

Flint Hills Prescribed Fire Update

March 24, 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.

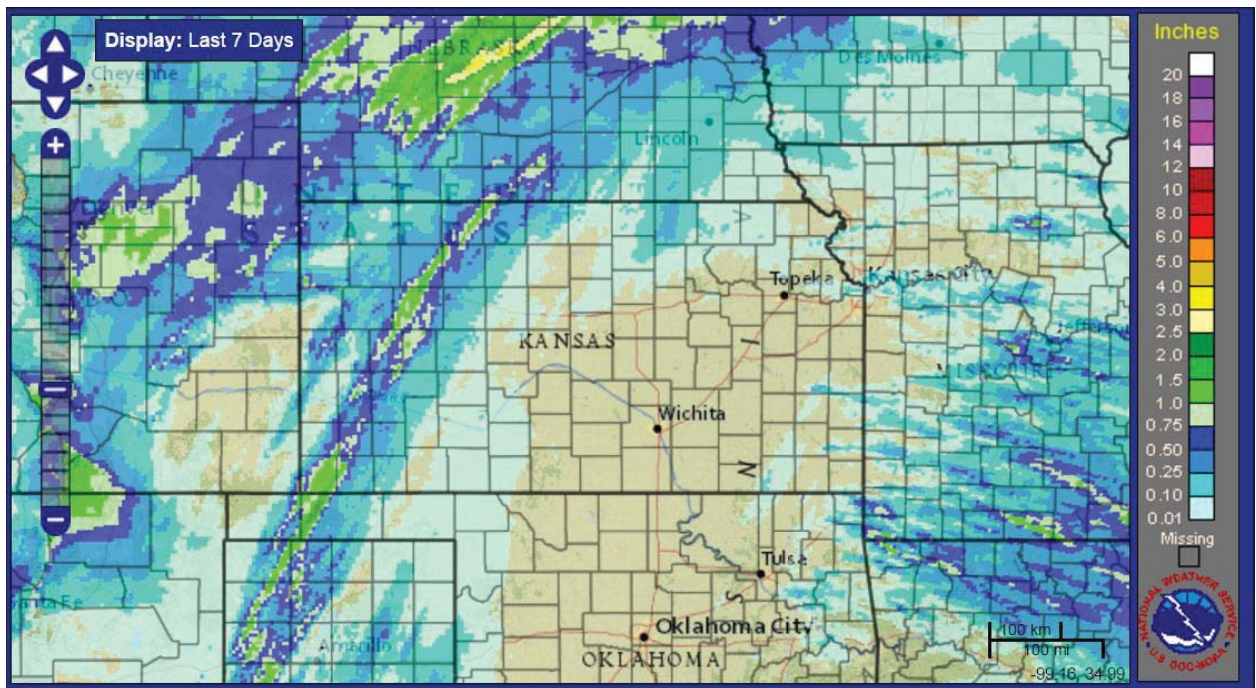




Meteorology

Seasonal to mild temperatures were observed for much of the past week. Only a brief cool down occurred on Tuesday and Wednesday (March 21-22) with temperatures in the 50s across much of the Flint Hills. Precipitation was east of the Flint Hills by last Friday (March 17) and occurred west and north of the Flint Hills on Thursday (March 23). Winds have been breezy to windy nearly every other day for the past week with gusts above 30 mph last Friday, Sunday, Tuesday, and Thursday.

Precipitation

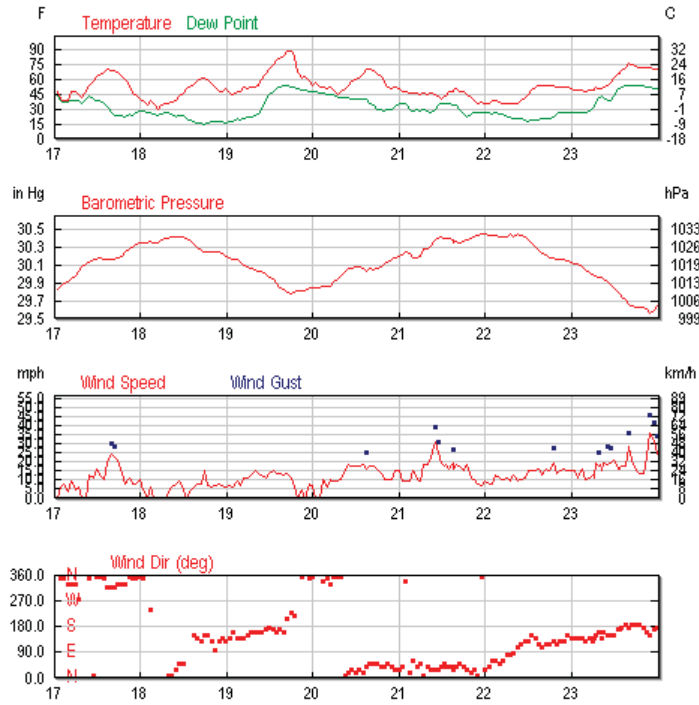


NOAA/NWS Observed Total Precipitation for March 17-23, 2017.

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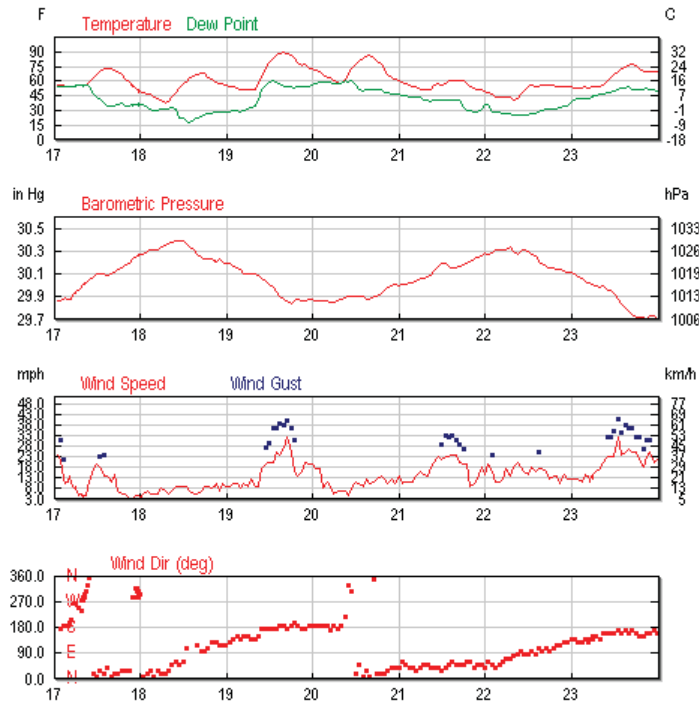


Lincoln, NE



Mar 17-23, 2017 Observed Weather from KLNK. Graphic: Weather Underground, Inc.

Emporia, KS



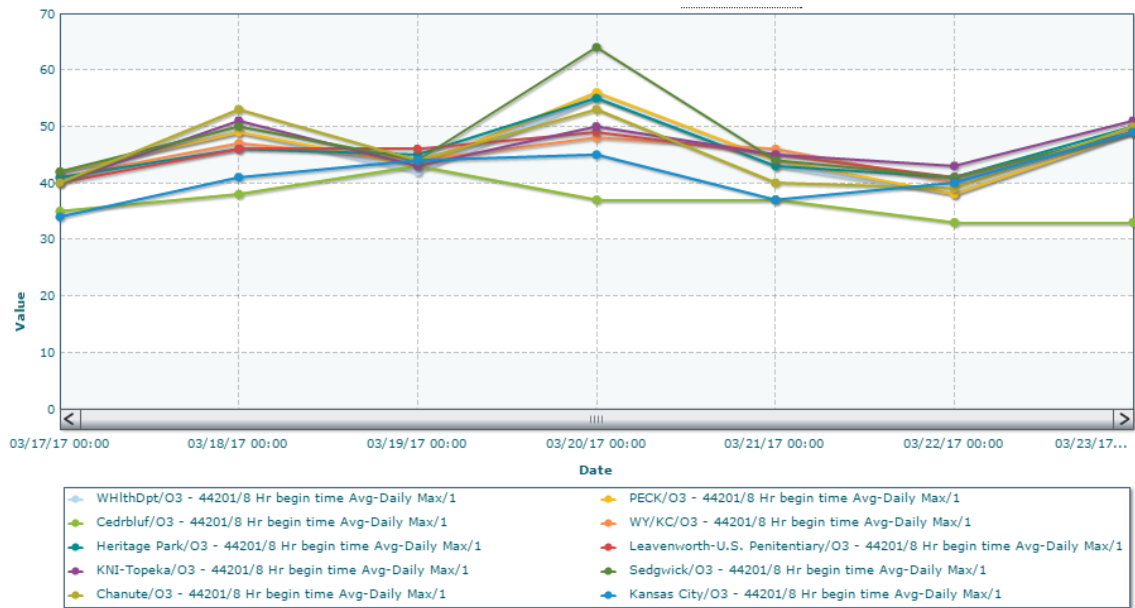
Mar 17-23, 2017 Observed Weather from KEMP. Graphic: Weather Underground, Inc.



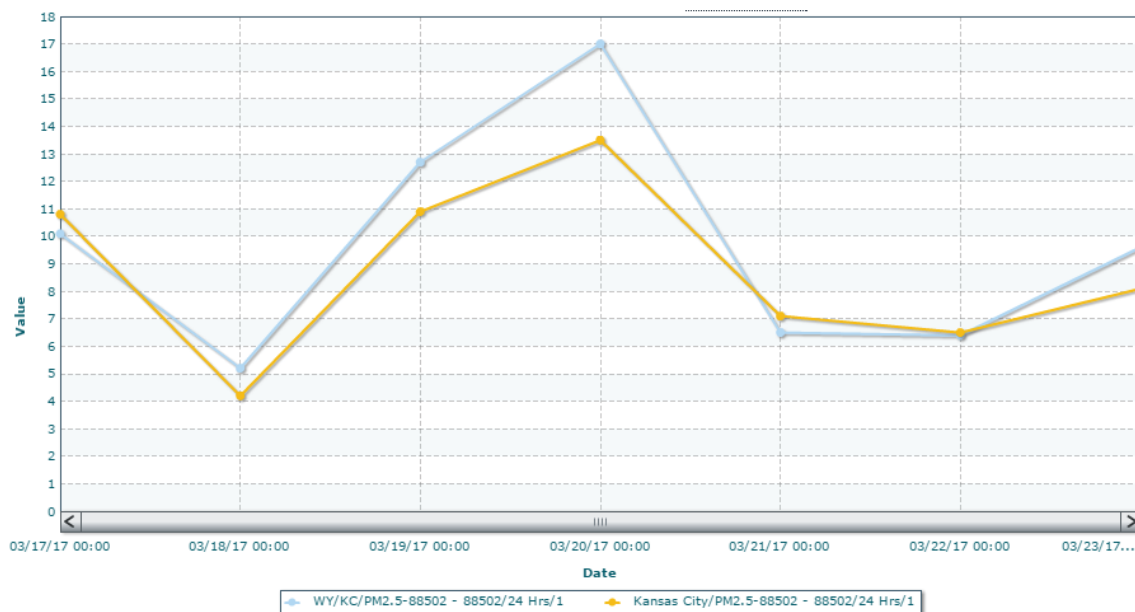
Air Quality Data

Air quality data for all sites in the region remained below exceedance levels during the past week, March 17-23, 2017.

Kansas Daily 8-hour Maximum Ozone (ppb)



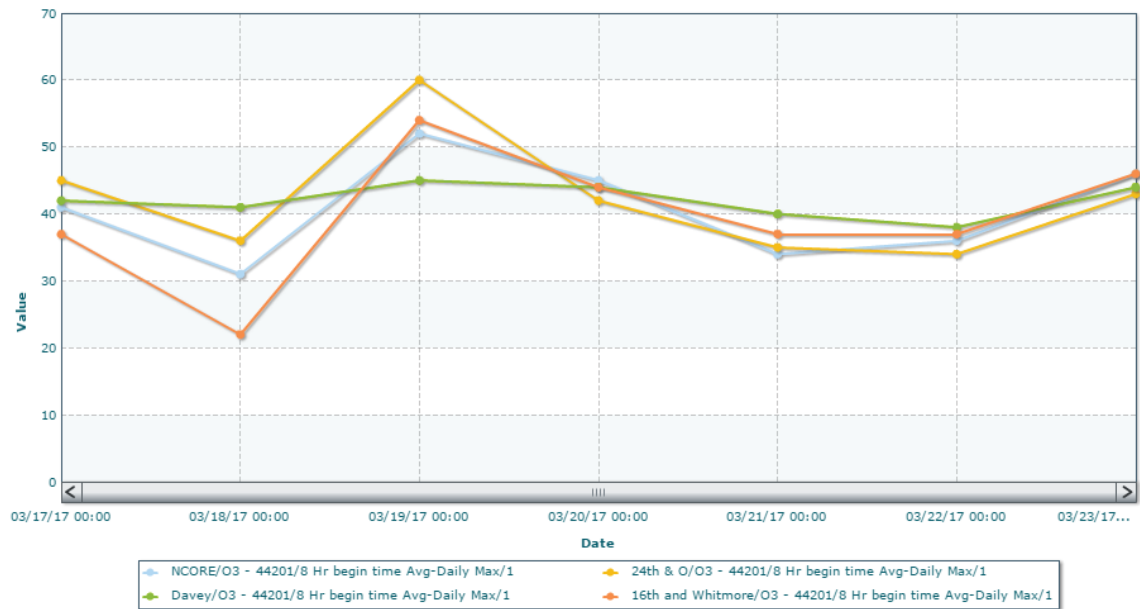
Kansas Daily PM_{2.5} (µg/m³)



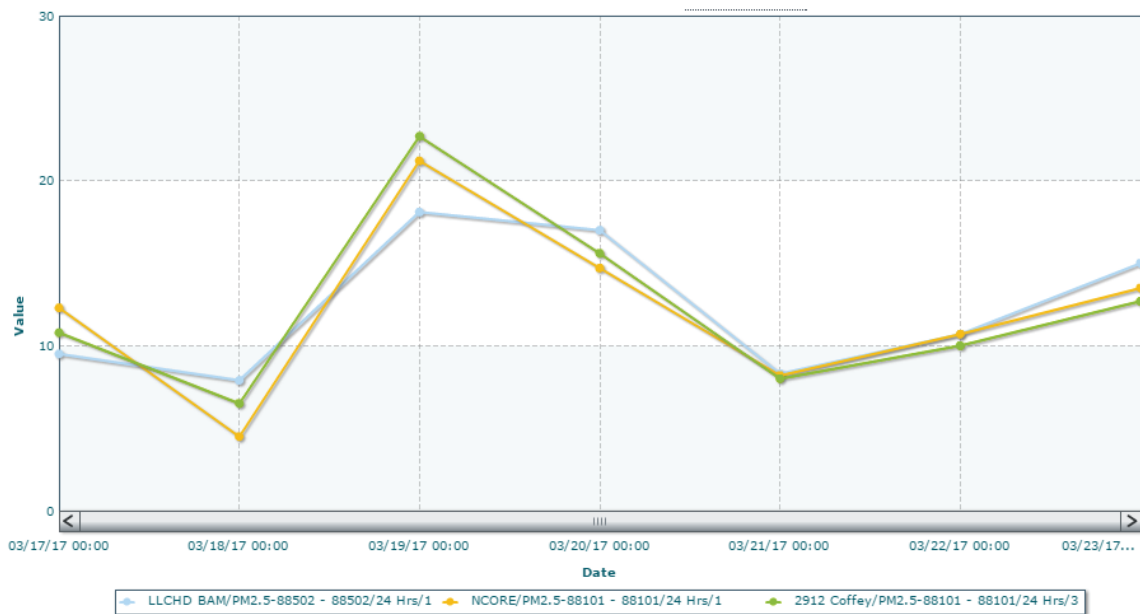
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Nebraska Daily 8-hour Maximum Ozone (ppb)



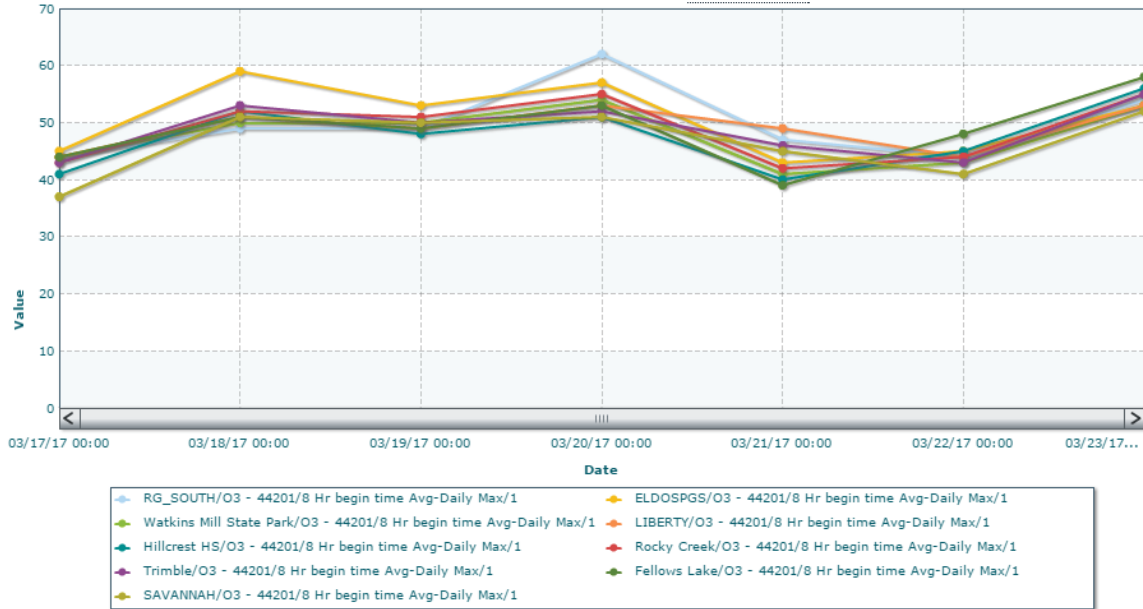
Nebraska Daily PM_{2.5} (µg/m³)



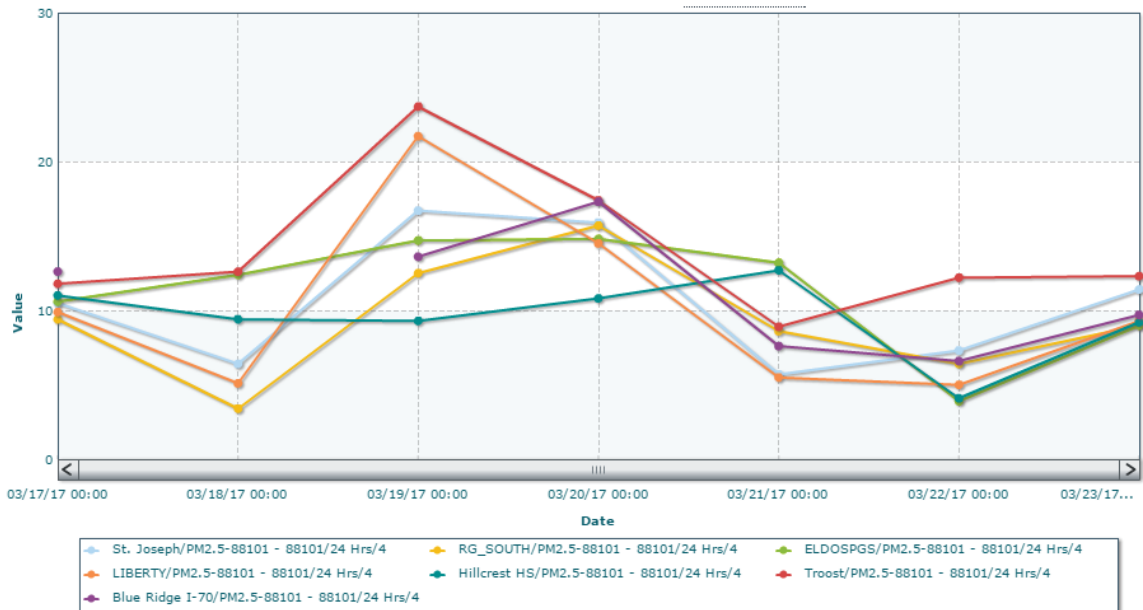
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Missouri Daily 8-hour Maximum Ozone (ppb)



Missouri Daily PM_{2.5} (µg/m³)





Fires and Smoke

Elevated wind speeds and a brief cool down kept the number of fires in check during the past week. Gusty north winds and prior day(s) precipitation kept burning confined to the far southern Flint Hills and patchy other locations last Friday (March 17). Warm temperatures and light winds provided an optimal burn day on Saturday (March 18) which many took advantage of, most noticeably though outside of the Flint Hills.

Windy conditions returned for Sunday (March 19) which kept prescribed burns to a minimum. Numerous wildfires were noted over eastern Oklahoma. Winds calmed for Monday (March 20) but burning was not extensive. Lack of burning may have been due to variable wind direction, and the return of the workweek. You can see the variable wind speeds across the region with the variance of the smoke plumes trajectories.

Windy conditions on Tuesday (March 21) and Thursday (March 23) alongside cooler temperatures on Tuesday and Wednesday (March 21-22) kept burning to a minimum over the Flint Hills. Not numerous smoke plumes and fires over Oklahoma and the High Plains on Thursday (March 23) due to continued and new wildfires.

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

KSFIRE.ORG

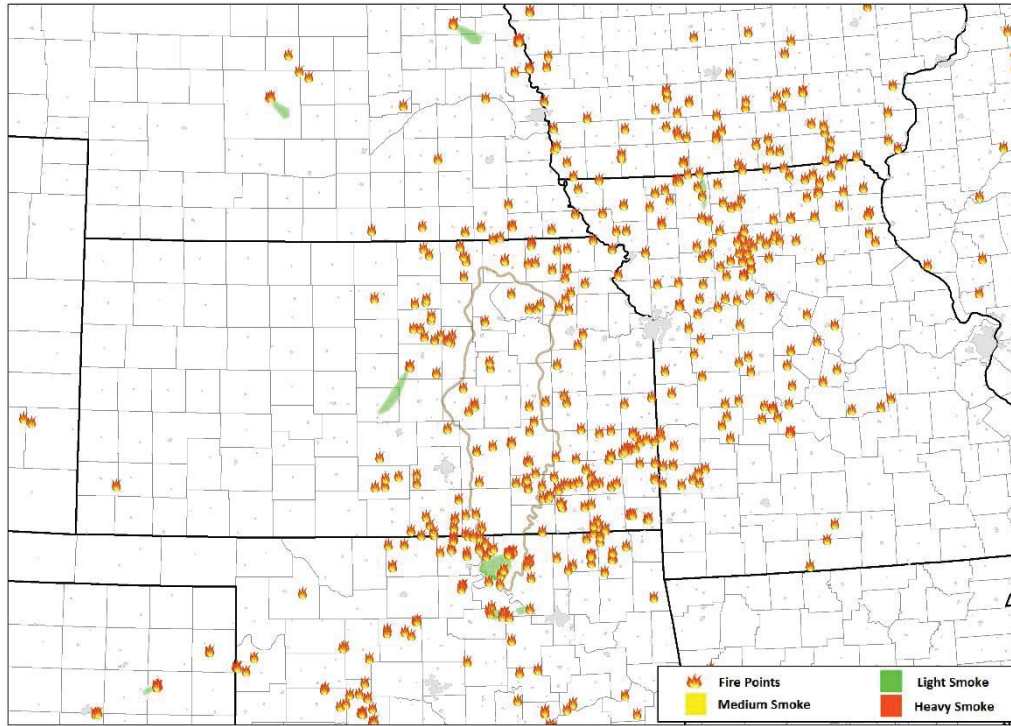


This website was developed as part of the development of the Kansas Flint Hills Smoke Management Plan. Kansas State University hosts the webpage and it includes important information for ranchers and others who might be interested in the Flint Hills. It provides training, regulations, policies, publications,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

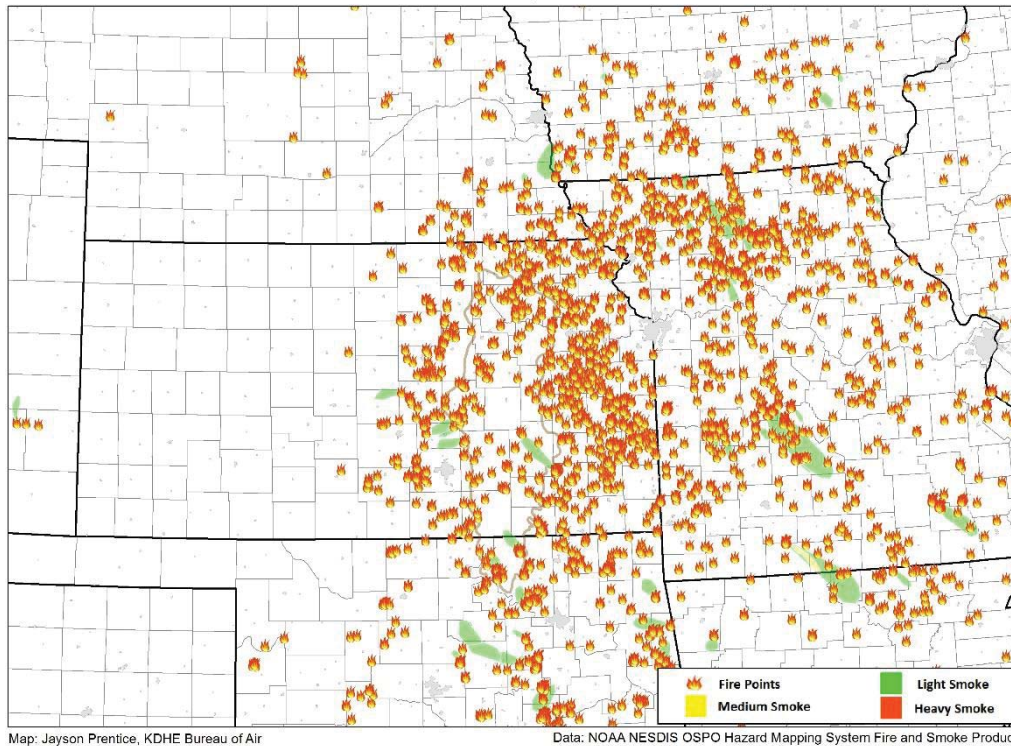
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HMS Fire & Smoke Analysis March 17, 2017



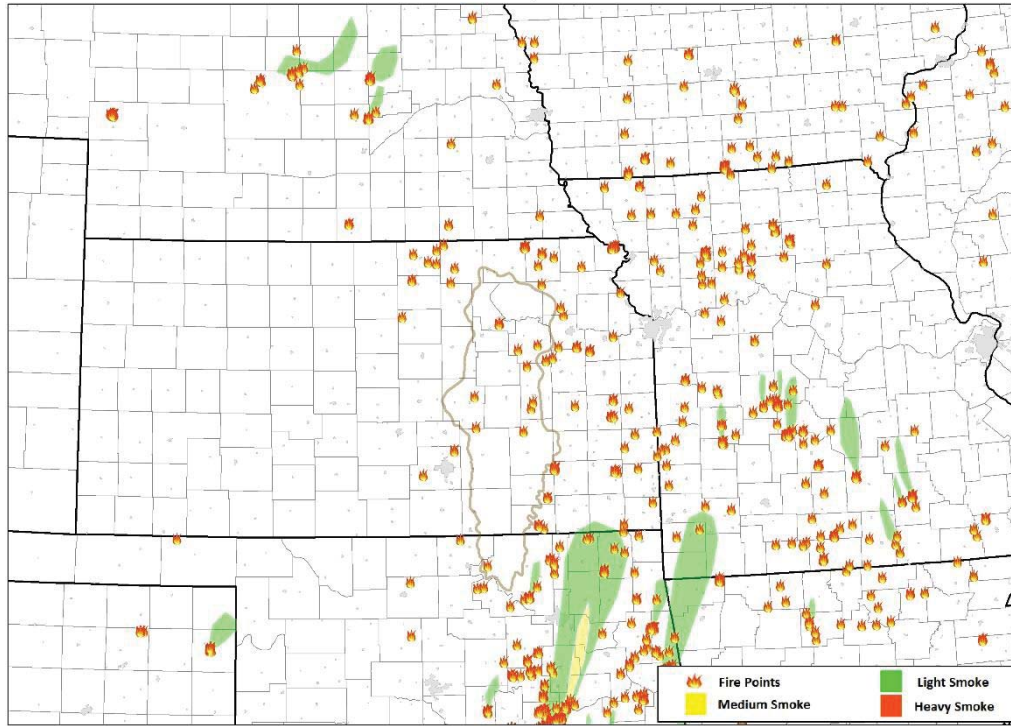
HMS Fire & Smoke Analysis March 18, 2017



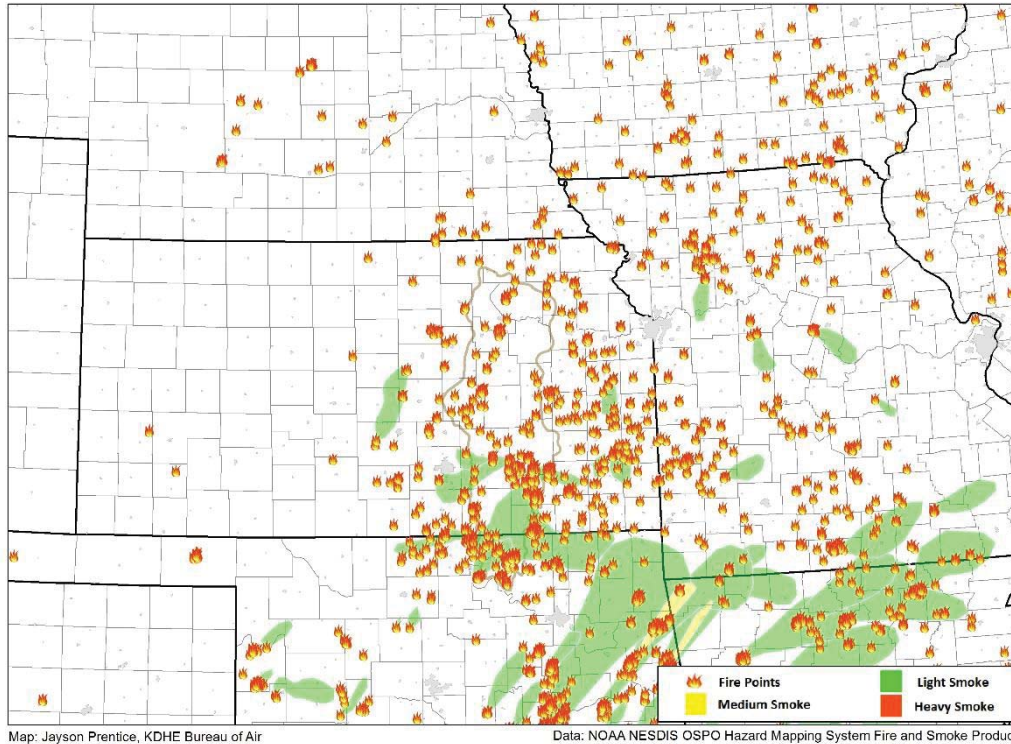
Flint Hills Prescribed Fire Update



HMS Fire & Smoke Analysis March 19, 2017



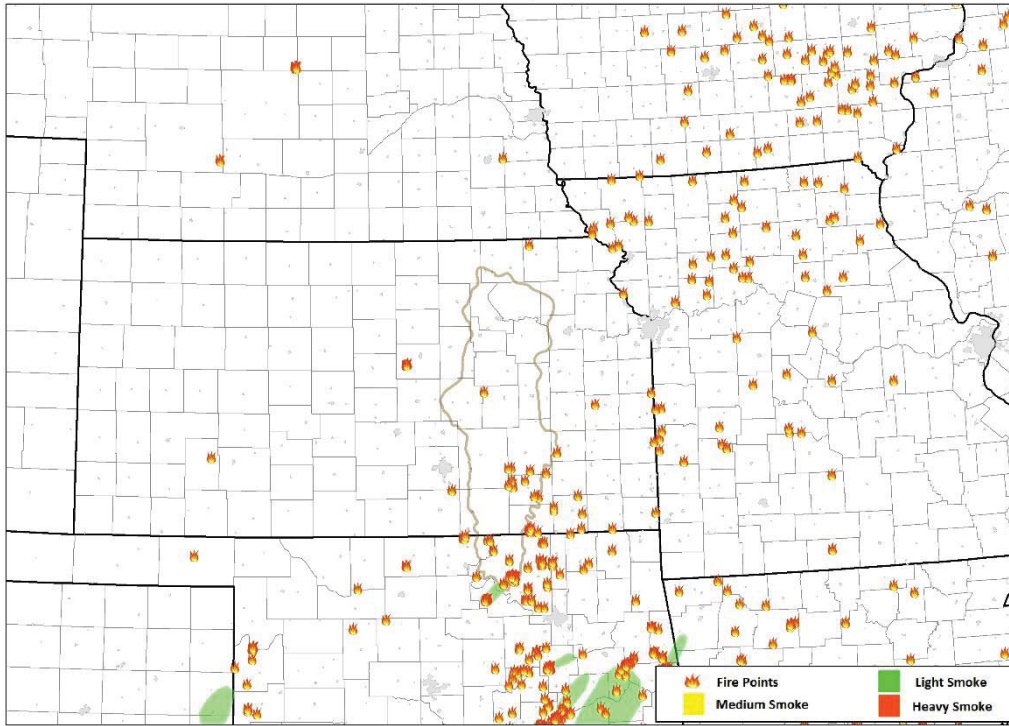
HMS Fire & Smoke Analysis March 20, 2017



Flint Hills Prescribed Fire Update



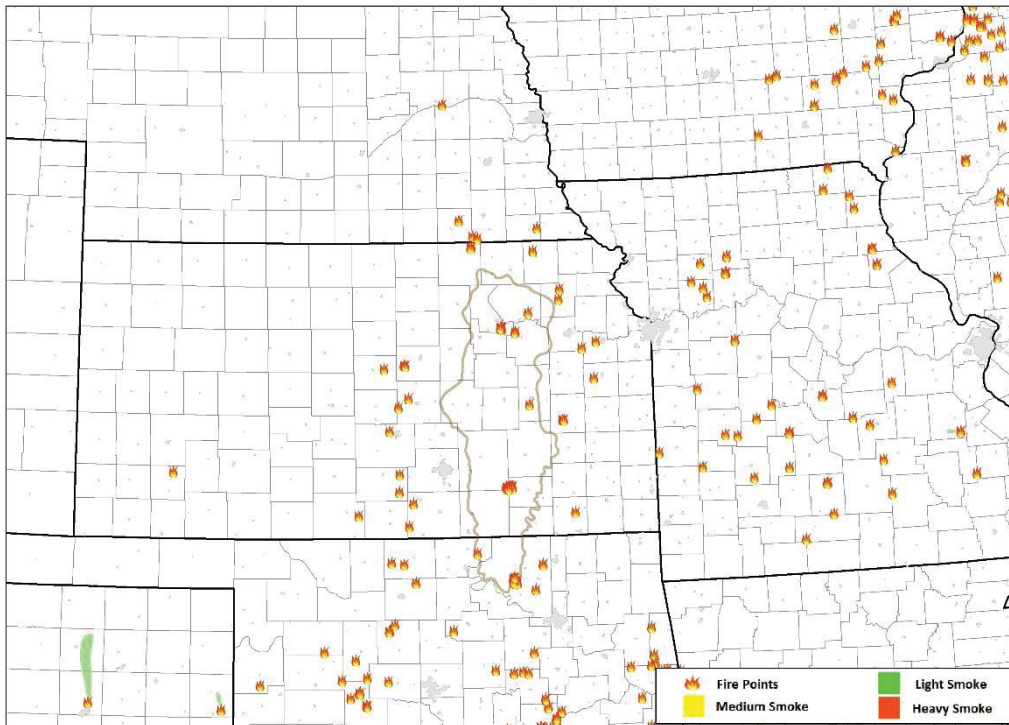
HMS Fire & Smoke Analysis March 21, 2017



Map: Jayson Prentice, KDHE Bureau of Air

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

HMS Fire & Smoke Analysis March 22, 2017



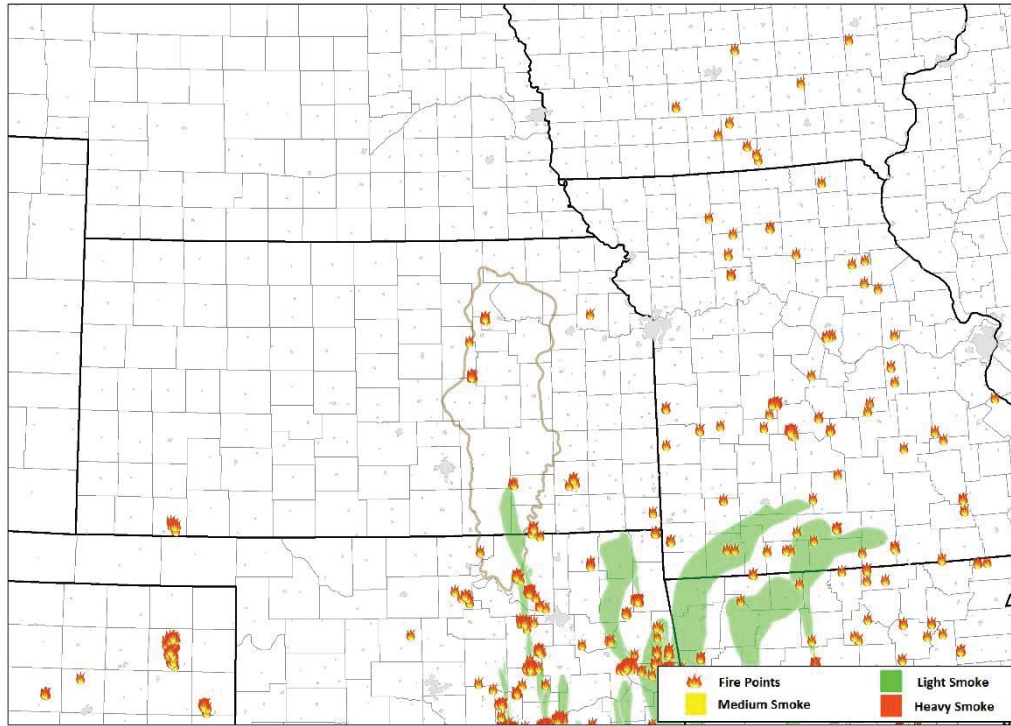
Map: Jayson Prentice, KDHE Bureau of Air

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

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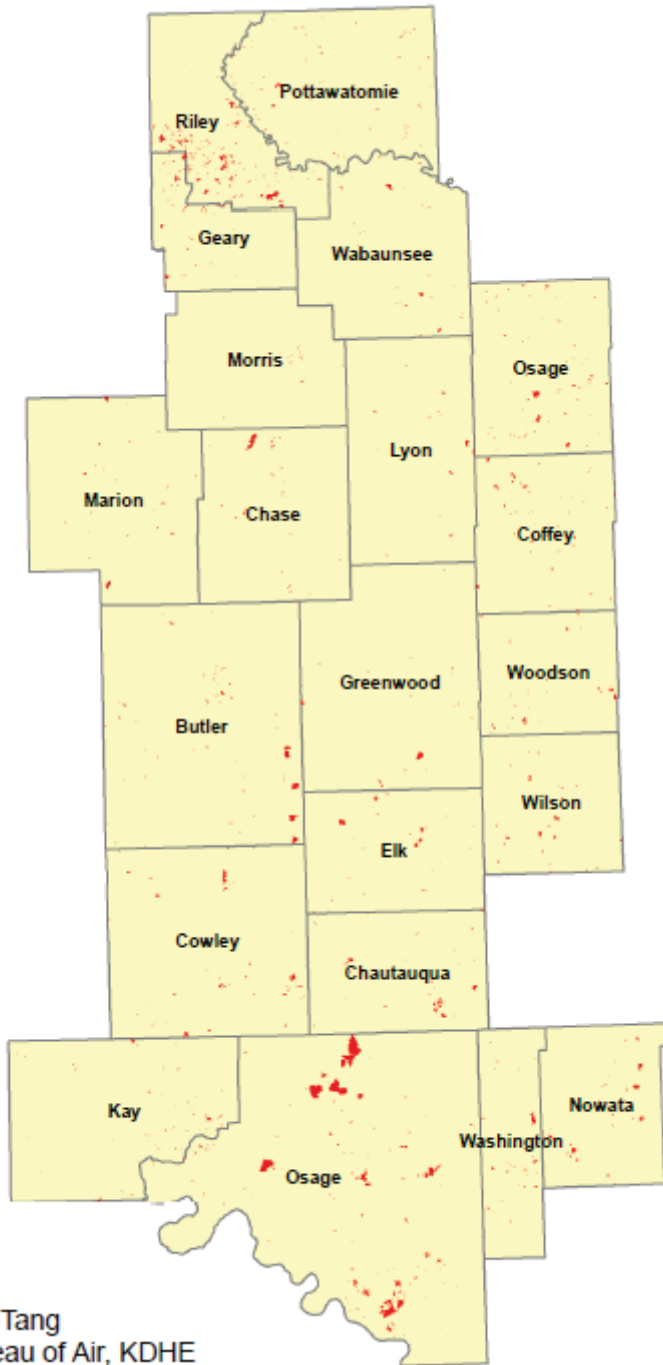


HMS Fire & Smoke Analysis March 23, 2017





Flint Hills Acreage Burned (February 15 – March 16, 2017)



Yao Tang
Bureau of Air, KDHE

<u>Counties</u>	<u>Acres Burned</u>	
Butler	3,722	
Chase	1,730	*
Chautauqua	2,070	*
Coffey	2,008	*
Cowley	2,780	*
Elk	1,668	
Geary	1,838	
Greenwood	1,251	*
Lyon	865	*
Marion	1,205	
Morris	278	
Osage (KS)	2,734	*
Pottawatomie	1,668	
Riley	7,120	
Wabaunsee	1,374	
Wilson	1,344	*
Woodson	1,359	*
Nowata (OK)	2,270	*
Osage (OK)	22,023	*
Washington (OK)	1,436	*
Kay (OK)	1,436	*
Total	41,468	
* Denotes county was partly or completely covered by clouds during analysis.		



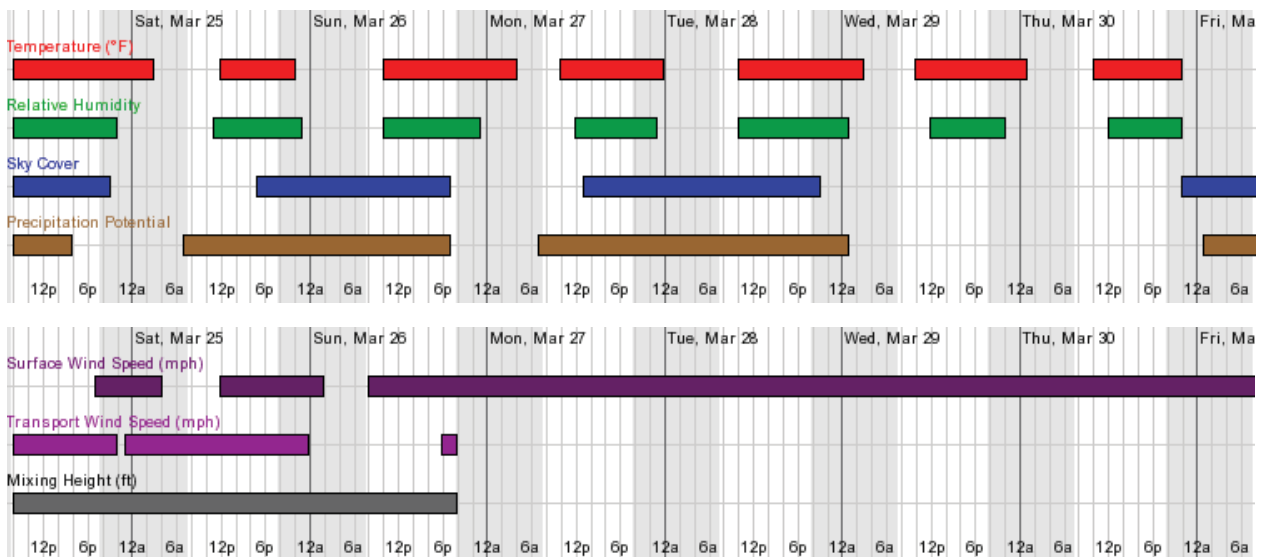
Upcoming Look at Fires and Smoke

Periods of showers and thunderstorms are expected today (Friday) into early Saturday and again late Sunday into Monday. Another storm system will bring potential for rain on Wednesday and Thursday. Afternoon temperatures are expected to remain the 50s and 60s for the next week.

Wind speeds will be gusty today (Friday) before calming over the weekend. Wind conditions actually become unfavorable for smoke dispersion on Sunday due to light winds at the surface and especially above the surface.

With periods of rain, potentially moderate to heavy with thunderstorms, expect minimal burning this weekend. An opportunity exists on Tuesday for burning if grasses dry before moisture returns with rain on Wednesday and Thursday.

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 March 24, 2017.