

For immediate release

October 2008

Operate outdoor wood-fired boilers properly to avoid health hazard for neighbors

Contact David S. Liebl, 608-265-2360, david.liebl@ces.uwex.edu

Madison, Wis.--It's the time of year when wood-fired boiler (OWB) owners begin preparing their units for the long Wisconsin heating season. Based on previous years, when the cost of natural gas and heating oil goes up, so does the demand for alternative, less expensive ways of heating homes and businesses. By the end of September, many OWBs begin operating, shutting down again the following April.

Because of the ready availability of wood, OWBs are becoming more common, particularly in rural areas. OWBs have several attractive features compared to indoor wood stoves; for example, they take the fire hazard and wood handling away from the house.

However, the smoke emissions from improperly operated OWBs can create a public health nuisance and, in many cases, a health hazard for downwind neighbors.

With the increasing reliance on OWBs as an alternative heating source, there has been a corresponding increase in the number of smoke exposure complaints, usually associated with an OWB being improperly located or operated. The Wisconsin Department of Health Services (DHS) has accumulated historical air monitoring data for smoke particulates (PM2.5) related to OWB emissions. In each case, when a visible smoke plume affects a neighboring house or property, it means US Environmental Protection Agency (EPA) PM2.5 health standards have been exceeded.

Strong smoke odors, along with a visible plume, indicate the presence of irritating chemicals normally found in wood smoke. Typically, one or more individuals experience adverse health effects such as respiratory irritation, sinus issues and headaches.

DHS believes that a "cause and effect" relationship has been established between OWB emissions and adverse health effects for downwind neighbors, and that air monitoring is not essential to establish exposure and health impacts. If there are visible emissions and odors at a neighboring residence, there is the potential for adverse health effects.

Local health officials who are called in on smoke exposure complaints can take several steps:

- Meet with the OWB operator to discuss the exposure problem.
- Review wood-burning practices with the operator.
- Check for proper stack height so that smoke will clear neighboring homes.

If additional legal action becomes necessary when efforts at voluntary compliance don't work, DHS has developed a model enforcement letter that local health officials can use (see sidebar). If the community has an existing OWB ordinance, it will be much easier to prepare the enforcement letter by stating in it which sections of the ordinance are being violated. Additional emphasis can be added by referring to the Wisconsin Environmental Health Statutes, Chapter 254.

###

SIDEBAR to run with above news release

More information on wood-fired boilers

The Wisconsin Department of Health Services and Department of Natural Resources (DNR) encourage communities to develop a local ordinance prescribing whether or not OWBs are allowed and, if allowed, details on location, stack height, operation and other factors to prevent neighbors from being exposed to smoke. Having an ordinance in place is the best way to protect the public from smoke exposure issues related to OWBs. Creating and adopting such an ordinance often requires cooperation between townships, boards of health and city councils or county boards. You can find the DNR model ordinance at <http://dnr.wi.gov/environmentprotect/ob/modelOrdinance.htm> or contact DHS for copies of municipal ordinances that are on file.

US-EPA has a voluntary "Orange Tag" program that OWB manufacturers can join, to "improve air quality through developing and distributing cleaner, more efficient outdoor wood-fired hydronic heaters." Some OWB manufacturers have joined this program and are making more efficient OWBs, though many have not. So, while a few models of next generation OWBs are available that are more efficient and produce less smoke, emissions are still a concern from OWBs already in operation that are not part of any program. You can find more information on EPA's "Orange Tag Program" at <http://www.epa.gov/woodheaters/>

It remains imperative that all OWBs be properly located and operated. OWB installation and operation guidelines are available from the *Hearth, Patio and Barbecue Association*, and the *Outdoor Furnace Manufacturers Caucus*. Dealers and installers should be using these guidelines as minimum requirements for the installation and operation of OWBs. See: http://www.hpba.org/fileadmin/PDFs/Tier_IV_Outdoor_Wood_Furnace_Best_Burn_Practices_-_MH1.pdf

For a copy of the model enforcement letter, or for other questions about OWBs and health, please contact Rob Thiboldeaux at 608-267-6844, Robert.Thiboldeaux@wi.gov; or Bill Otto at 608-266-9337, William.Otto@wi.gov

There is additional information on OWBs at the DHS website: <http://dhfs.wisconsin.gov/eh/HlthHaz/fs/waterstoves.htm>