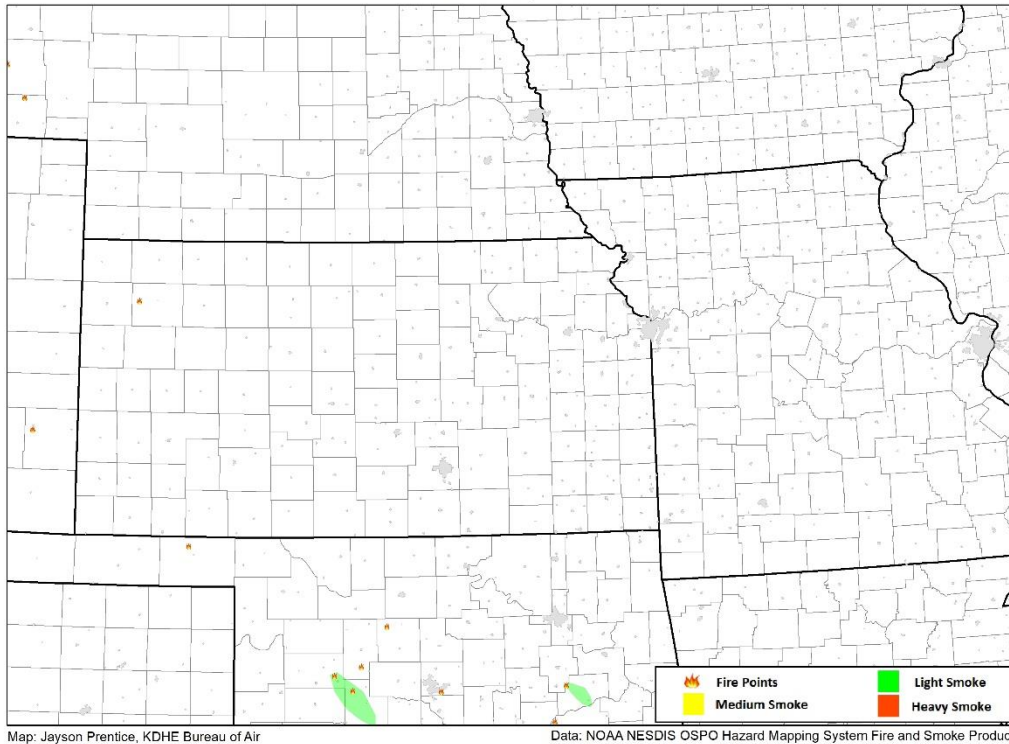
Flint Hills Prescribed Fire Update



HMS Fire & Smoke Analysis March 08, 2020



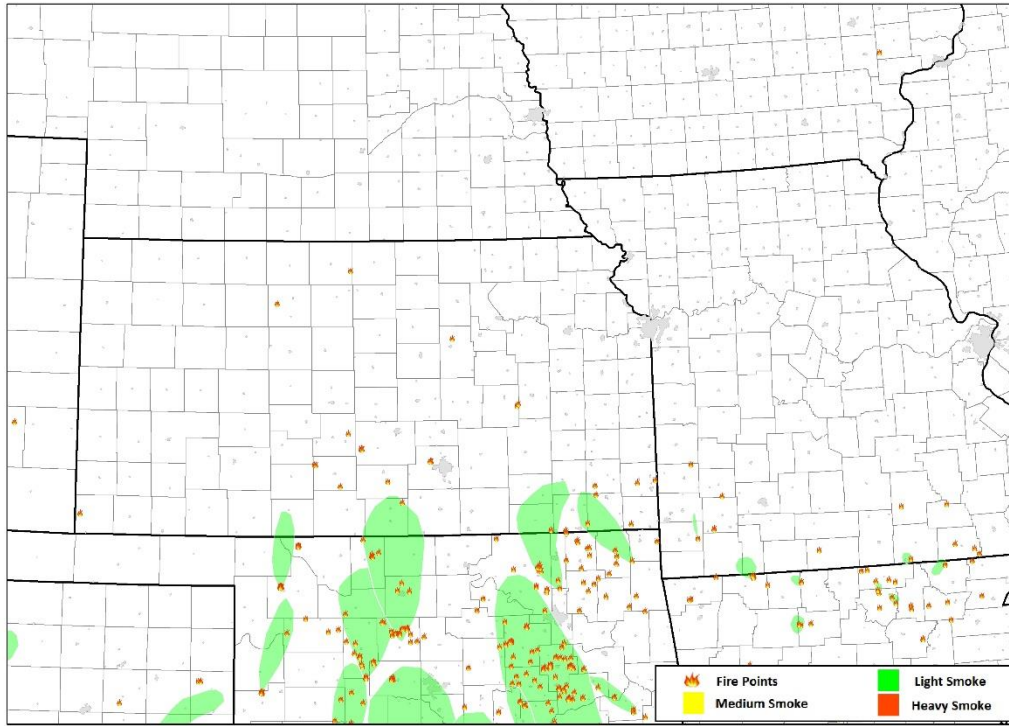
HMS Fire & Smoke Analysis March 09, 2020



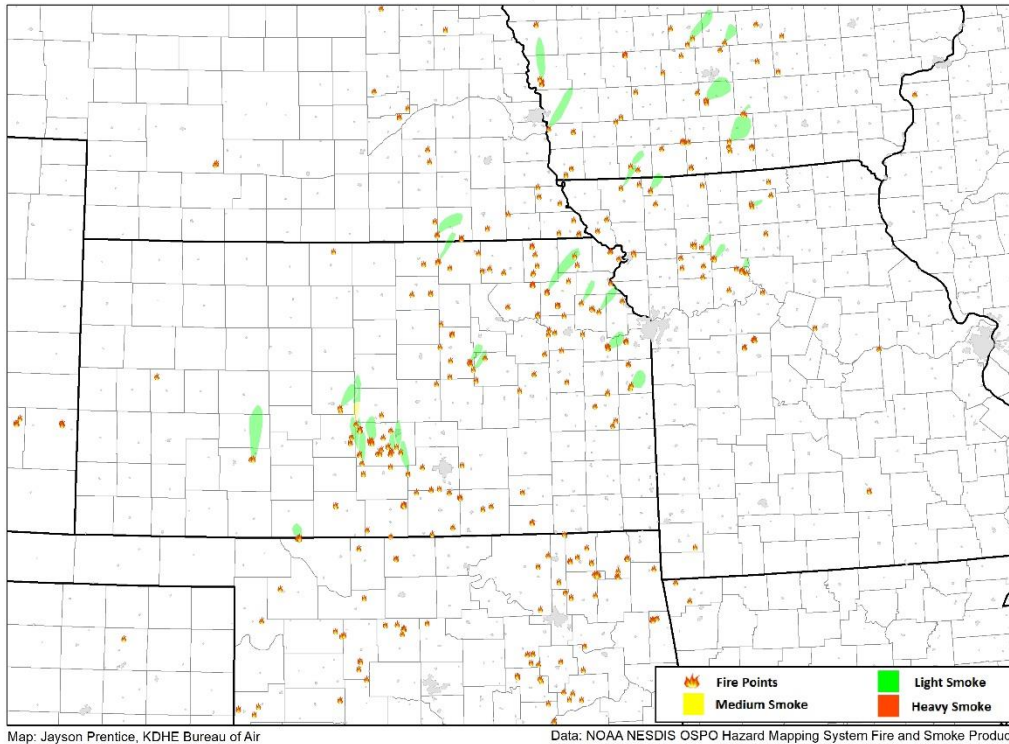
Flint Hills Prescribed Fire Update



HMS Fire & Smoke Analysis March 10, 2020



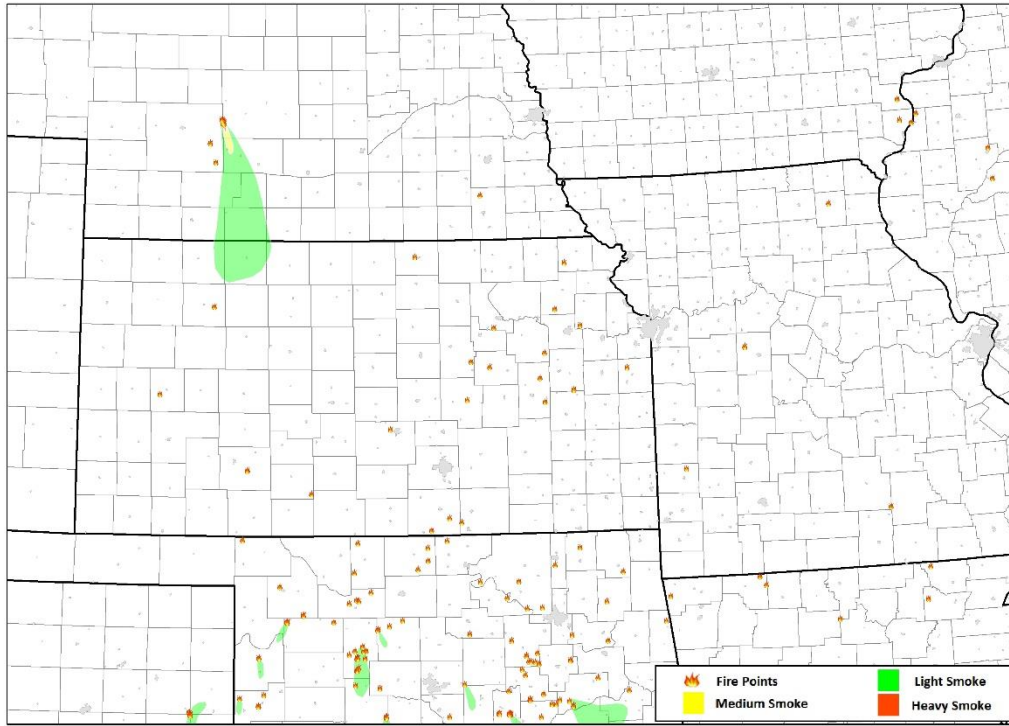
HMS Fire & Smoke Analysis March 11, 2020



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HMS Fire & Smoke Analysis March 12, 2020





Flint Hills Acreage Burned

Flint Hills acreage burned map is not yet available for 2020. This map and acreage estimation will be provided as soon as available and will also be included on the Flint Hills Smoke Management Facebook page.

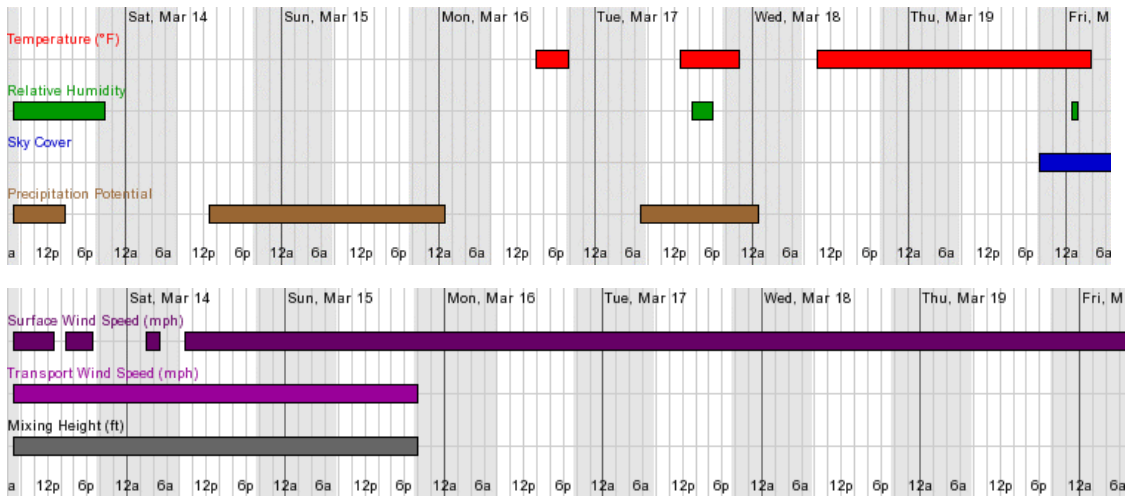
<u>Counties</u>	<u>Acres Burned</u>	
Butler		
Chase		
Chautauqua		
Coffey		
Cowley		
Elk		
Geary		
Greenwood		
Lyon		
Marion		
Morris		
Osage (KS)		
Pottawatomie		
Riley		
Wabaunsee		
Wilson		
Woodson		
Nowata (OK)		
Osage (OK)		
Washington (OK)		
Kay (OK)		
Total		
<i>* Denotes county was partly or completely covered by clouds during latest analysis.</i>		



Upcoming Look at Fires and Smoke

Below normal temperatures have moved into the region and look to stay in place through at least Monday (March 16) before warming back up to near normal. The larger impact on prescribed fire activity will be a very wet and cloudy week ahead. Conditions look to remain cloudy for nearly the entire next week with rain, perhaps even rain and snow, late Friday into Saturday (March 13-14); More rain is expected throughout Monday (March 16); Then additional rain showers on Wednesday and Thursday (March 18-19). Prescribed fire activity in the Flint Hills, and the entire Central Plains, is likely to remain minimal throughout the upcoming week if the forecast holds true.

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 13, 2020.

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