



Blowing in the Wind

Managing Smoke from Prescribed Burning The Flint Hills Experience

Photo: Aleksey Sheshuvov



Carol Blockstone
K-State Research & Extension
Great Plains Fire Science Exchange

Making the Plan Work: Encouraging adoption of the SMP

Challenges:

Who needs to know about the provisions of the plan?

What methods of outreach will work best?

Who will assist with outreach?

Where will outreach occur?



Why the emphasis on outreach?

- Plan is largely voluntary.
- Education is imperative if SMP is to succeed.
- Multiple audiences, different emphases.
- Limited time before 2011 burn season began.



Photo: Aleksey Sheshuvov



Outreach Strategy

- Coordinate joint-agency effort.



- Create one authoritative information source.
- Use multiple methods of outreach.
- Evaluate effectiveness of outreach.



Outreach Strategy

- **Agree on key messages (what's important).**
- **Identify target audiences and develop targeted messages.**
 - Ranchers
 - County emergency staff
 - Urban audience
 - General public
- **Provide easy access to information.**
- **Reduce air quality exceedances resulting from rangeland burning.**



Outreach Methods



- Website.
- Publications.
- Radio interview series.
- Integrated with other agencies' meetings and publications.
- Informational listserv.
- Press releases/ news stories.

radio
interviews
newsletters
press
web
model
portal
workshops
conferences
publications
pamphlet
meetings
releases
burn
smoke
presentations
listserv



Impact and Evaluation

- **Post-burn season surveys.**
- **Recordkeeping and correlation.**
- **Total acres burned in county during April 2011.**
- **Acres burned vs. daily smoke forecast.**
- **Days of air quality non-attainment.**



Burn Boss Survey

- About 50% looked at the website;
- About 40% used the plume smoke model prior to burning.
- Found the forecast model (red/yellow/green) to be most useful.
- Most common behavior changes reported:
 - Burn fewer acres.
 - Burn earlier.
 - Wait for better day to burn.




County Staff Survey

- **More staff meetings.**
- **Some uncertainty in role of various emergency management staff.**
- **Requests to track acreage burned.**
- **Review of burning regulations after 2011 burn season.**



County Burn Regulations



Kansas Flint Hills
SMOKE MANAGEMENT

[Home](#) | [About Us](#) | [Environment](#) | [Implementation](#) | [Education](#) | [Health](#) | [Events](#) | [Weather](#) | [Models](#)

Burning Information for Counties within the Flint Hills Region

For more information on obtaining a burn permit, reporting a burn, or questions regarding burning, please contact your local Law Enforcement Center, Emergency Management Office or Fire Chief / Fire District.

Butler

Contact the appropriate local 911 center or fire service agency immediately prior to commencing the burn and when the burn is completed. Permission is required for burns of less than 40 acres and will be granted if certain standards are met. These are listed in the County Burning Resolution. Agriculture burns of 40 acres or more requires notification. Butler County Emergency Communications numbers are: 316-320-1294 or 316-322-4398.

[Butler County Burning Resolution](#)

Chase

Permission to burn is obtained the day of the burn. Call the sheriff's office at 620.273.6313 extension 1 to request permission. Be prepared to provide name, location of the burn, and approximate acreage to be burned. Permission to burn will be determined by weather and smoke modeling forecasts and may change during the day. Upon completion of the burn, the sheriff's office should again be notified.

Chautauqua

Permission to burn is obtained the day of the burn. Call the sheriff's office at 620.725.3108 or 3109 to request permission. Additional requirements apply. Adequate and appropriate equipment to control the fire must be on site before burning. The fire should not be left unattended at any time. Upon completion of the burn, the sheriff's office should again be notified.

Cowley

Notify the local fire district or dispatcher immediately before burning and again to report the burn is out. Fire department phone numbers are: Winfield 620.221.5560; Atlanta 620.394.2222; Arkansas City 620.441.4430; Burden 620.438.2315; Cambridge 620.467.4111; Dexter 620.876.5605; Udall 620.782.3333. Only Winfield and Arkansas City fire departments are staffed full time. Dispatcher numbers for the entire county are Winfield 620.221.5555 and Arkansas City 620.441.4444.

Elk

Permission to burn is not required, but it is recommended that the sheriff's office be contacted immediately prior to burning at 620.374.2108. A recommendation to not burn will be given if weather conditions are not favorable for burning.

Geary

Website: <http://ks-geary.manatron.com/RuralFireDepartment/BurnPermits/tabid/5370/Default.aspx>

Greenwood

[Greenwood County Burning Regulations](#)

AT A GLANCE

- [For Land Managers:](#)
 - [April Burning Restrictions](#)
 - [Smoke Management Plan Kansas Department of Health and Environment Bureau of Air](#)
 - [Fire Management Practices for Air Quality Attainment](#)
 - [Burn Permit Information](#)
 - [Current Burn Bans](#)
 - [Fire Management Practices Pamphlet - KDHE](#)
 - [2011 Air Quality Health Advisory Alert - KDHE](#)
 - [Related Links](#)
 - [Site Map](#)


PILOT COUNTY INFO

- [Pilot Programs](#)
- [County Contact Information for Flint Hills Region](#)

IN THE NEWS

- [Radio Broadcasts](#)
- [News Releases](#)
- [Videos](#)

WEBSITE FEEDBACK

 **Submit FEEDBACK**



Summary of First Year Activities

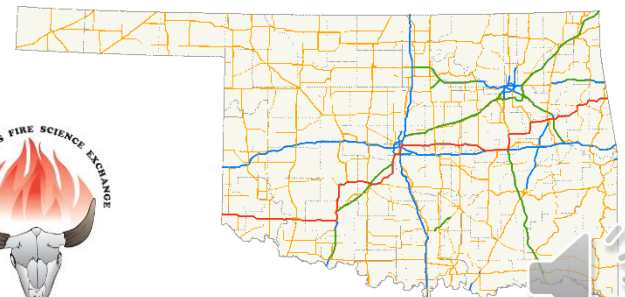
- **Smoke Management Plan completed and implemented.**
- **Extensive outreach campaign conducted.**
- **Post-Burn Season Evaluation.**
- **4 Exceedances.**





Outreach Strategy

- **Addressed specific information needs**
 - Publication: “Air quality in Kansas urban areas: what is being done and what could happen.”
- **Expanded participation: Regional, National, International**
 - Joint KDHE/K-State presentation at OSU-KOMA Oklahoma Cattle Conference.
 - Research discussions with Oklahoma Department of Environmental Quality.
 - Great Plains Fire Science Exchange
 - SmoC



Related Links

- News Releases
- Kansas Common Sense
- Columns
- Speeches
- Media Kit
- Photo Album
- Audio
- Video

Office Information

- Washington, D.C.

Russell Senate Office Building
Room 354
Washington, D.C. 20510
Phone: (202) 224-6521
Fax: (202) 228-6966
*Please send invitations to
Olathe Office

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May 16 2011

Moran and Inhofe Introduce Legislation to Preserve Flint Hills

Will protect use of prescribed fire to preserve tallgrass prairie

WASHINGTON, D.C. – U.S. Senator Jerry Moran (R-Kan.) and U.S. Senator Jim Inhofe (R-Okla.), recently introduced legislation, S. 989, the Flint Hills Preservation Act, to protect the ability of landowners in the Flint Hills to use prescribed fire as a tool to preserve the tallgrass prairie ecosystem.

"Rather than have to worry about a schedule dictated by the EPA, this legislation will allow landowners to manage prescribed burning around the forces of weather and other factors impacting safe conditions, while at the same time preserve a unique ecosystem," Sen. Moran said.

"I am pleased to work with Senator Moran on this commonsense legislation that preserves the tallgrass prairie ecosystem in Oklahoma and Kansas and helps our agricultural communities manage their pastures," said Sen. Inhofe. "The fact that they play a key role in supporting two separate and unique ecosystems at risk. This bill will protect their economic and environmental needs."

"We applaud Senator Moran's legislation," said President Obama.

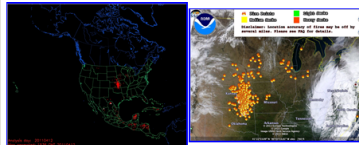
U.S. Air Quality

The Smog Blog

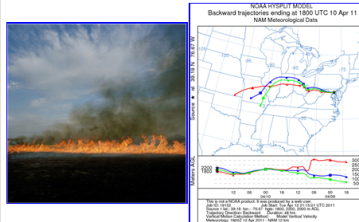
April 12, 2011

FIRES BURN THROUGHOUT PLAINS STATES, CONCENTRATED IN KANSAS.

There are a large amount of fires today in the Northern Oklahoma and Kansas area. These fires are very concentrated in this area, which has led to a large amount of smoke being poured into the air. The first image (courtesy NOAA HMS) shows a map of North America, with all of the significant fires in red. You can see that there is a large area of fire concentrated in Kansas and Oklahoma. The image on the right (courtesy Google Earth and NOAA HMS), also shows the fires and their locations.



These large fires are started by farmers and ranchers to burn off old vegetation and eventually provide fresh grass for cattle. The image is from a grass fire near Emporia, Kansas. (Courtesy photo by Larry Schwarm, Wichita Examiner) These fires have created a smoke plume that has stretched from eastern Kansas across the southern Great Lakes states and all the way to the Atlantic Coast. The second image is a HYSPLIT trajectory model, and according to the National Oceanic and Atmospheric Administration, a majority of the smoke aloft (around 2000m) we are receiving is coming from these concentrated fires.



By John Sullivan on April 12, 2011 4:19 PM | [Permalink](#) | [Comments \(0\)](#)

April 11, 2011

THE WALL STREET JOURNAL
WSJ.com

U.S. NEWS [JUNE 6, 2011

Range Fires Ignite Dispute

Blazes Clear Way for Prime Cattle Pastures but Pollute Air in Heartland Cities

By JEFFREY BALL



Associated Press

Range fires in Kansas' Flint Hills region, intentionally set to foster feed-grass growth, are cited as a risk to air quality in some Midwestern cities.

American cattle producers from Texas to Tennessee ship their herds each summer to the Flint Hills region of Kansas, where the animals bulk up on grass before they're dispatched to feedlots and then slaughtered.

Ranchers help prime the sprawling pastures by torching them to burn out prairie brush, clearing the way for stands of big bluestem and other grasses that are cheap cattle feed.

“Effective with 2011, an additional burning window statewide from July 16 thru August 31 except soils with an I value of 86 or greater.”

FSA Exhibit 5, pg. 2



About the U.S. Air Quality Weblog

USAQ is a daily diary of air quality in the U.S. prepared using information from satellites, ground-based measurements, and models. Interpretation and analysis are provided by the staff of the University of Maryland, Baltimore County Atmospheric Lidar Group.

Permission has been sought for the use of copyrighted images, data, and products on USAQ. Similarly, we request any data copied from this site carry the citation "Image (or graphic) obtained from the U.S. Air Quality Smog Blog (<http://aq.umbc.edu/smog/>)."

Recent Posts

- 12 Apr: Fires Burn throughout Plains states, concentrated in Kansas.
- 11 Apr: Today's PM 2.5 & Ozone Moderate in Texas
- 11 Apr: Southern Smoke over Baltimore
- 10 Apr: Busy Air Quality Day in the US with widespread smoke
- 09 Apr: International Feature: Air quality in South Korea
- 08 Apr: Fires, Smoke, Moderate PM2.5 and AOD Levels in Texas
- 07 Apr: International feature: Saharan Dust off Portugal

Recent Comments

- 05 Apr: Ray Hoff on Fires continue to burn in the Great Lakes and Mid-Atlantic, smoke rising towards South East. I have passed over it.
- 04 Apr: Daniel Tong on Fires continue to burn in the Great Lakes and Mid-Atlantic, smoke rising towards South East. nice job. The high-...
- 27 Mar: Anonymous on PM2.5 readings are good in the US! Smoke approaching from the south. Please do a quick re...
- 08 Mar: Ray Hoff on Clouds found nearly everywhere. Cool. Should be a...
- 08 Mar: Scott Bachmeier on Clouds found nearly everywhere. There was even 'muddy'...

Main Data Sources



USDA AID Visiting Scholars Program



Developing Options for Avoiding, Reducing or Mitigating Agricultural Burning that Contributes to Black Carbon Deposition in the Arctic Conference.

- **Keeping it legal: Regulations affecting prescribed burning in Kansas, U.S.A.**
- **Prescribed Burning Education in Kansas.**
- **Balancing Ecological and Environmental Objectives in Smoke Management Planning.**



Videos



Urban · Producers



Rangeland Ecosystem Services

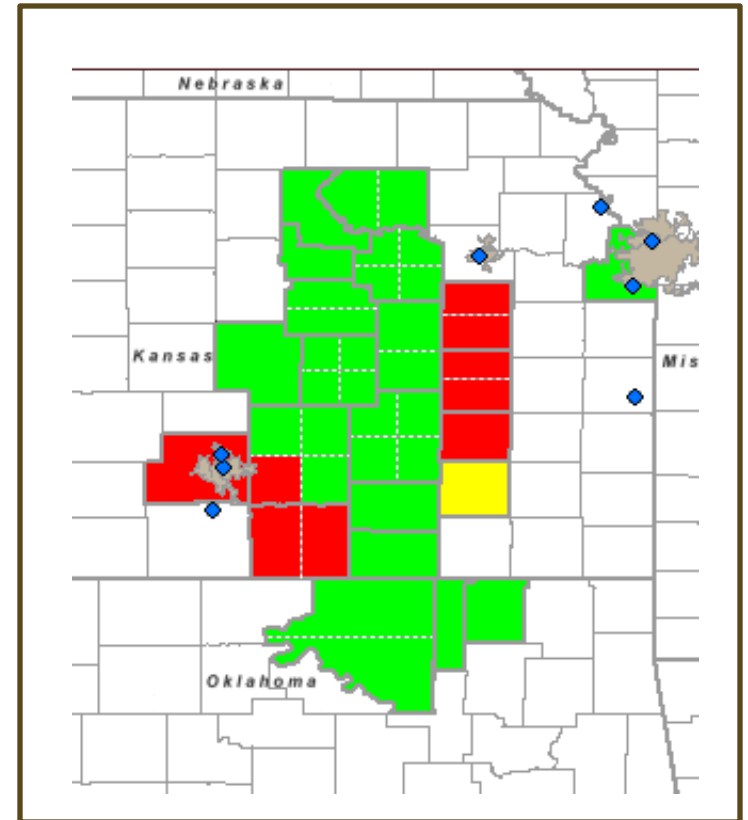


Carbon sequestration · Open space
Recreation · Livestock production
Water quality



Room for Improvement

- Clarify between smoke green days and safety green days on website model.
- Continue outreach.
 - TV weather forecasts?
 - Kansas City, Missouri urban audience?



Room for Improvement

- Educate more about reasons for burning, alternatives to burning during April each year.
- Emphasize need to call in burns.
- Clarify liability issues.
 - Contingency Planning
 - Insurance
 - Legal framework.



Smoke Management Conundrums

- Days with good smoke dispersal are often too windy to burn safely.
- Local wind direction needed to avoid highways, towns, and neighbors may be the same direction that will take smoke to urban areas.
- Burning must occur to maintain ecosystem; air quality must be maintained to meet EPA standards.



Final Thoughts

- Policy and regulations affect prescribed burning activity.
- Choices may need to be made between environmental and ecological needs, both of which are important.
- What is politically or regulatory possible?



Final Thoughts

- Prescribed burning is ecologically and financially important.
- Prescribed burning is largely carried out by private landowners.
- Benefits of prescribed burning are shared by the public (ecosystem services).
- Impaired air quality is shared by the public.

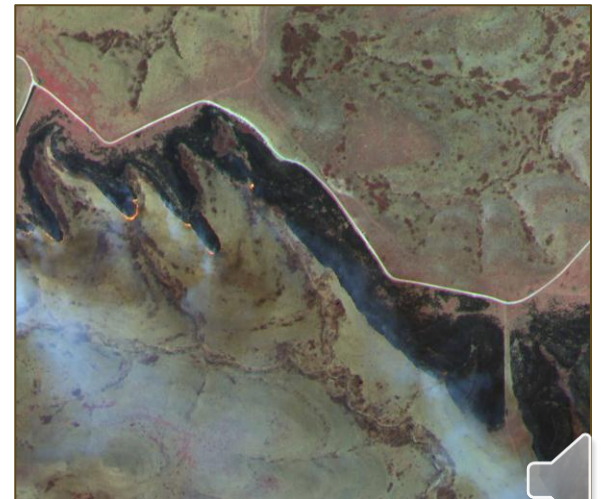


Photo: Kevin Price





Photo: Eve Horne

