

**Kansas Department of Health and Environment**

**Bureau of Air**

**December 15, 2010**

**Response to Comments – Draft Flint Hills Smoke Management Plan**

The Bureau of Air of the Kansas Department of Health and Environment posted the draft Flint Hills Smoke Management Plan on our website on November 25, 2010. Public comments were accepted on the draft plan until 5:00pm Wednesday, December 8, 2010.

The State of Kansas, with the input of a diverse group of stakeholders, has developed a smoke management plan to address air quality concerns caused by the annual burning of the tallgrass prairie in the Flint Hills of Kansas.

Following is the summary of the written comments, with responses to each describing the State's response to the respective comment, including, where applicable, notation of changes made to the draft document.

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Ms. Susan M. O'Neill, Ph. D., Air Quality Scientist, Air Quality and Atmospheric Change Team, NRCS, Portland, OR., submitted the following written comments on Dec. 7, 2010.

**Comment:** I went through it (glossary) and have recommendations on terms to remove or change. I'm recommending removing terms that are not used in the document, and in the case of changing definitions, using definitions established by EPA or NWCG (National Wildfire Coordinating Group). EPA in their Rules is also making the effort to be consistent with NWCG.

**Response:** The KDHE concurs and has made the appropriate changes to the glossary by deleting words not used in the document and revised some definitions for consistency.

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Mr. Steve Adams, Natural Resource Coordinator, Kansas Department of Wildlife and Parks, Topeka, KS., submitted the following written comments on Dec. 8, 2010.

**Comment:** In the second paragraph on page 17 there is a discussion about the impacts that PBG would have on smoke emissions. There is no mention of the recent study by Cade Resnick that was distributed to the SMP listserver. That study indicated that less biomass would be consumed annually by fire when a pasture was managed with patch burning compared to the entire pasture being burnt annually. This would suggest that smoke emissions would likely be less in PBG systems compared to annually burning entire pastures. We would suggest a reference to this in the final plan.

**Response:** The KDHE concurs with the comment and has inserted the following language in the second paragraph on Page 17 of the SMP: “*One study (Rensink, 2009) indicates that less biomass would be consumed annually by fire when a pasture was managed with patch burning compared to the entire pasture being burnt annually.*” A citation for this study was also added to Literature Cited page.

**Comment:** Additionally, in the 4th paragraph on page 17 it is stated that annual burning was the only burn frequency that reduced "woody" plant density. Is woody a reference to trees or both trees and shrubs? The plan should clearly distinguish the difference between shrubs and trees relative to effective fire frequencies. Also, there is ample evidence that a 2-3 year frequency, or longer, is more than sufficient to keep trees from encroaching into a pasture. Those "woody" shrubs (e.g. plums, dogwood, sumac, etc.) are essential habitat for many grassland birds and they are native to our prairie ecosystems.

**Response:** Woody vegetation refers to trees and shrubs. While it's true that most shrubs and even most trees are native, they were not as common as they are today, at least outside the more intact areas of the Flint Hills. The plan does say that the need for frequent fire is dependent on the site, that some areas are receiving more fire than what's ecologically necessary while other areas are not receiving enough. No additional language was added or changed in response to this comment.

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Mr. Craig Volland, Chair, Air Quality Committee, Kansas Chapter, Sieera Club, Kansas City, KS., submitted the following written comments on Dec. 4, 2010.

**Comment:** It does not adequately address the decline in grassland bird populations.

**Response:** The intent of this plan was to address the health impacts associated with the smoke produced by the burning in the Flint Hills of Kansas. It was not the intent to address declining populations of grassland bird populations. No changes were made to the Plan.

**Comment:** We are greatly troubled by the implications of Section 5.3.5 dealing with communications to the public. That is, citizens who may be affected by smoke from the Flint Hills burning will be provided with health advisories to "reduce exposure and minimize medical emergencies." This section seems to imply that the rangeland burning takes priority over public health. It should be clearly stated that the goal is to eliminate health impacts and especially to eliminate any medical emergencies attributable to the burning. If KDHE is going to propose that some level of health effects will be tolerated, then studies need to be conducted that would compare the economic benefits associated with burning to the costs and suffering also associated with it, and thereby provide the basis for a thorough public debate.

**Response:** KDHE believes this concern is addressed in Chapter 2 of the Plan in which we state in the first paragraph that the most obvious and important reason for the Plan is to protect the health of Kansas citizens. Additionally, as described in Section 7.2.6, KDHE will continue to investigate opportunities to research the potential health impacts of the burning in the Flint Hills. No changes were made to the Plan.

**Comment:** We note that the success of the proposed smoke management plan relies almost entirely on individual land managers making timely decisions relating to favorable meteorological conditions that would reduce downwind impacts. Thus the proposed hiring of a meteorologist and the establishment of an effective, real-time communications network are crucial. Until this is implemented the SMP will be of no effect.

**Response:** KDHE concurs with this comment and agrees that this is an important issue that needs to be resolved. KDHE will continue to work with Kansas State University and other stakeholders to explore personnel and funding issues related to this concern. No changes were made to the Plan.

**Comment:** In the final analysis, the Plan does not address the methods of burning and stocking used in the Flint Hills in a meaningful way.

**Response:** In Section 2.5 of the Plan, methods of burning and stocking are discussed in detail. We acknowledge that the Plan does not require changes in agricultural burning practices. The Plan is an attempt to balance the agricultural burning practices with the needs to reduce downwind impacts on air quality by developing the tools necessary to allow the land managers to make informed decisions on their burning techniques and its affects on air quality. No changes were made to the Plan.

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Mr. Daniel L. Williamson, Environmental Biologist IV, Wolf Creek Operating Corporation, Burlington, KS., submitted the following written comments on Dec. 8, 2010.

**Comment:** In accordance with Title 10 Code of Federal Regulations Part 50 Appendix R, WCNOG must maintain a fire brigade and fire watch training programs. Appendix R requires our fire brigade to received live fire and fire extinguisher training. Additionally, security and outage personnel must receive fire extinguisher training. Appendix R requires fire brigade and fire watch training to be conducted year round and on an ongoing basis. The regulatory changes, as proposed in the draft SMP, would create a situation where KAR 28-19 would be contrary to our NRC obligations found in 10 CFR 50 Appendix R. Additionally, WCNOG believes, that based upon duration and fuel selections, our fire fighter training burns have minimal impacts to Kansas air quality. The KDHE Southeast District Office has historically approved exemptions to the following restrictions:

KAR 28-19-647(e)(1): dry materials restriction,  
KAR 28-19-647(e)(3): night burn restrictions,  
KAR 28-19-647(e)(4): weather restrictions, and  
KAR 28-19-647(e)(5): wind speed restrictions

Therefore, WCNOG suggests two possible options to mitigate the resulting regulatory conflict:

1. Remove the SMP Chapter 8.5 presumption that fire fighter training burns would be prohibited if the provisions of Chapter 4 are expanded to cover Coffey County, or
2. Ensure that KAR 28-19 includes language allowing a fire fighter training burn exemption for facilities licensed by NRC.

**Response:** KDHE's proposed regulation will allow for similar exemptions like those described in the comment from WCNO. No changes were made to the Plan.

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Ms. Janice Glanville, Chase County Landowner, Chase County Commissioner, Chase County, KS., submitted the following written comments on Dec. 8, 2010.

**Comment:** I think it is vital to remember that safety is the most important point in performing a prescribed burn. So that being said, I feel that safety is and should be first and foremost the main concern in prescribed burning. In reading Chapter 3, I do not see where safety is listed as an objective in 3.2 as well as other areas of the document. I feel that it should be noted throughout the document.

**Response:** KDHE addresses the first comment in the Plan in the first paragraph on page 9. *"The existing Kansas regulations on agricultural burning were written originally to deal with safety, specifically vehicular and airport safety as it pertained to smoke from fires covering a roadway or runway. These regulations are found in Appendix D. Therefore this plan does not discuss those concerns directly but addresses the health and air quality impacts from agricultural burning in the Flint Hills."* No changes were made to the Plan.

**Comment:** I feel that our metropolitan neighbors/businesses should be asked to do whatever they need to do to also help air quality during this time of the year. I feel that it is unfair to ask the Flint Hills producers to shoulder the air quality issue and limit their livelihood without asking the metropolitan areas to take some responsibility also.

**Response:** This is addressed in Section 2.4 of the plan and describes the significant amount of emissions controls and related costs that the Kansas City industry has incurred over the past 25 years. No changes were made to the Plan.

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Mr. Tim W. Millsbaugh, Fire Marshall, Sedgwick County Fire District #1, Park City, KS., submitted the following written comments on Dec. 1, 2010.

**Comment:** If the regulations are adopted, SCFD#1 has the following recommendations/questions. SCFD#1 has a burn permit process in place which includes the entire fire district and all unincorporated areas of Sedgwick County. We would like to retain that responsibility since we have the resources to handle it. I do not believe KDHE has enough resources to deal with the 2,000 permits per year. We do enforce not only the Fire Code through our permit process but also all KDHE regulations on open burning. As I see in the draft, the burn ban during the month of April addresses almost all controlled burning but does not talk about trash burning in a barrel which is still legal in Sedgwick County if the property owner has 5 acres of land or more. Will this be addressed?

**Response:** Local permitting processes will not be assumed by KDHE as part of this plan. Trash burning in barrels was not addressed by this plan and it's legality will continue to be a local jurisdiction issue.

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Mr. Brian Hind, Rancher and 1<sup>st</sup> District County Commissioner, Greenwood County, KS., submitted the following written comments on Dec. 7, 2010.

**Comment:** I have learned during that time that one thing voters absolutely hate is feeling a regulation was passed behind closed doors, especially when it is a regulation that deeply impacts the way they make their living. I do not expect anything about this to be smooth or happy, but believe there will be a lot less hostility from farmers and ranchers if they believe their opinions played a part in the final product.

**Response:** When representatives of the agricultural organizations first approached KDHE about developing a Flint Hills Smoke Management Plan in 2009, it was our intent to make this process as transparent as possible. When the SMP Advisory Committee was formed in early 2010, we included a wide range of stakeholders from agriculture, urban and environmental interests. This included the Kansas Department of Agriculture, Kansas Fire Marshal, Kansas Division of Emergency Management, Kansas Forest Service, Kansas State University, City of Wichita, Johnson County, Natural Resources Conservation Service, Kansas Livestock Association, Kansas Farm Bureau, Tallgrass Legacy Alliance / Greenwood County Extension, The Nature Conservancy, American Lung Association (Wichita), Kansas Prescribed Fire Council/KS Grazing Lands Coalition, Kansas State Firefighters Association, Kansas Emergency Managers Association, Audubon of Kansas and the Kansas Forage and Grasslands Council. As the process developed, numerous outreach efforts were extended by all stakeholders to let citizens know about the issues and the development of the Plan. A partial list of these outreach efforts are attached as an addendum to this document.

## **Flint Hills Smoke Management Plan Development Outreach**

Information about the burning in the Flint Hills and the development of the Flint Hills Smoke Management Plan were given at the following conferences, meetings, workshops, newsletters, news articles, etc. by KDHE and the stakeholders involved in the development of the Flint Hills Smoke Management Plan. This is not an all inclusive list.

1. KSU Prescribed Fire Workshops 2010 – Shawnee, Douglas, Montgomery, Cowley, Greenwood, Republic, Washington, Cloud, Anderson, Wilson, Sedgwick, Ottawa, Saline, Linn, Marion, Harvey, Coffey, Russell, Ellis and Trego Counties.
2. Kansas Prescribed Fire Council Town Hall Meetings – Jan. 14, 2010 in Howard and Madison, Jan. 15, 2010 in Westmorland.
3. [http://sedgwick.granicus.com/MediaPlayer.php?view\\_id=7&clip\\_id=2186](http://sedgwick.granicus.com/MediaPlayer.php?view_id=7&clip_id=2186)
4. [http://www.kake.com/findit/tuesdayheadlines/Local\\_Leaders\\_Say\\_Key\\_To\\_Clean\\_Air\\_Is\\_Managing\\_Grassland\\_Burning\\_111481069.html](http://www.kake.com/findit/tuesdayheadlines/Local_Leaders_Say_Key_To_Clean_Air_Is_Managing_Grassland_Burning_111481069.html)
5. Manhattan Mercury Newspaper Article  
<http://www.themercury.com/news/article.aspx?articleId=b0c6ae6b48554a439ca5ff88cf62fc9b>
6. Interview on KSU radio program “Agriculture Today” that covered the SMP process.
7. Presentation to the Kansas Forest Service Advisory Council in May 2010.
8. Presentation to the Kansas Emergency Management Association Conference in September 2010.
9. Kansas Geologic Survey Tour stop at the Tallgrass Prairie in June – SMP discussed by Rep. Moxley.
10. Kansas Farm Bureau – Farm Leader Letter (5 times), presentations at policy committee, presentation at KFB annual meeting ( <http://www.kfb.org/2010am.htm>) and e-news.
11. Information on the Flint Hills burning and SMP were given to all permitted sources in Johnson County.
12. Johnson County also communicated with all city/county parks departments and local fire districts/departments about possible burning restrictions and the Flint Hills issues.
13. Discussions through Kansas City’s Mid-America Regional Council’s Air Quality Forum about the Flint Hills Smoke Management issues.
14. Briefed Johnson County commissioners about the smoke issues in 2009.
15. KS Senate Natural Resource Committee meetings in Spring 2010.
16. <http://kansas.sierraclub.org/FlintHills/FlintHillsBurning.html>
17. <http://www.kansas.sierraclub.org/FlintHills/index.html>
18. Kansas Rural Center (<http://www.kansasruralcenter.org/>) - 2010 Sustainable Ag Conference, Nov. 20, 2010 - Breakout session - Kansas Smoke Management: Melding Legislation and Production Practices to Preserve Prairie Ecosystems.
19. Kansas Grazing Land Coalition - <http://www.kglc.org/> Sericea Program & Scientists Outline Burning Strategies for Kansas Tallgrass Prairie.
20. shairtheair.org - Johnson County, Kan. Website
21. K-State Research and Extension Annual Conference - Oct. 18-20, 2010 - Breakout Session - Flint Hills Smoke Management Plan: What is coming? What does it mean to me? This session will explain the Flint Hills Smoke Management Plan, how it will affect agents and others at the local level, and the science behind the plan to address air quality issues related to springtime prescribed burning in Kansas.

22. Pottawatomie County Commission - Commission Minutes - June 28, 2010  
<http://www.pottcounty.org/Commissioners/Minutes/2010/06-28-10%20min.pdf>  
Bruce Brazzle, county fire supervisor, updated the Commission on the status of the Fire District #10 building, Wamego Senior Center, Fire Department responses, and KDHE, Smoke Management Plan.
23. City of Wichita - Testimony - JOINT COMMITTEE ON ENERGY AND ENVIRONMENTAL POLICY - Concerns about air quality standards and verifiable local data - Sept. 9, 2010  
<http://skyways.lib.ks.us/ksleg/KLRD/Resources/Testimony/EEP/9-09-10/20-Wichita-FlintHillsSmokeMgmt.pdf>
24. Topeka Capitol Journal -  
[http://cjonline.com/news/legislature/2010-03-28/heated\\_debate\\_flint\\_hills\\_fires](http://cjonline.com/news/legislature/2010-03-28/heated_debate_flint_hills_fires)
25. Kansas Farmer - Prescribed Burning Debate Highlights KLA/K-State Field Day  
A session about how state regulations on prescribed burning in the Flint Hills may change will be the highlight presentation of the first Kansas Livestock Association/Kansas State University Ranch Management Field Day in Cowley County on Sept. 19, 2010.
26. Wichita Eagle – <http://www.kansas.com/2010/08/11/1442158/flint-hills-burning-a-topic-for.html>
27. Presentation on SMP at Kansas Association Conservation Districts annual convention – Nov. 2010
28. EPA Regional Administrator Karl Brooks radio Interview with Kelly Lenz on May 14, 2010 – WIBW
29. EPA Regional Administrator Karl Brooks Speech at KS Ag and Rural Leadership Conf Dec. 9, 2010
30. EPA Regional Administrator Karl Brooks Speech at KS Farmers Union Dec. 11, 2010
31. EPA Regional Administrator Karl Brooks Testimony to KS Legislature Joint Committee on Energy Sept. 9, 2010
32. EPA Regional Administrator Karl Brooks spoke about the smoke management plan during his speech at:
  - Kansas Municipal Utilities Conference, May 13, 2010
  - Beef Producers Information Seminar, Emporia, Kan., Aug. 20, 2010.
  - 2010 Sustainable Agriculture Conference, Emporia, Kan., Nov. 20, 2010
33. [http://www.kansasagland.com/index.php?option=com\\_content&view=article&id=4405:smoke-modeling-tool-for-flint-hills-burning-could-benefit-grassland-managers&catid=102:farm-management&Itemid=56](http://www.kansasagland.com/index.php?option=com_content&view=article&id=4405:smoke-modeling-tool-for-flint-hills-burning-could-benefit-grassland-managers&catid=102:farm-management&Itemid=56)
34. Presentation given on SMP to Kansas Prescribed Fire Council Annual Meeting on SMP – September 2010
35. Presentation given on SMP to Commission on Emergency Planning and Response Conference – September 2010