

Butte County Air Quality Management District
2525 Dominic Drive, Suite J
Chico, CA 95928

 *Check Before You Light*

Staff Report to the Governing Board of the
Butte County Air Quality Management District
November 1, 2009 – February 28, 2010

October 15, 2009

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INTRODUCTION

This staff report proposes the **Check Before You Light** Program which began last year and replaced the previously known “Don’t Light Tonight” Program. The **Check Before You Light** program is voluntary and emphasizes checking air quality status anytime before using wood burning devices, not just at night. The program requests residents to voluntarily curtail using wood burning stoves and fireplaces on poor air quality days.

Chico and most of Butte County do not meet the federal 24-hour ambient air quality standard (AAQS) for PM_{2.5} established in 2006 of 35 micro grams per cubic meter (ug/m³). The U.S. EPA published the notice of the final designation on October 8, 2009. Further, Butte County does not meet the State AAQS for PM₁₀ or PM_{2.5}. Federal and State laws require District actions to reduce emissions to meet these standards.

During the winter months many residents in Butte County are affected by smoke from wood burning stoves and fireplaces. Due to meteorological conditions, smoke collects in localized, concentrated pockets. This means that the smoke from just one fire can cause a significant problem for the entire neighborhood. Because airborne particles take time to settle, the problem intensifies quickly. Additionally, smoke particles are so tiny that they seep into homes despite closed doors and windows. Even in homes where wood is not burned, indoor wood smoke pollution can reach up to 70 percent of the outdoor level. Neighbors of wood burners may be breathing unhealthy particles, even if they are not using their own wood burning stoves or fireplaces.

Wood smoke contains PM_{2.5}, carbon monoxide, formaldehyde, sulfur dioxide, irritant gases, and known and suspected carcinogens, such as polycyclic aromatic hydrocarbons (PAH). The toxic air pollutants in wood smoke can cause coughs, headaches, and eye and throat irritation. People can be exposed to wood smoke when they or people in their neighborhoods use their wood burning devices.

“DON’T LIGHT TONIGHT” PROGRAM BACKGROUND

Your Board approved the voluntary “Don’t Light Tonight” program in November 2005 with amendments to the program in January 2007 reflecting the change in the federal PM_{2.5} AAQS from 65 to 35 ug/m³.

The voluntary “Don’t Light Tonight” program objective was to be protective of public health and keep pollution levels of fine particulate matter below the health-based standards. "Don't Light Tonight" was a voluntary program during the fall and winter in which the District asked residents not to use their wood burning stoves and fireplaces when air quality was forecasted to be unhealthy. The criteria for issuing a “Don’t Light Tonight” public advisory was determined when the midnight to 6a.m. PM_{2.5} average for the Chico and Gridley monitors equaled 41 ug/m³ or greater. At that time 41 ug/m³ was equal to an AQI of 101 and considered **Unhealthy for**

Sensitive Groups. The AQI scale has been updated to reflect the new PM2.5 standard. An AQI of 101 today is equal to 35.5 ug/m³. The current PM2.5 AQI Guide is shown below in Table 1.

TABLE 1 AIR QUALITY INDEX GUIDE FOR PARTICLE POLLUTION

Air Quality	Air Quality Index	Micro grams per cubic meter (ug/m ³)	Health Advisory
Good	0-50	0 - 15	None
Moderate	51-100	16 - 35	Unusually sensitive people should consider reducing prolonged or heavy exertion.
Unhealthy for Sensitive Groups	101-150	35.5 – 65.4	People with heart or lung disease, older adults, and children should reduce prolonged or heavy exertion.
Unhealthy	151-200	65.5 – 150.4	People with heart or lung disease, older adults, and children should avoid prolonged or heavy exertion. Everyone else should reduce prolonged or heavy exertion.
Very Unhealthy	201-300	150.5 – 250.4	People with heart or lung disease, older adults, and children should avoid all physical activity outdoors. Everyone else should avoid prolonged or heavy exertion.
Hazardous	301-500	250.5 – 350.4	People with heart or lung disease, older adults, and children should remain indoors and keep activity levels low. Everyone else should avoid all physical activity outdoors.

The District issued “Don’t Light Tonight” advisories during the 2005 through the 2008 seasons as follows: One (1) advisory in the 05/06 season (criteria was AQI forecast to reach 150 and an agricultural No Burn Day); Three (3) advisories were issued in the 06/07 season; and eleven (11) advisories in the 07/08 season.

PROPOSED VOLUNTARY CHECK BEFORE YOU LIGHT PROGRAM

Your Board approved the voluntary **Check Before you Light** program last October to replace the “Don’t Light Tonight” program. Last seasons program was aimed at educating the public about potential poor air quality associated with wood burning stoves and fireplaces, distributing educational material and included a pilot program for the Chico Urban Area. Fifteen (15) advisories were issued in the 08/09 season.

This season’s proposed **Check Before You Light** program would also begin on November 1, 2009 and continue through the end of February 2010. The program would be focus on educating the public to check air quality through various media before lighting a residential wood fire.

Staff proposes to forecast the AQI for the following day by 2 p.m. during the fall/winter season. The forecast will primarily be for PM2.5 for Chico, Gridley and Paradise. District staff will issue a **Check Before You Light** advisory when the PM2.5 is forecast to reach 35 ug/m³ or greater. 35 ug/m³ is the federal PM2.5 standard and is considered **Unhealthy for Sensitive Groups** on the AQI scale.

Staff will advise the public of a voluntary no burn day for the **Check Before You Light** program using the District website, EnviroFlash email, telephone hotline, newspapers, television and radio. A sample advisory is included in Appendix A. When a **Check Before You Light** advisory is issued any person considering agricultural burning will need to obtain approval prior to burning from the on-duty inspector, if agricultural burning is not prohibited through the Sacramento Valley Smoke Management Program.

If complaints are received during a voluntary no burn day they would be handled as other District complaints are currently handled such as, odor complaints of smoke, open burning or fugitive dust complaints or for smoking vehicles. Educational material will be mailed to addresses with smoking chimneys or flues that produce excessive levels of smoke.

A detailed summary of daily forecasts and any **Check Before You Light** advisories issued will be provided to your Board tentatively in March 2010. Depending on the success of the program your Board may choose to enact other changes to the program for the next season.

ECONOMIC ANALYSIS

The District anticipates expenses for preparing public education materials. The District anticipates partnering with private industry to develop and produce commercials and advertising costs for broadcast time on the local channel television stations. In addition, the District has contracted with a consultant to develop an air quality forecasting procedure for PM2.5. The total program cost estimate is \$17,000, which can be implemented within the approved 2009-2010 budget.

APPENDIX A SAMPLE CHECK BEFORE YOU LIGHT ADVISORY

2525 Dominic Drive, Suite J
Chico, CA 95928
(530) 891-2882
(530) 891-2878 Fax



W. James Wagoner
Air Pollution Control Officer



FOR IMMEDIATE RELEASE

CHECK BEFORE YOU LIGHT ADVISORY IS IN EFFECT

This is a voluntary program

The Butte County Air Quality Management District (District) is requesting residents of Chico to voluntarily refrain from using their woodstoves and fireplaces on [insert date] from **midnight to midnight**. The voluntary curtailment has been prompted by an air quality forecast of Unhealthy For Sensitive Groups for the Chico area.

Residential chimney smoke is a major source of wintertime air pollution in Butte County. More than a nuisance, the microscopic particles in smoke have been linked to serious health injury. The good news is that your choices can do a lot for Clean Air.

Reduce Smoke When You Do Light:

- Always burn small pieces of seasoned, dry hardwood or manufactured logs.
- Stack wood loosely in your firebox, so plenty of air circulates around it.
- Keep the flame active.
- Don't let your fire smolder overnight - keep enough air in the fire to maintain a flame.
- Check your chimney regularly to see how well your fire is burning.

Please remember that it is always prohibited to burn household trash, chemically treated or painted wood at anytime. If you have any questions or would like further information please contact the District On-Duty inspector at **891-2882** [insert extension] during regular business hours Monday through Friday. Information is also available on the District website at www.bcaqmd.org and on the District Hotline Number at **896-2537**.

If you do not wish to receive these advisories, please e-mail air@bcaqmd.org with a request for removal from the distribution list.

APPENDIX B SAMPLE CHECK BEFORE YOU LIGHT POSTCARD

WE'VE NOTICED BURNING IN YOUR NEIGHBORHOOD...

HOW TO CHECK BEFORE YOU LIGHT: NOVEMBER — FEBRUARY

- ✓ **CHECK OUR BURN HOTLINE: 896-2537**
THIS NUMBER GIVES DAILY
UPDATED INFORMATION.
- ✓ **CHECK YOUR E-MAIL:** SIGN-UP TO RECEIVE AN E-MAIL
FOR **CHECK BEFORE YOU LIGHT** ADVISORIES.
- ✓ **CHECK OUR WEB SITE:** VISIT WWW.BCAQMD.ORG FOR
THE DAILY **CHECK BEFORE YOU LIGHT** STATUS.
- ✓ **CHECK THE NEWSPAPERS:** LISTEN TO THE RADIO OR
WATCH LOCAL TELEVISION FOR THE DAILY
CHECK BEFORE YOU LIGHT STATUS.

FOR MORE INFORMATION CALL US AT 891-2882



REDUCE SMOKE WHEN YOU DO LIGHT:

- PROPERLY INSTALL AND MAINTAIN
YOUR EPA CERTIFIED WOOD BURNING
APPLIANCE. YOUR NEW APPLIANCE BURNS
MUCH CLEANER AND USES LESS FUEL!
- USE ONLY DRY, WELL-SEASONED WOOD.
PROPERLY SEASONED WOOD IS DARKER,
HAS CRACKS IN THE GRAIN AND
WEIGHS LESS.
- KEEP YOUR CHIMNEY SWEEPED AND ASH
BIN CLEAN TO IMPROVE AIR FLOW AND
REDUCE SMOKE.



**BUTTE COUNTY
AIR QUALITY MANAGEMENT**
2525 DOMINIC DRIVE, SUITE J
CHICO, CA 95928

PROTECT PUBLIC HEALTH, CLEAN THE ENVIRONMENT!

WHEN A **CHECK BEFORE YOU LIGHT** ADVISORY IS ISSUED,
PLEASE REFRAIN FROM USING YOUR WOOD STOVE OR FIREPLACE.

JOIN US AND YOUR NEIGHBORS TO IMPROVE AIR QUALITY AND
INCREASE PUBLIC AWARENESS.

- ✓ RESIDENTIAL CHIMNEY SMOKE IS
A MAJOR SOURCE OF WINTERTIME
AIR POLLUTION IN BUTTE COUNTY.
- ✓ MORE THAN A NUISANCE, THE
MICROSCOPIC PARTICLES IN
SMOKE HAVE BEEN LINKED TO
SERIOUS HEALTH INJURY.
- ✓ THE GOOD NEWS IS THAT YOUR
CHOICES CAN DO A LOT FOR
CLEAN AIR.

