

Flint Hills Prescribed Fire Update

March 16, 2018

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

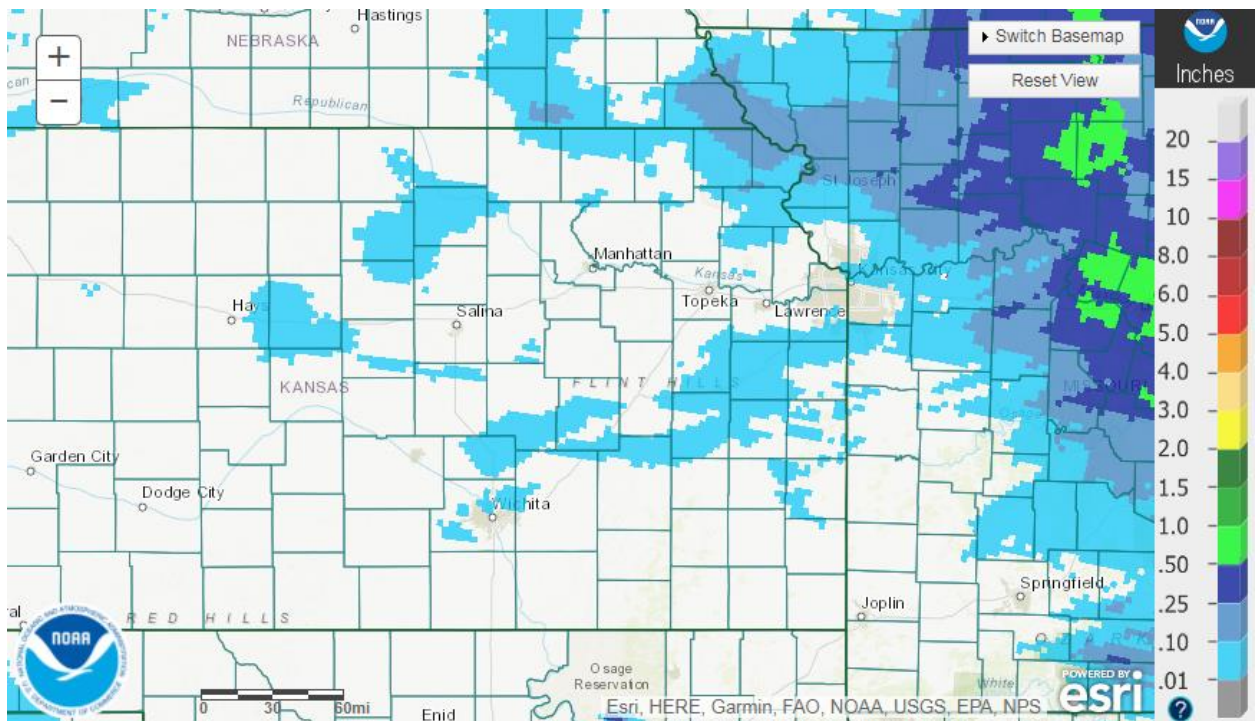




Meteorology

Scattered light rain fell late Saturday into Sunday (March 10-11) across the Flint Hills, but many locations remained dry. Temperatures were above normal on Friday into Saturday (March 9-10) before remaining cool and breezy on Sunday (March 11) behind the cold front. Temperatures were near to just below normal on Monday and Tuesday (March 12-13) with light to moderate winds. Above normal temperatures returned for Wednesday and Thursday (March 14-15) which was accompanied by strong south to southwest winds with measured gusts typically in the 30-40 mph range.

Precipitation

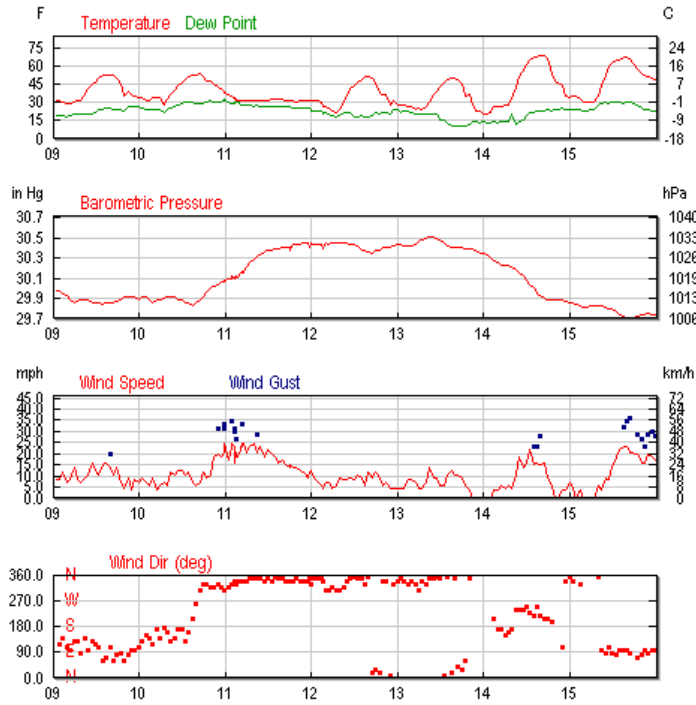


NOAA/NWS Observed Total Precipitation for March 9-15, 2018.

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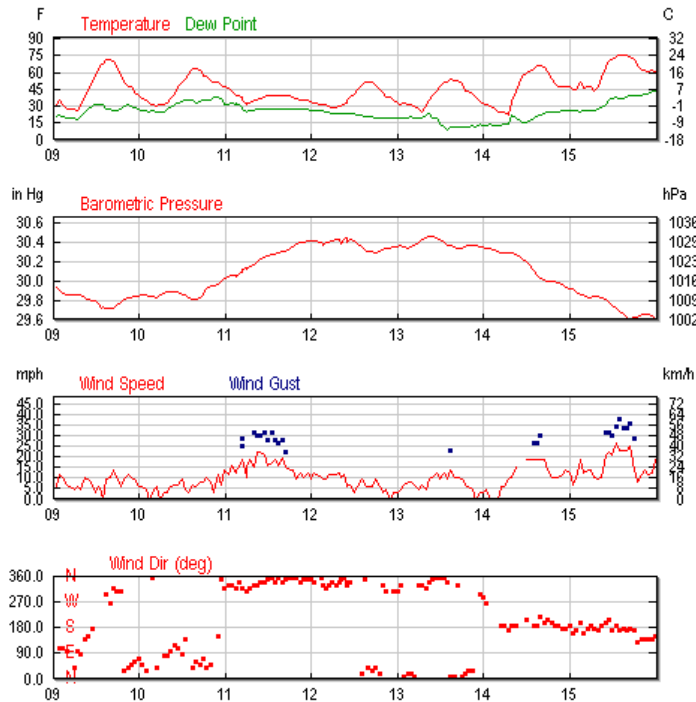


Lincoln, NE



March 9-15, 2018 Observed Weather from KLNK. Graphic: Weather Underground, Inc.

Emporia, KS



March 9-15, 2018 Observed Weather from KEMP. Graphic: Weather Underground, Inc.



Air Quality Data

Air quality data for the period of March 9-15, 2018:

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.

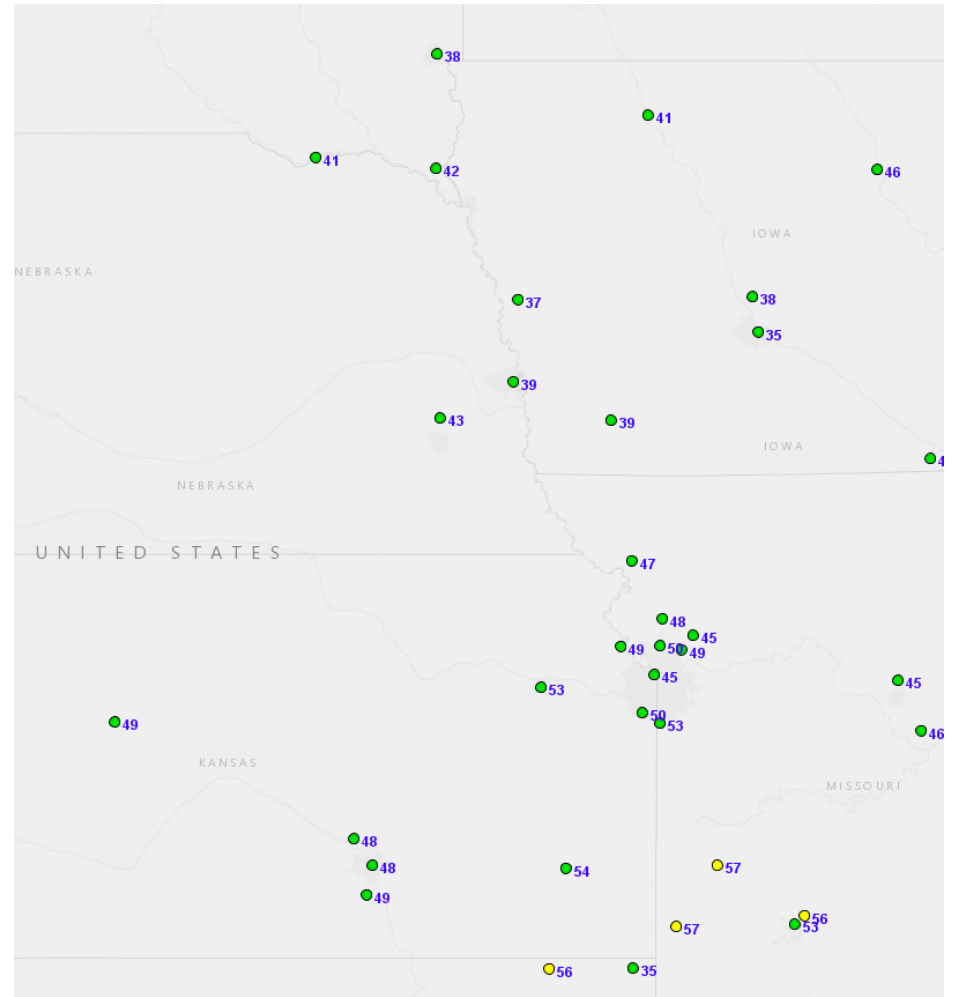
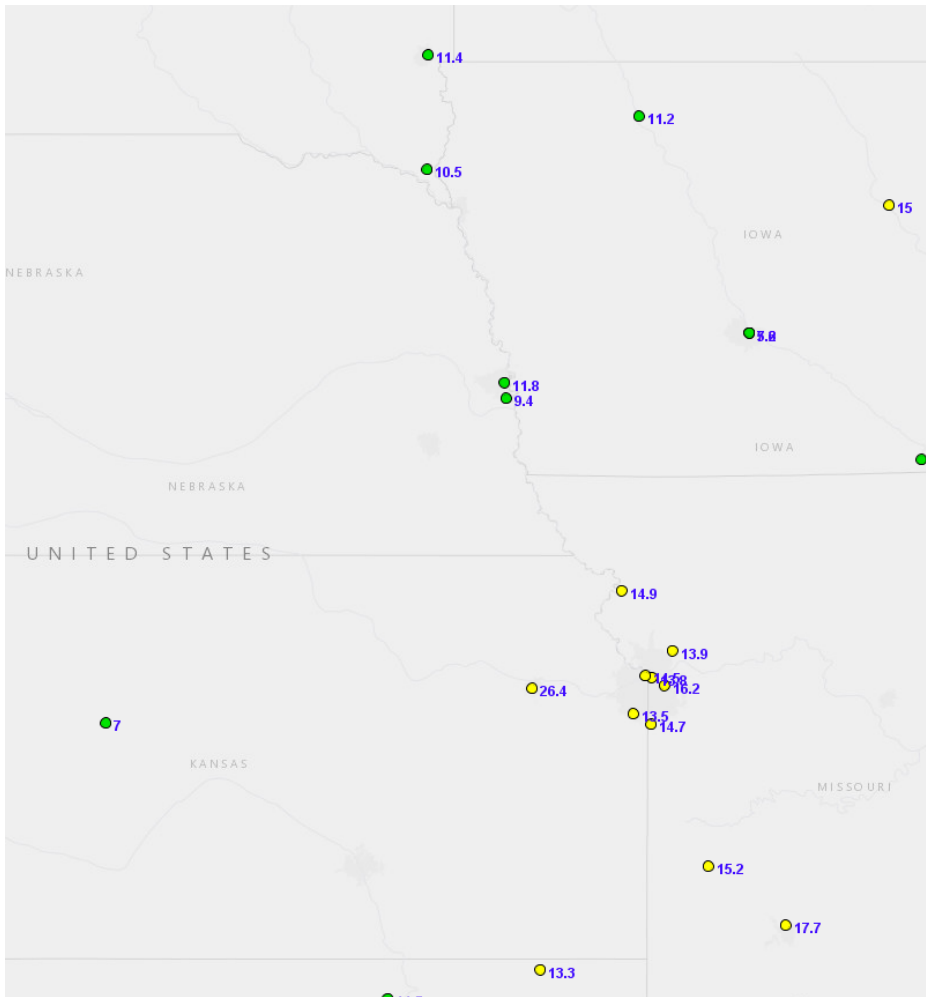
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Friday, March 9, 2018

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



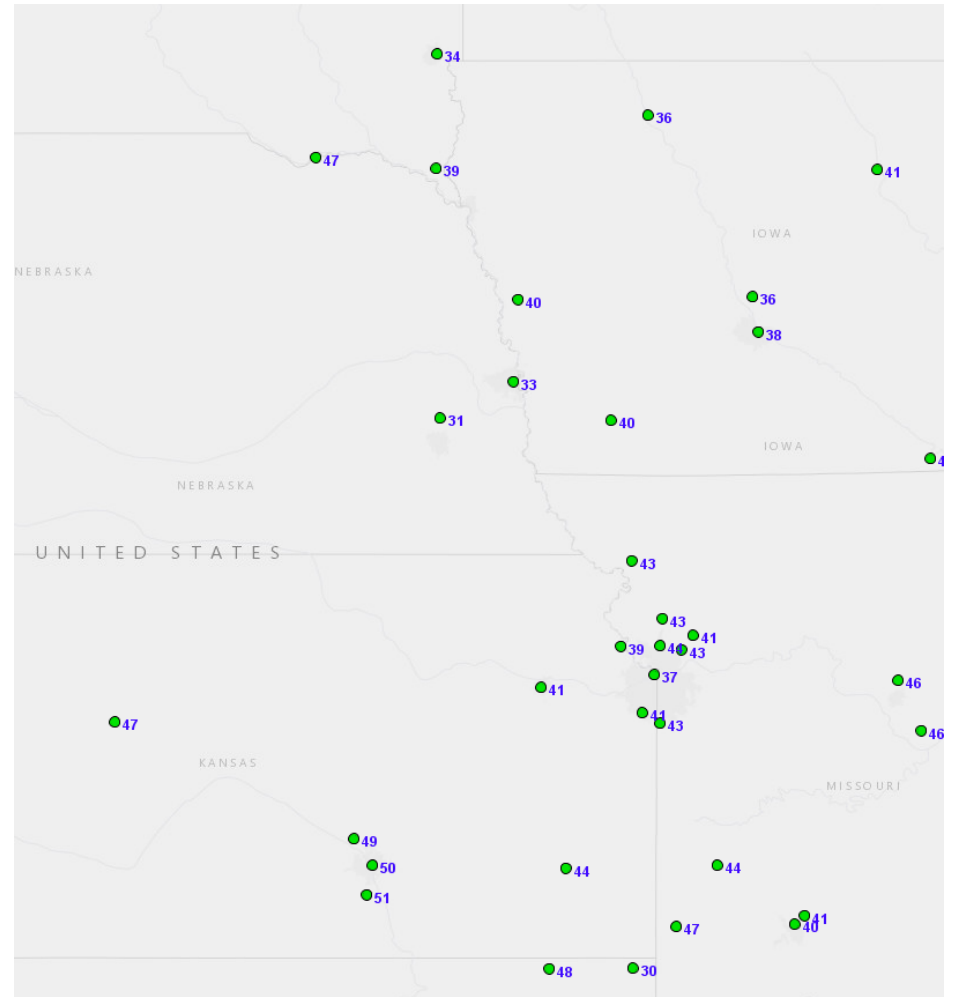
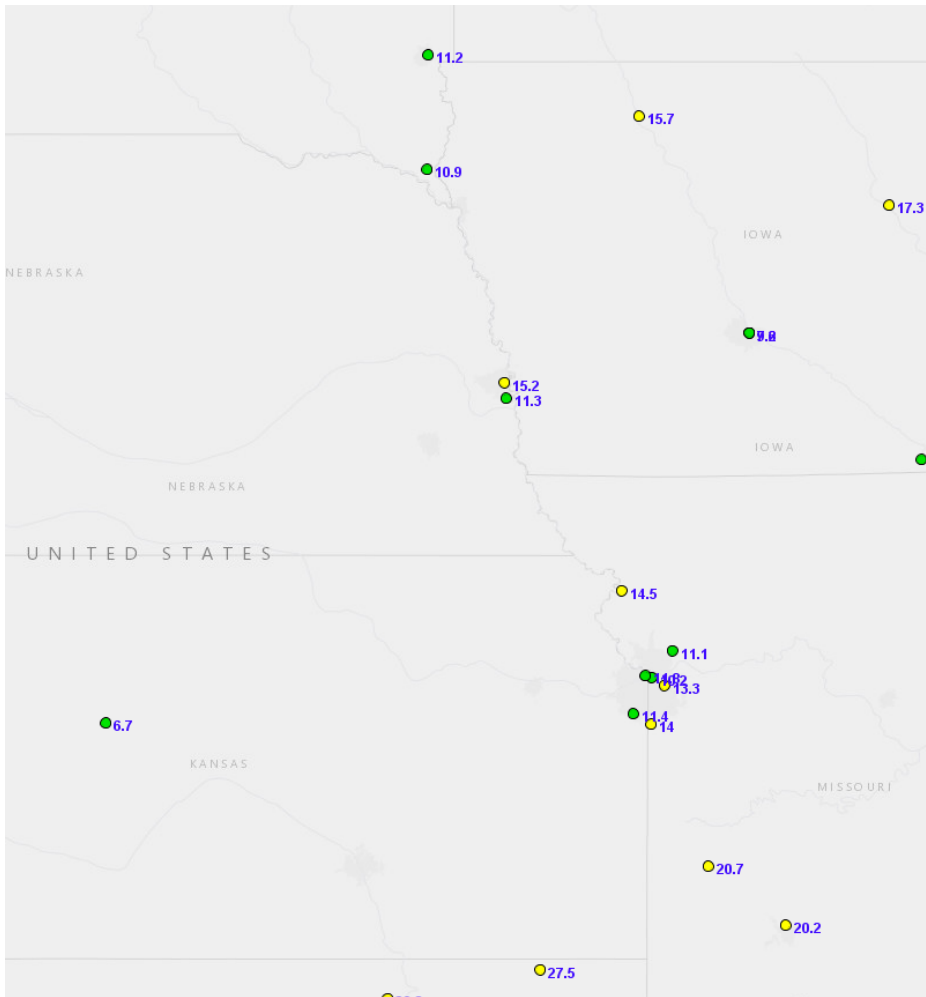
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Saturday, March 10, 2018

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



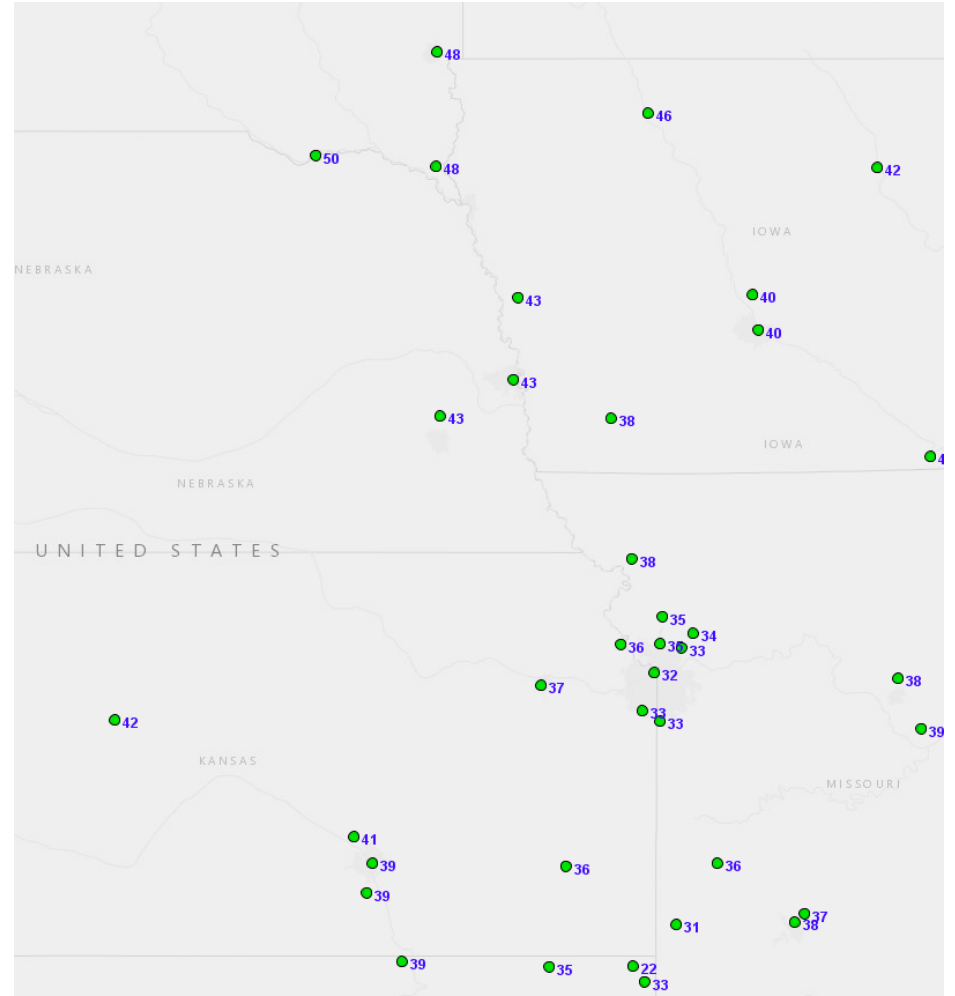
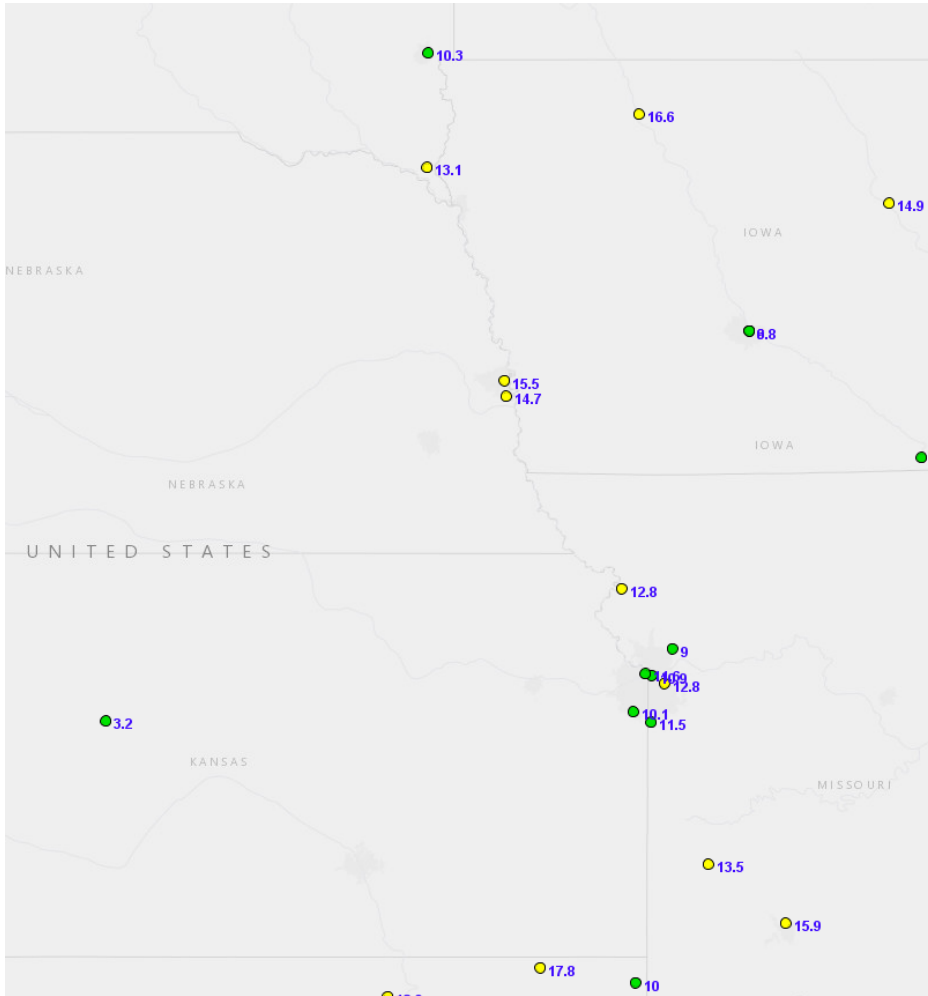
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Sunday, March 11, 2018

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



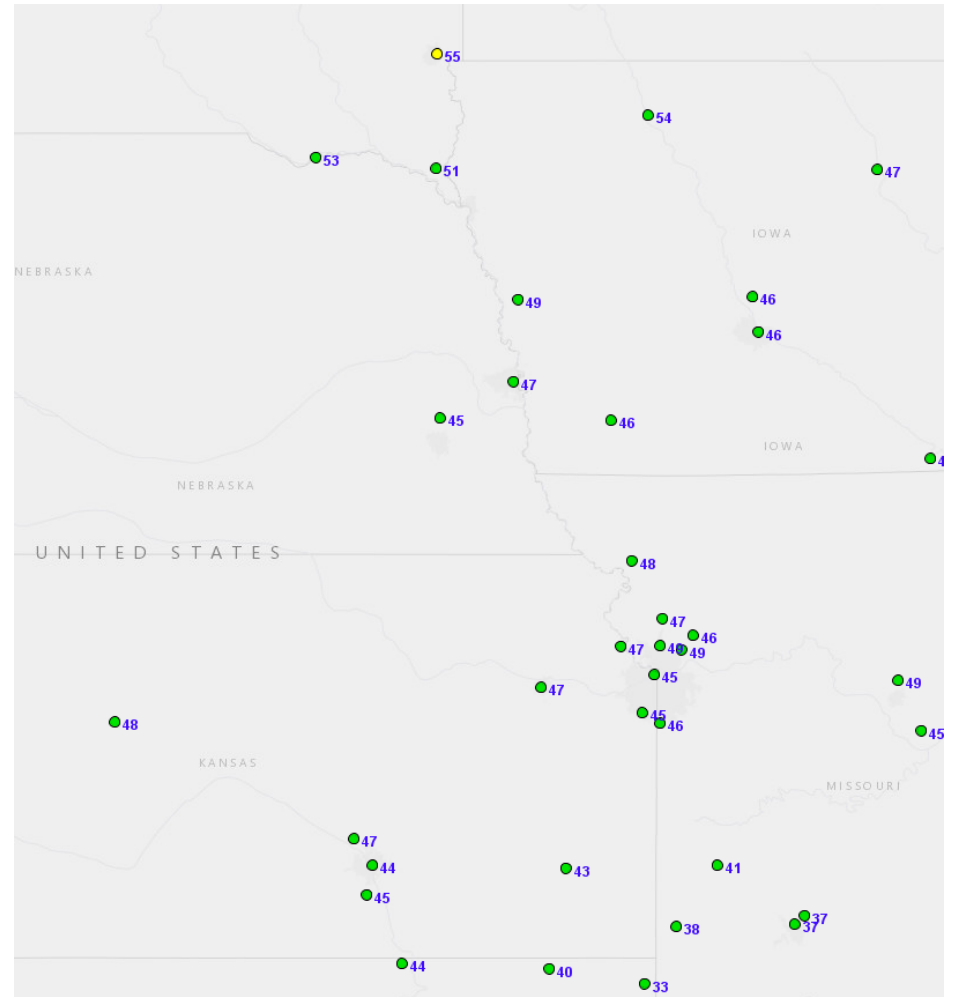
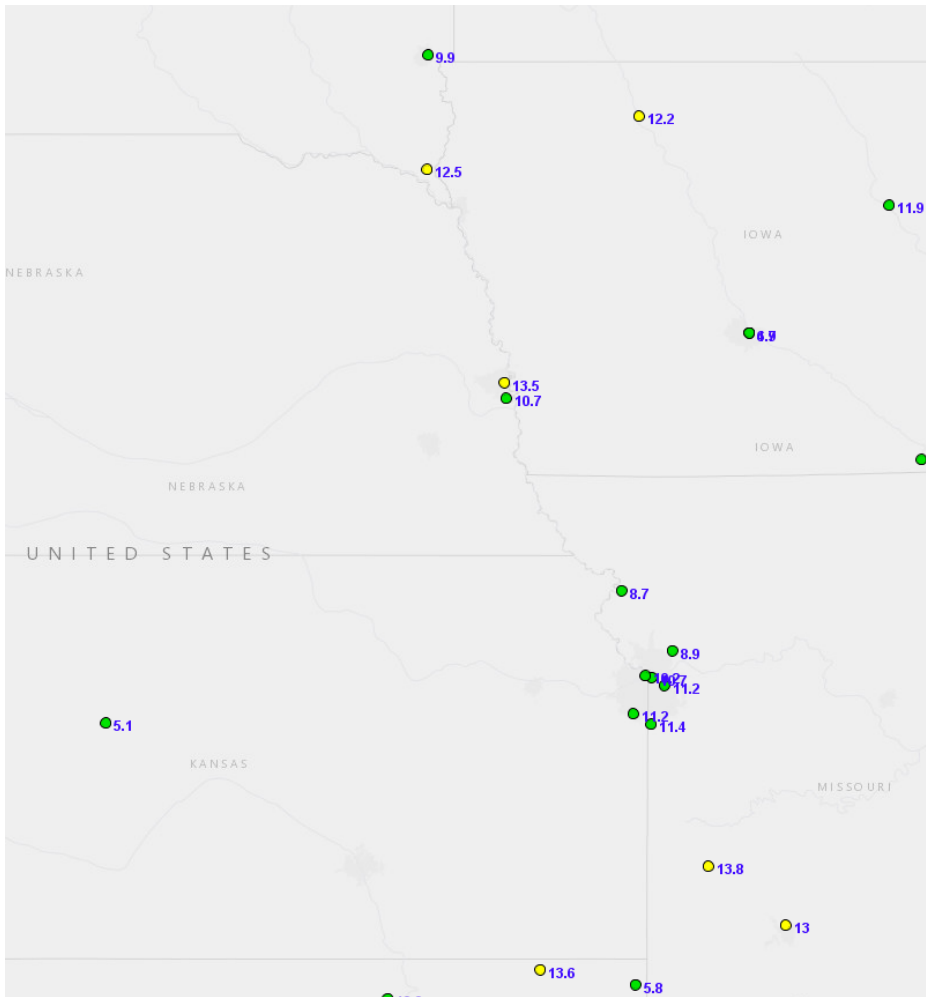
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Monday, March 12, 2018

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



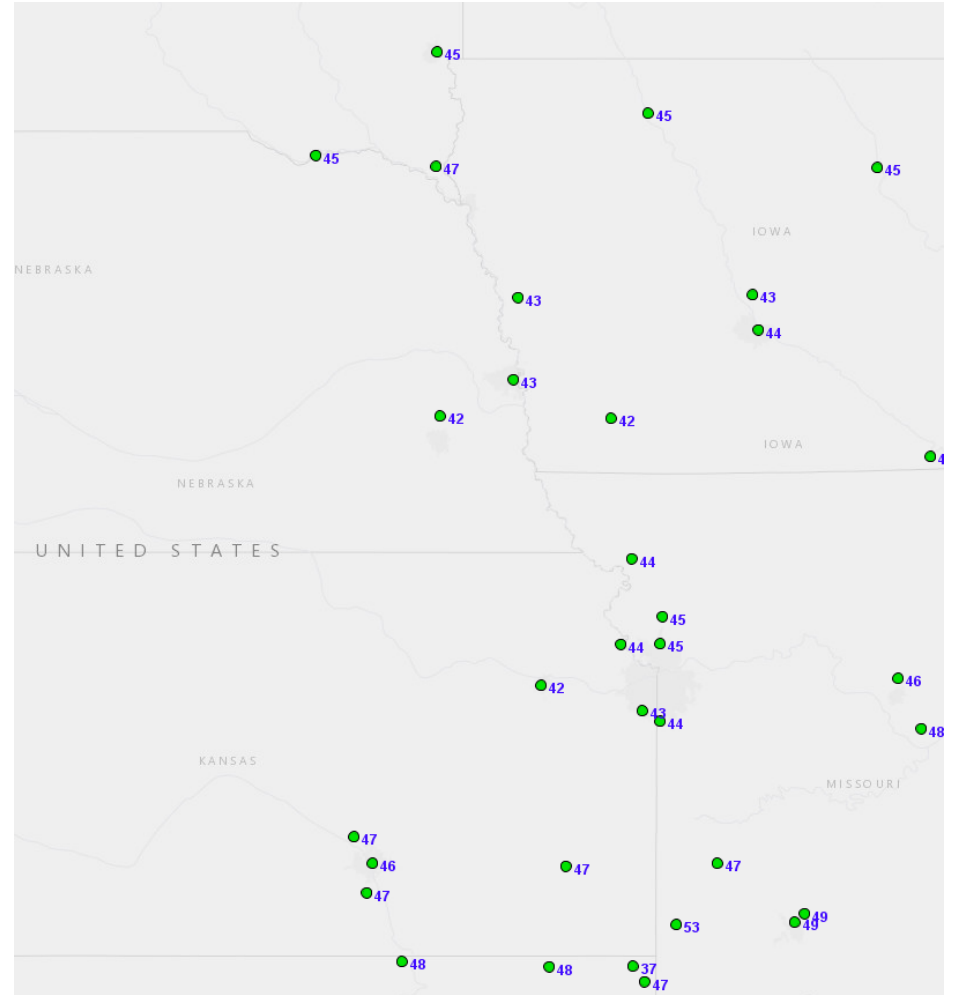
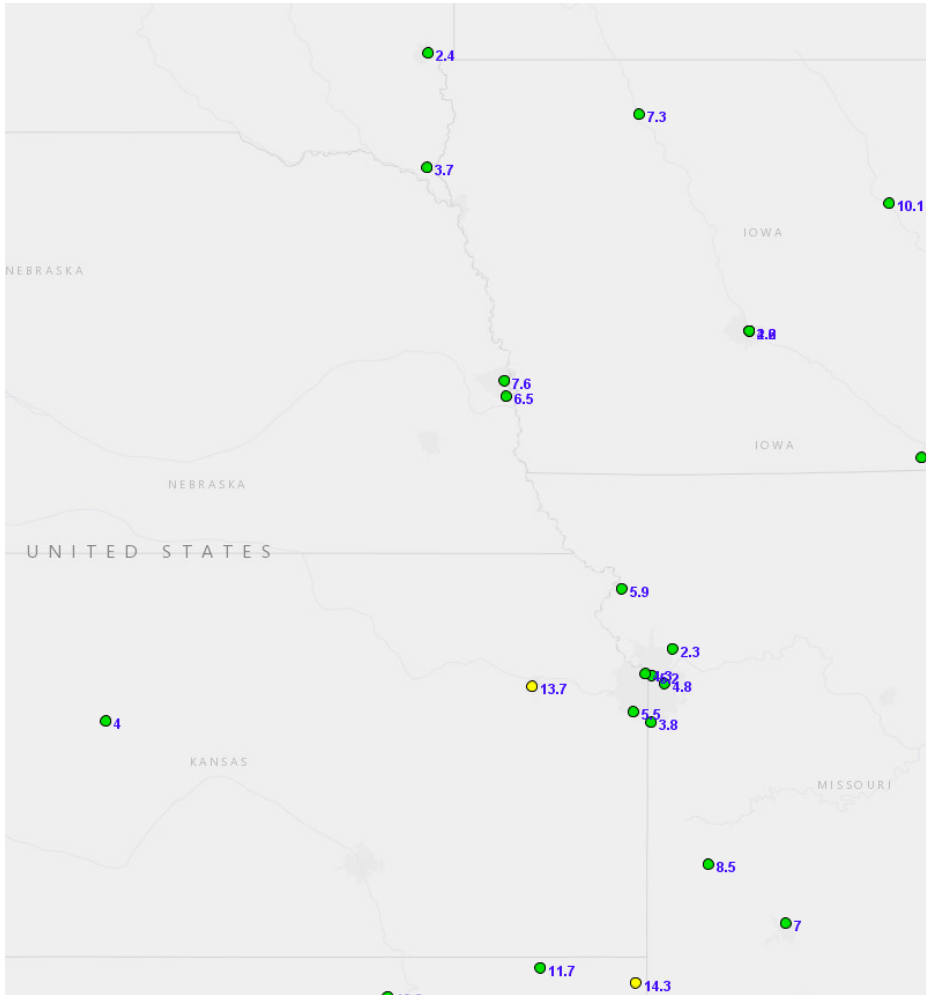
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Tuesday, March 13, 2018

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



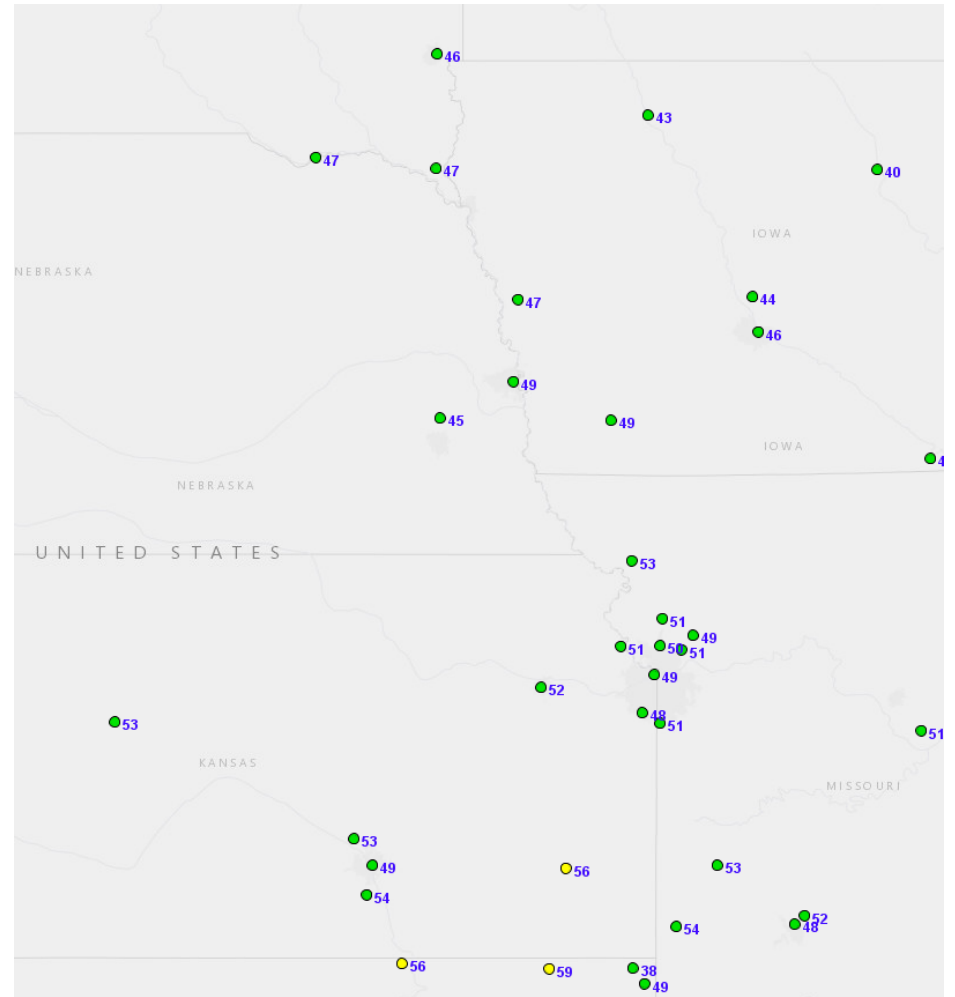
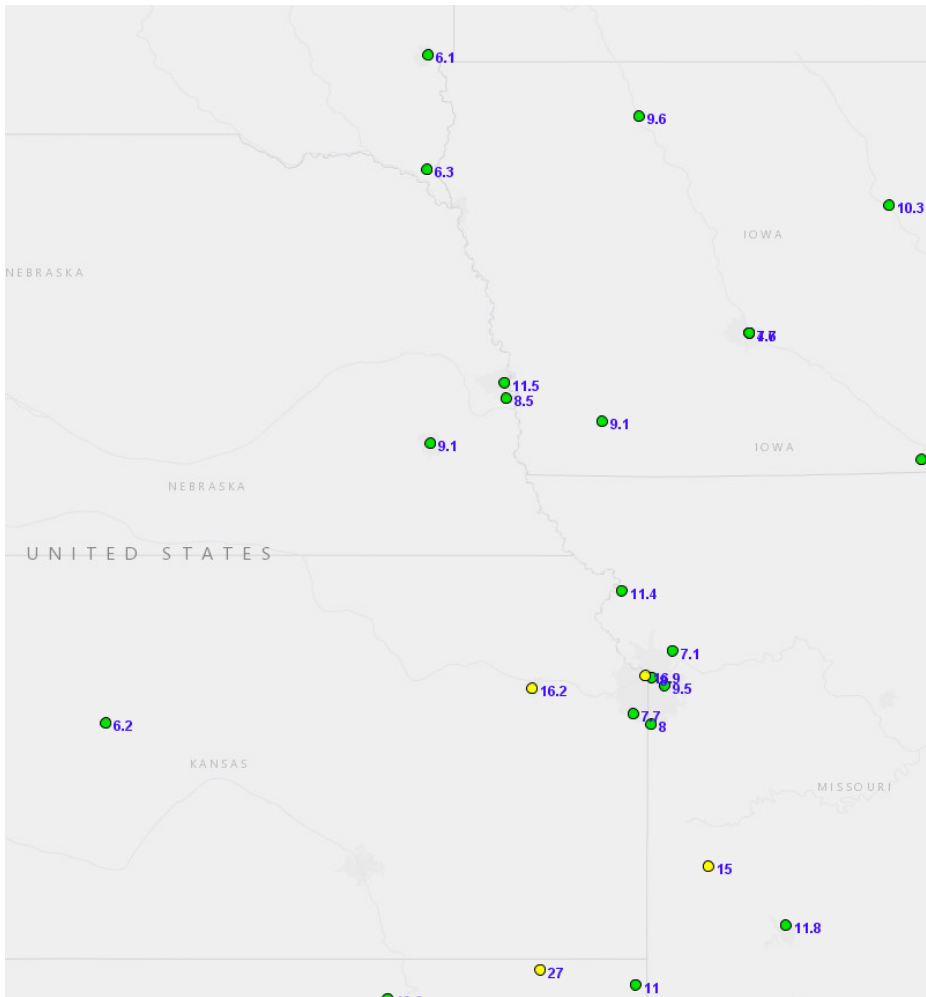
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Wednesday, March 14, 2018

PM2.5 (24-hour average)

Ozone (8-hour average maximum)



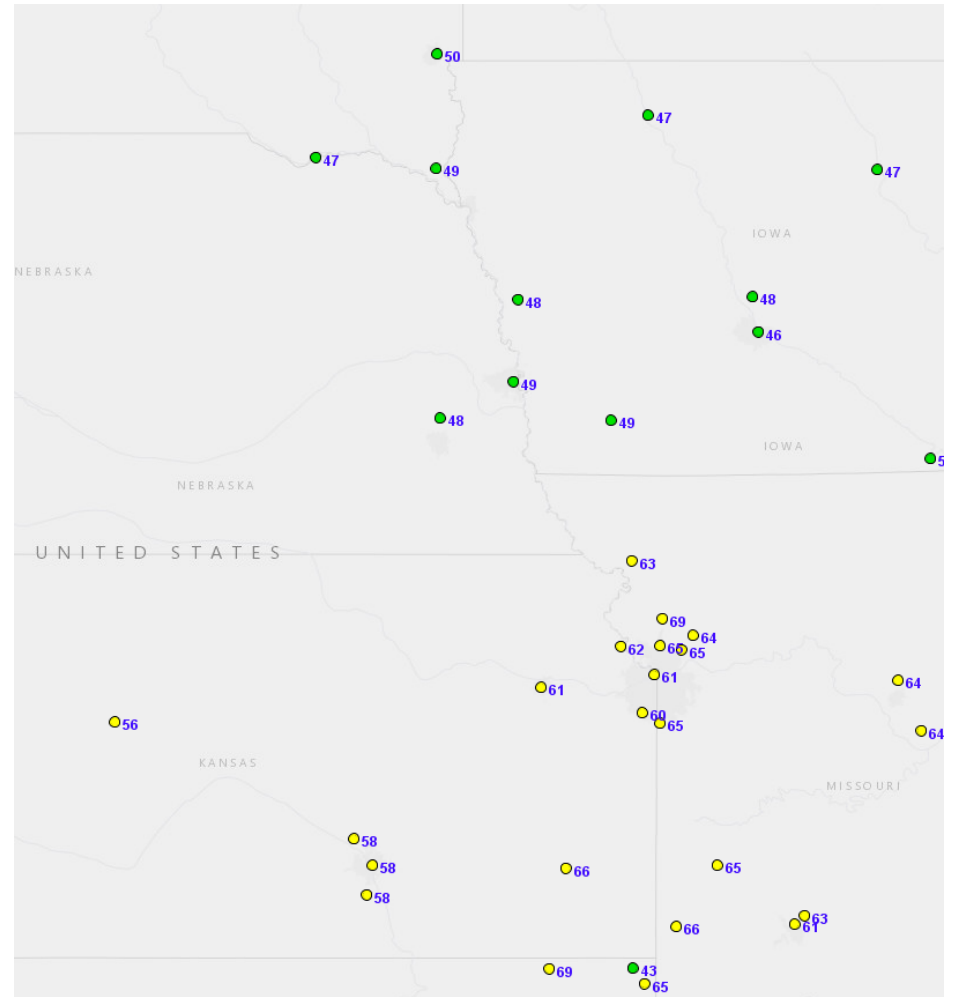
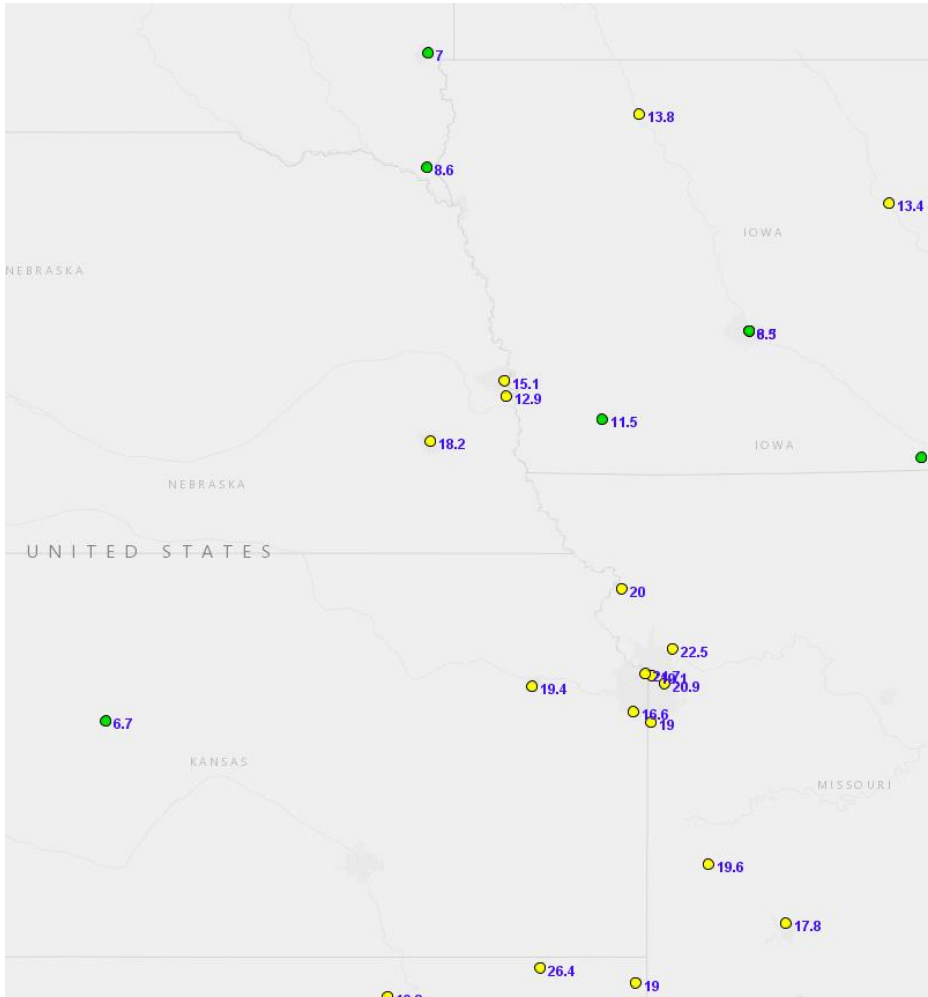
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Thursday, March 15, 2018

PM2.5 (24-hour average)

Ozone (8-hour average maximum)





Fires and Smoke

Favorable weather conditions were observed last Friday and Saturday (March 9-10) for prescribed burns, and many locations east and southeast of the Flint Hills took advantage of the weather. Breezy winds on Sunday (March 11) kept prescribed fires nearly non-existent. Lighter winds on Monday and Tuesday (March 12-13) allowed for a return of prescribed burns. Windy conditions and very low relative humidity values led to "Very High" to "Extreme" fire danger indices, and numerous Red Flag Warnings were issued by National Weather Service offices on Wednesday and Thursday (March 14-15). Any fires and smoke plumes observed in Kansas and closely adjacent areas during the past two days were likely wildfires.

It is important to note that long term drought conditions have precluded many locations within and west of the Flint Hills from conducting burns early as they are either in county-wide burn bans or awaiting rainfall to aid in the ability to control fires.

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

KSFIRE.ORG

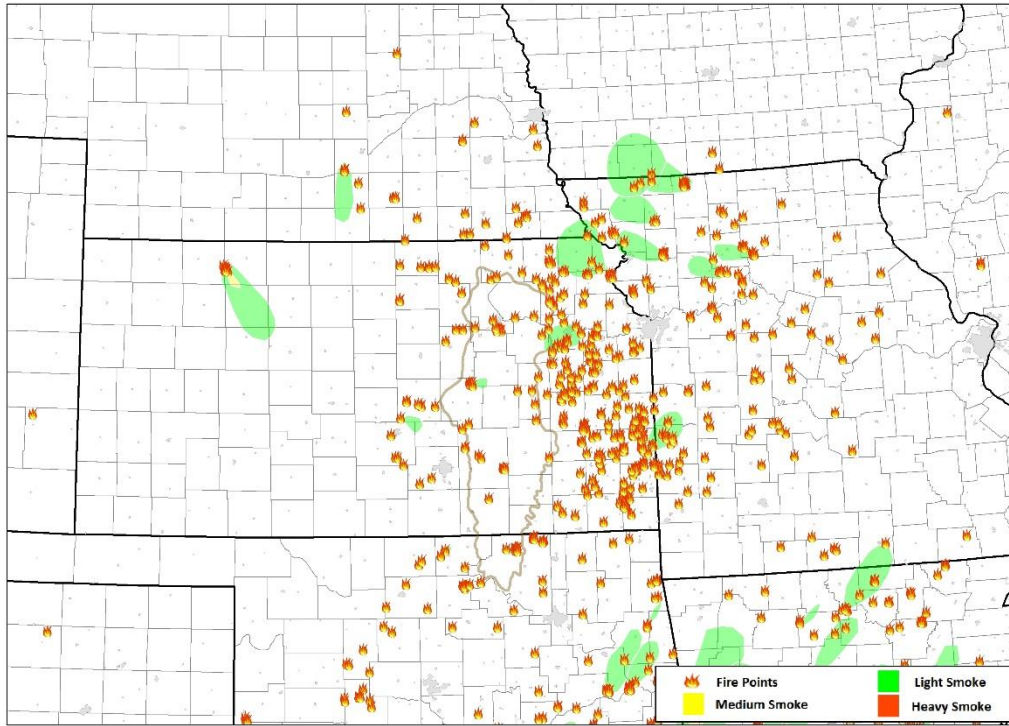


This website was developed as part of the development of the Kansas Flint Hills Smoke Management Plan. Kansas State University hosts the webpage and it includes important information for ranchers and others who might be interested in the Flint Hills. It provides training, regulations, policies, publications,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

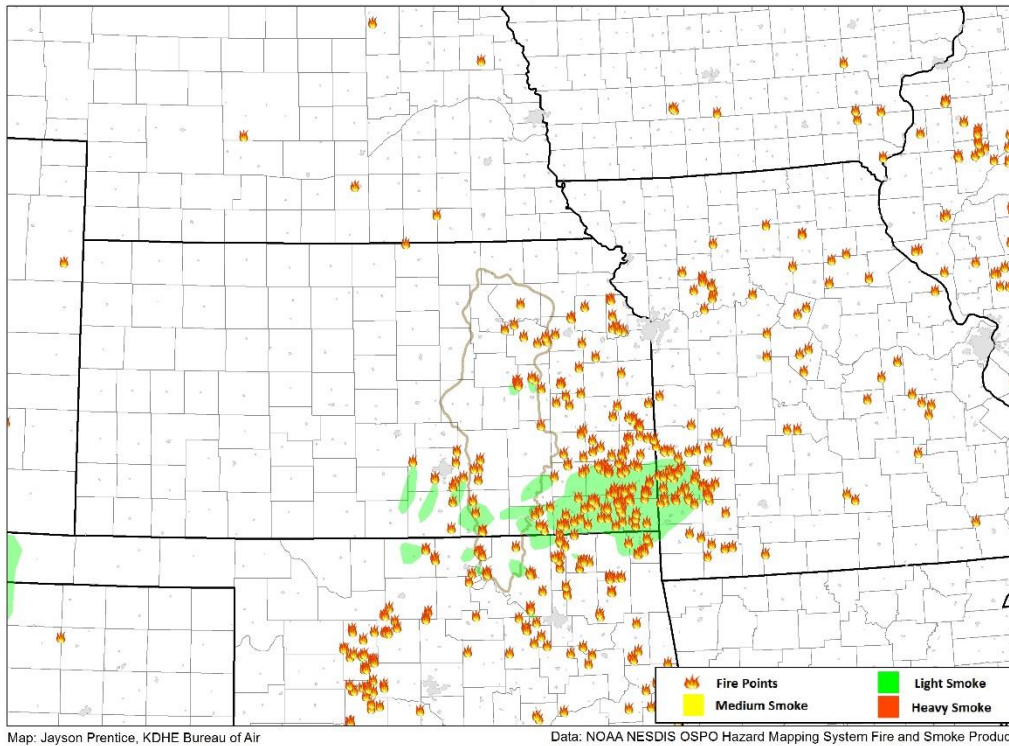
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HMS Fire & Smoke Analysis March 09, 2018



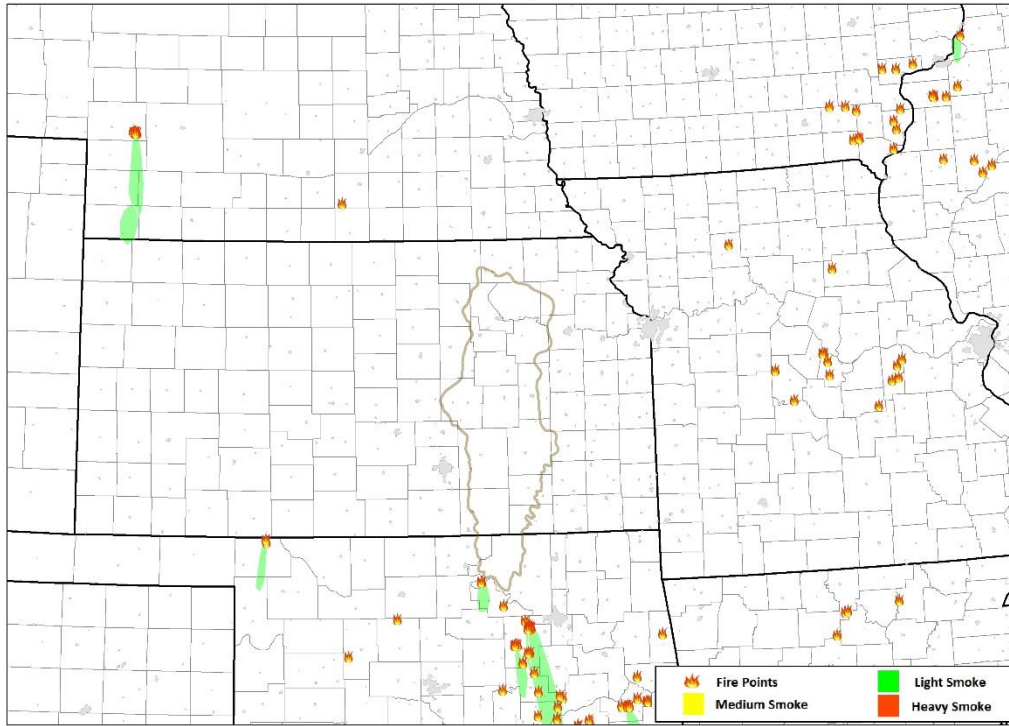
HMS Fire & Smoke Analysis March 10, 2018



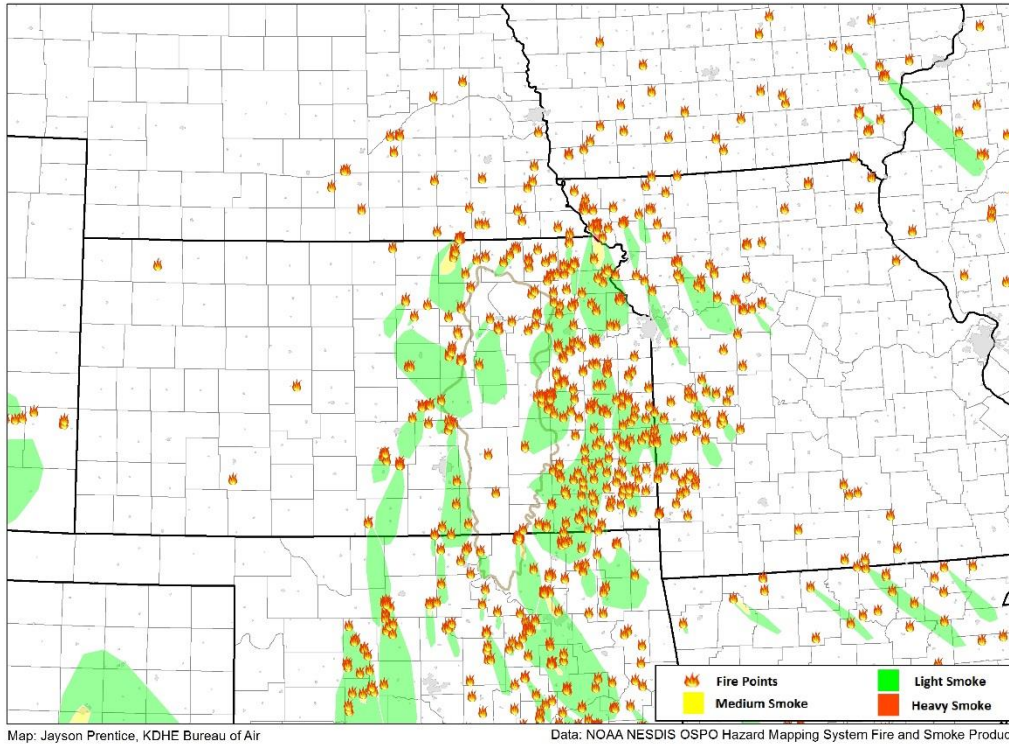
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HMS Fire & Smoke Analysis March 11, 2018



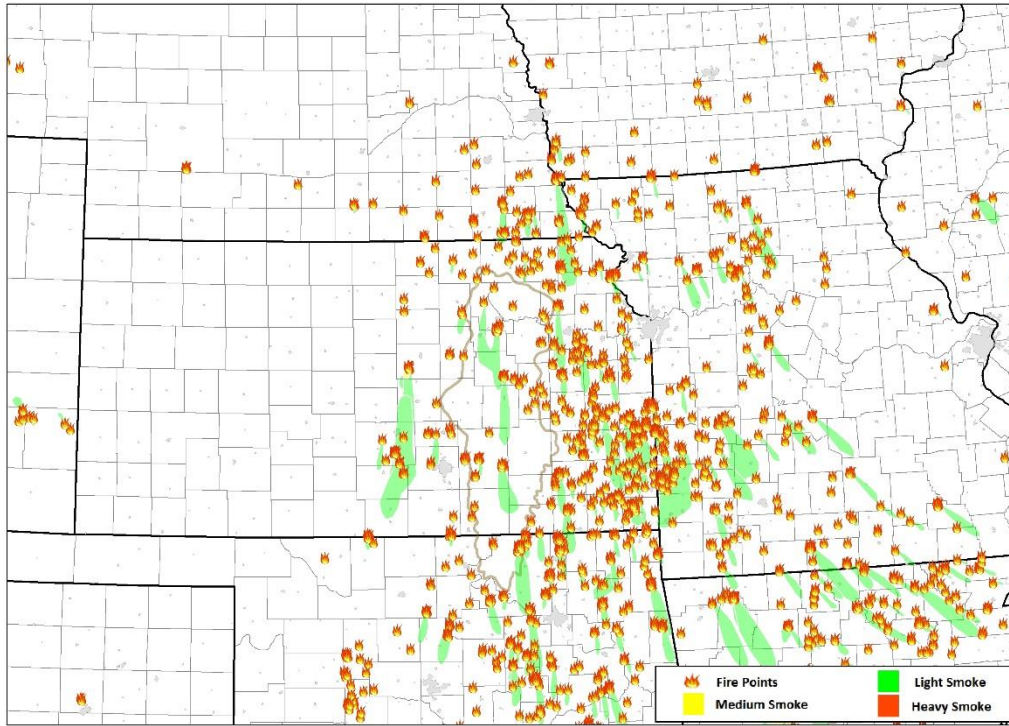
HMS Fire & Smoke Analysis March 12, 2018



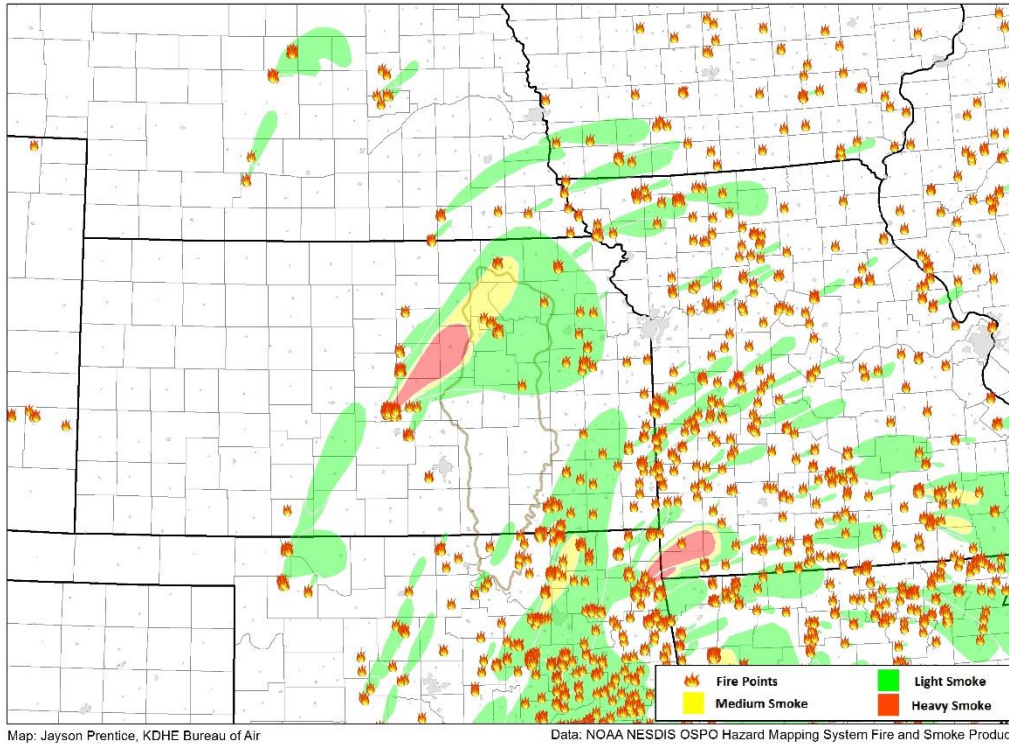
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HMS Fire & Smoke Analysis March 13, 2018



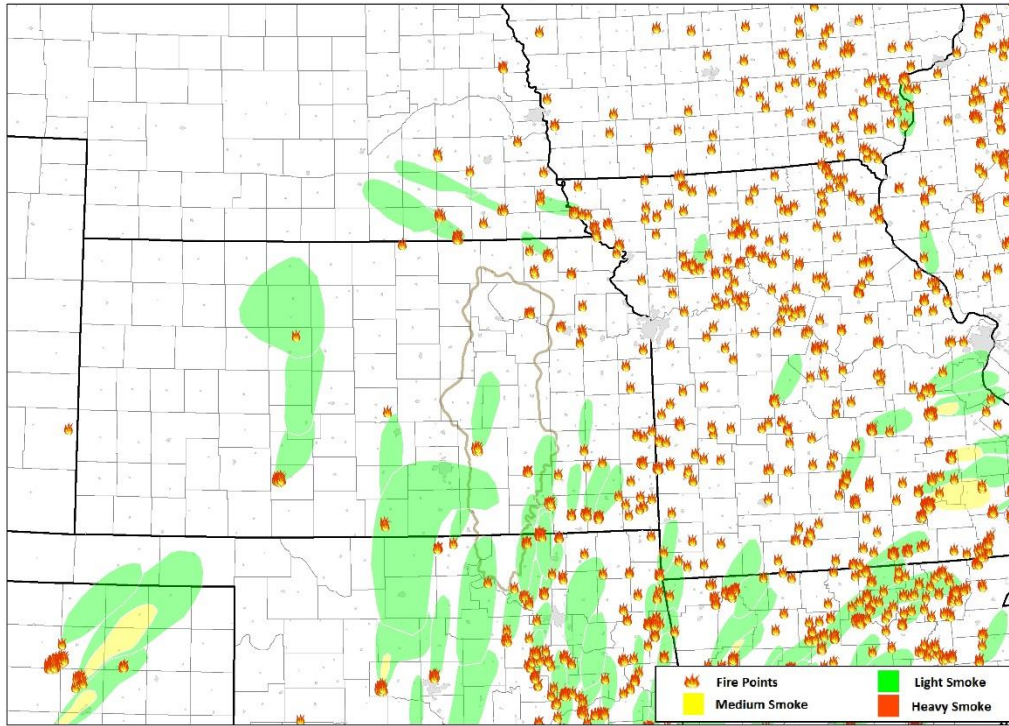
HMS Fire & Smoke Analysis March 14, 2018



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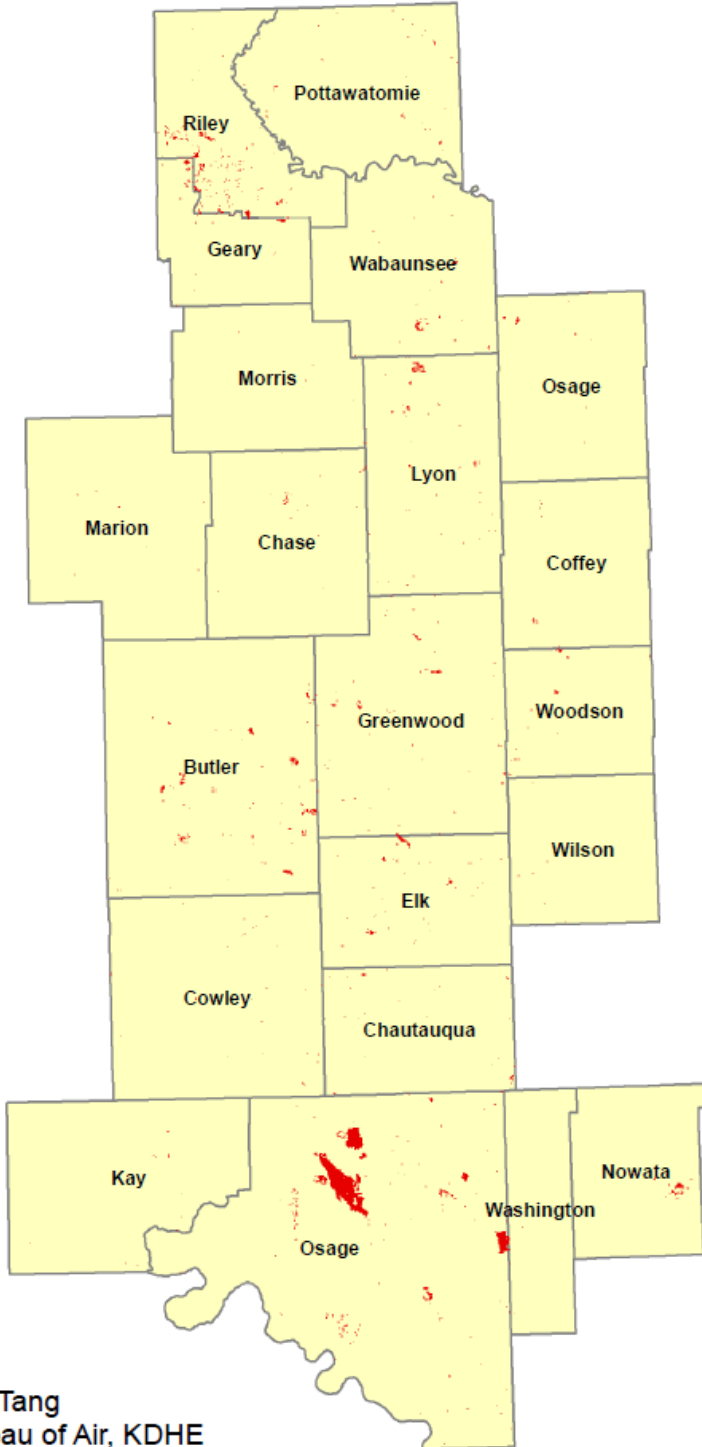


HMS Fire & Smoke Analysis March 15, 2018





Flint Hills Acreage Burned (February 17 – March 7, 2018)



<u>Counties</u>	<u>Acres Burned</u>	
Butler	4,324	
Chase	587	
Chautauqua	695	
Coffey	263	*
Cowley	541	
Elk	1,745	
Geary	1,529	
Greenwood	2,240	
Lyon	2,163	
Marion	170	
Morris	108	
Osage (KS)	541	*
Pottawatomie	849	*
Riley	5,020	
Wabaunsee	1,220	*
Wilson	93	*
Woodson	695	*
Nowata (OK)	1,174	*
Osage (OK)	31,336	
Washington (OK)	139	*
Kay (OK)	309	
Total	55,741	
* Denotes county was partly or completely covered by clouds during latest analysis.		

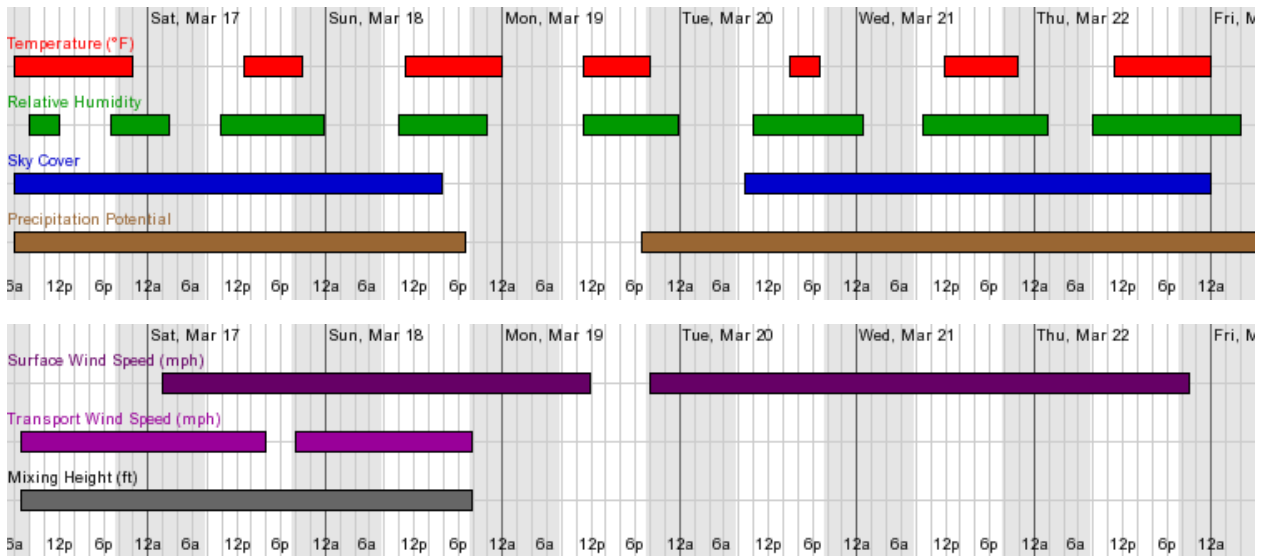
Yao Tang
Bureau of Air, KDHE



Upcoming Look at Fires and Smoke

Breezy to windy conditions and low relative humidity will lead to 'Extreme' fire danger today across most of the Flint Hills despite at least small chances for showers and thunderstorms. There is potential for burning on Saturday with lighter winds out of the north; transport winds will also be very light, and any smoke impacts would likely be localized. Winds increase on Sunday with the potential for rain Sunday evening into Monday. Tuesday appears cool and somewhat breezy. Wednesday may be the best day of next week for burning opportunities with warming temperatures and lighter winds out of the north-northwest. Breezy to windy conditions look to return for Thursday, and especially next Friday.

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: 7am March 16, 2018.