

STAFF REPORT

DATE: September 15, 2009
TO: City Council
FROM: Sue Gedestad, Assistant Public Works Director
SUBJECT: Further Discussion on Mandatory or Voluntary Wood Burning Restrictions and Continued Air Quality Data Monitoring

Recommendation

Approve the attached resolution establishing “Voluntary No Burn” days. This resolution is based on the recommendations from the July 21, 2009 meeting. The resolution also specifies air quality monitoring and analysis to be done during the 2009/10 burn season. Elements in the Resolution are as follows:

- Establish voluntary no burn days, based on a forecasted average of particulate matter (PM) 2.5 concentration of 25 ug/m3 or higher.
- Work with Dr. Cahill to continue the data collection and analysis during the next burn season.
- In conjunction with YSAQMD, log resident complaints.
- Evaluate program after one year.

If Council decides a mandatory no-burn restriction is preferable, staff has attached a second resolution to direct staff to return to Council with an ordinance restricting burning on days where PM 2.5 concentration is forecasted to be 25 ug/m3 or higher. In order to make a no-burn restriction mandatory and allow for enforcement, Council must pass an ordinance.

Fiscal Impact

The Yolo Solano Air Quality Management District (YSAQMD) has offered to pay costs associated with providing specific forecast information, advertising curtailment days on the YSAQMD website and toll free burn line, email and text message through YSAQMD “enviroflash” program and assist with logging complaints. City staff time will be necessary to automate city webpage updates advertising no burn days, log complaints, assist with air monitoring and an evaluation of the program at the end of the season. Estimated cost is \$3,000 to \$4,000. These efforts will be charged to the Natural Resources Commission program (7150) which is funded by a combination of Enterprise and General Funds. If additional funds are needed to administer the voluntary program or if another large project surfaces through the NRC, staff would return to Council with a budget adjustment request.

The additional costs associated with a mandatory program are not fully known at this time. They are contingent on the details of the program.

Background

Voluntary Program

There are two main elements of the resolution. The first is to establish a voluntary no burn day program. Council approved at its July 21 meeting a voluntary program that establishes no burn days when P.M. 2.5 is forecasted to have a concentration of 25 ug/m³ or higher. This threshold is lower than the Federal PM 2.5 standard of 35 ug/m³. Using a lower threshold was done in an effort to address the individual neighborhood effect of wood burning. YSAQMD has offered their assistance with some of the administrative tasks associated with the program. These tasks include the following:

- Provide specific forecasts for no burn days.
- Broadcast and advertise curtailment information
- Provide assistance to city staff to develop automated web notification.

Staff will work to update the City's web page to accommodate no burn day information.

The second element of the resolution is to continue efforts to gather air quality data in the effort to define what the true neighborhood impacts of wood burning are. Dr. Cahill has again offered to continue his efforts that began last burn season. YSAQMD will assist in finding resources to expand neighborhood monitoring, assist city staff in logging complaints and then provide analysis of information collected during the burn season. Staff's involvement in this aspect is to establish a mechanism for residents to register air quality incidents and to also log complaints. Staff will work with both YSAQMD and Delta Group to expand neighborhood data collection. At the end of the burn season, both YSAQMD and Dr. Cahill of Delta Group will review and analyze the information collected and report findings.

Mandatory Program

At the September 8, 2009 meeting, Council opted to further discuss a mandatory program at the September 15th meeting.

There are several issues to consider when developing a mandatory program:

- Are EPA Phase II certified appliances and pellet stoves exempted?
- Is there permitting?
- How is enforcement done?

Enforcement

While it is simple to suggest that the Police Department enforce the ordinance, the nuances of actually doing so are quite complex. Below are several elements that make the draft ordinance difficult to enforce.

1. Because of the inherent difficulties of monitoring actual burning time, the 6 hour maximum burn time is not readily enforceable.
2. Enforcement is complicated when various appliances are treated differently. Police officers would be required to distinguish between open hearth, non-EPA certified wood burning stoves and inserts and EPA Phase II certified stoves and inserts. Some of this concern is relieved if permits are issued.
3. Police officers would be required to distinguish between seasoned dry wood and unseasoned or wet wood.

4. And lastly, if triaging simultaneous public safety calls for service, this type of call is likely to be a very low priority.

Code Compliance is often viewed as an option for enforcement. However, the City does not have a code compliance person working after hours when most of the wood burning calls would be made.

Permitting

Along with the educational component, the intent was to simplify enforcement. By way of example, a police officer would verify the resident had a valid permit and that it is a permissible burn day. The permit may offer some assistance on the enforcement side but the requirement that all users of wood burning appliances obtain a permit is seen by many as onerous and overly bureaucratic. From an educational aspect, there are other methods that can be utilized that would be more widespread than through a permitting process.

Background Supplemental Information

Background information on wood-burning can be found in the July 21, 2009 staff report to the City Council on this issue at

<http://cityofdavis.org/meetings/councilpackets/20090721/06%20Wood%20Burning%20Restrictions.pdf>

Staff may provide supplemental information based on Council's September 8 request.

Attachment

1. Resolution for Voluntary Ban
2. Resolution Directing Staff to Return with and Ordinance for Mandatory Ban

RESOLUTION NO. 09-XXX, SERIES 2009

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF DAVIS
ESTABLISHING VOLUNTARY "NO BURN" DAYS FOR THE CURTAILMENT OF
ALL WOOD BURNING DEVICES TO PROTECT PUBLIC HEALTH FROM
WOOD BURNING SMOKE EMISSIONS**

WHEREAS, the U.S. Environmental Protection Agency (EPA), in response to growing medical evidence, in 2006 proposed tightening the 24-hour air quality standard for smoke Particulate Matter (PM) 2.5 concentrations from 65 micro-grams per cubic meter to 35 micro-grams per cubic meter; and

WHEREAS, the American Heart Association, the American Lung Association and the American Cancer Society note that the components of wood smoke may cause, contribute to, and complicate the symptoms of numerous respiratory, cardiovascular, auto-immune and eye disorders and diseases, including asthma, bronchitis, obstructive lung disease, cancer, cataracts, eye inflammation; and

WHEREAS, smoke concentrations in a locale can vary significantly, depending upon local topography, wind speed and direction, meteorological conditions, smoke production rate and the number of wood burning devices within a locality; and

WHEREAS, more studies regarding the dispersion and transfer of smoke from wood burning devices need to be conducted.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Davis:

Section 1. City of Davis City Council hereby establishes voluntary “No Burn” days when PM 2.5 is 25 micro-grams per cubic meter or higher as determined by the Yolo Solano Air Quality Management District; and

Section 2. Public notification of “No Burn” Days will be made available via the City's and Yolo Solano Air Quality Management District's web pages, email, local government cable, and other local media as available; and

Section 3. That City of Davis will continue its efforts to gather air quality information related to wood burning during the upcoming year as follows:

- a. Through continued work with UCD Delta Group and Dr. Cahill, who will install at least one stationary monitoring station; provide expertise in the analysis of the air monitoring data collected; review neighborhood complaints for analysis; and make comparisons with meteorological conditions, data collected by Yolo Solano AQMD, Sacramento Metropolitan AQMD, and other pertinent information sources; and

- b. By partnering with the Yolo Solano Air Quality Management District to gather air quality data and disseminating and notifying of no burn days. This will include utilizing YSAQMD automatic email notification and web update process to advertise no burn days. YSAQMD will look to partner with the City on other opportunities for neighborhood air quality monitoring; and;
- c. Via logging and tracking neighborhood air quality complaints from November 2009 through February 2010; both the city and the Yolo Solano Air Quality Management District will log and track such complaints; and
- d. By analyzing the data collected from Yolo Solano Air Quality Management District and UC Davis' DELTA Group and comparing this data to logged neighborhood complaints;
- e. In May, 2010 staff will Report to the City Council and the public regarding the data collected during November 2009 through February 2010 and the correlation, if any, between this air quality data and complaints, the dispersion and transfer of smoke from wood burning devices and any other information related to No Burn days and wood burning related to the further consideration of this issue by the City.

PASSED AND ADOPTED, by the City Council of the City of Davis on this 15th day of September, 2009 by the following vote:

AYES:

NOES:

ABSENT:

Ruth Uy Asmundson, Ph.D.
Mayor

ATTEST:

Zoe S. Mirabile, CMC
City Clerk

RESOLUTION NO. 09-XXX, SERIES 2009

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF DAVIS
DIRECTING STAFF TO DEVELOP AN ORDINANCE FOR MANDATORY BURN
RESTRICTIONS TO PROTECT PUBLIC HEALTH FROM
WOOD BURNING SMOKE EMISSIONS**

WHEREAS, the U.S. Environmental Protection Agency (EPA), in response to growing medical evidence, in 2006 proposed tightening the 24-hour air quality standard for smoke Particulate Matter (PM) 2.5 concentrations from 65 micro-grams per cubic meter to 35 micro-grams per cubic meter; and

WHEREAS, the American Heart Association, the American Lung Association and the American Cancer Society note that the components of wood smoke may cause, contribute to, and complicate the symptoms of numerous respiratory, cardiovascular, auto-immune and eye disorders and diseases, including asthma, bronchitis, obstructive lung disease, cancer, cataracts, eye inflammation; and

WHEREAS, the City Council desires additional information and studies regarding the dispersion and transfer of smoke from wood burning devices; and

WHEREAS, the City Council believes that mandatory restrictions will be the most effective means to protect the public health.

NOW, THEREFORE, BE IT RESOLVED the City Council of the City of Davis directs staff to return to the City Council as soon as feasible with an ordinance to establish mandatory burn restrictions on days when PM 2.5 is 25 micro-grams per cubic meter or higher as determined by the Yolo Solano Air Quality Management District.

BE IT FURTHER RESOLVED that staff will conduct public outreach and education on the no-burn requirements via the City's and Yolo Solano Air Quality Management District's web pages, email, local government cable, and other local media as available.

BE IT FURTHER RESOLVED that City staff will continue efforts to gather air quality information related to wood burning during the upcoming year as follows:

- a. Through continued work with UCD Delta Group and Dr. Cahill, who will install at least one stationary monitoring station; provide expertise in the analysis of the air monitoring data collected; review neighborhood complaints for analysis; and make comparisons with meteorological conditions, data collected by Yolo Solano AQMD, Sacramento Metropolitan AQMD, and other pertinent information sources; and
- b. By partnering with the Yolo Solano Air Quality Management District to gather air quality data and disseminating and notifying of no burn days. This will include utilizing

YSAQMD automatic email notification and web update process to advertise no burn days. YSAQMD will look to partner with the City on other opportunities for neighborhood air quality monitoring; and;

c. Via logging and tracking neighborhood air quality complaints from November 2009 through February 2010; both the city and the Yolo Solano Air Quality Management District will log and track such complaints; and

d. By analyzing the data collected from Yolo Solano Air Quality Management District and UC Davis' DELTA Group and comparing this data to logged neighborhood complaints;

e. In May, 2010 staff will Report to the City Council and the public regarding the data collected during November 2009 through February 2010 and the correlation, if any, between this air quality data and complaints, the dispersion and transfer of smoke from wood burning devices and any other information related to No Burn days and wood burning related to the further consideration of this issue by the City.

BE IT FURTHER RESOLVED that the City Council encourages community members to voluntarily adhere to burning restrictions on No-Burn days until an ordinance officially goes into effect.

PASSED AND ADOPTED, by the City Council of the City of Davis on this 15th day of September, 2009 by the following vote:

AYES:

NOES:

ABSENT:

Ruth Uy Asmundson, Ph.D.
Mayor

ATTEST:

Zoe S. Mirabile, CMC
City Clerk