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From: Hausbeck, John
Sent: Monday, October 06, 2008 9:24 AM
To: Hoffman, Jeanne; 'Sherrie Gruder'
Subject: FW: Outdoor Wood Boiler Information 2008

Jeanne and Sherrie,

I just realized that the next SDE meeting coincides with a week of vacation time that I have coming up so I will not be in attendance at the meeting this month. I believe, I have answered most of the questions the group had and you all know the concerns of the Health Dept on this issue. I have forwarded and attached for your information the email I received from the State Health Dept on this issue. As I said in the last meeting, this is a growing public health concern. It is mainly affecting rural portions of our state and county but Madison is not immune to these problems. Replacing coal and other fossil fuels with alternative energy / biofuels is a must but we have to do this in a way that does not impact air quality.

One thought that's been hitting me since our last SDE meeting. Several people have compared OWB efficiency with coal or have suggested that OWB's might be a way to reduce the amount of coal used. However, OWB's heat homes primarily and coal is primarily burned to create electricity. Because very few homes in our area heat with electricity, I think the comparison between coal and OWB is misleading. This is especially important when we look at emissions and efficiency. Natural gas is not a sustainable fuel but it is extremely efficient and very clean when its burned. Wood on the other hand is not so clean, even in the top of the line burners. Sorry for going on, just wanted to get that out there.

Let me know if there are any questions or concerns.

John

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From: Otto, William H - DHFS [<mailto:William.Otto@dhfs.wisconsin.gov>]
Sent: Wednesday, September 17, 2008 1:38 PM
To: Amy Hill; Anne Boyce; Anthony Fraundorf; rondorf@network2010.net; Brenda Hanson; Barbara Salna; Brian Hobbs; Bruce Kress; Chris Hinz (hinzc@centurytel.net); Courtenay Johnson; Dale Grosskurth; Daniel Ziegler; Don Schaewe; Donald Wick; Voegeli, Doug; Amy Hill; Anne Boyce; Anthony Fraundorf; rondorf@network2010.net; Barbara Salna; Brenda Hanson; Brian Hobbs; Bruce Kress; Chris Hinz (hinzc@centurytel.net); Courtenay Johnson; Dale Grosskurth; Daniel Ziegler; Don Schaewe; Donald Wick; Voegeli, Doug; Ed Thurman; Gary Garske; Gary Schuettpelz; Gloria Smedema; Jackie Phillips; Jeff Mears; Jeffrey Phillips (jphillips@co.winnebago.wi.us); Jim Blaha; Hausbeck, John; John Paul; Joseph Lally; Judy Crouch-Smolarek; Karen Pfeiffer; Keith Bergeson; Kris Murphy (kmurphy@mail.de-pere.org); Laura Gagas; Laurie Diaby-Gassama; Marcia Fernholz; Margaret Anderson; Mark Meske; Zabkowicz, Marty - City of South Milwaukee; Dorn, Mary - City of DePere; Mary Kapelis; Michele Williams; Michelle Dale; Mike Carder; Nancy Eggleston; Natalie Vandveld; Pat O'donnell; Patrick Heiser; Paul Biedrzycki; Randy Wergin (rwerigin@county.kenosha.wi.us); Ronald Berg; Sara Ward; Stephen Ogungbe; Steve Korthof; Terry Brandenburg; Timothy Anderson; Timothy Banwell; Timothy Mirkes; Drew, Todd - Menasha Health Dept; Tom Chojnacky; Schneider, Tommye; Troy Moris; Vicki Drake; Amelia Lindsey; Barbara Theis;

Bevan Baker; Bina Lori; Bonnie Kolbe; Caralynn Hodgson; Carol Larson; Carol Quest; Carol Wantuch; Charlotte Sortedahl; Cheryl Mazmanian; Christine Hovell; Cynthia Bodendein; Cynthia Tomasello; Dale Hippensteel; Debbie Siegenthaler; Deborah Clasen; Deborah Miller; Debra Konitzer; Debra Persak; Hibray, Dennis A - DHFS; Diane Cappozzo; Don Smith; Doug Mormann; Douglas Gieryn; Elizabeth Anderson; Elizabeth Johnson; Faye Tetzloff; Frank Matteo; Gail Scott; Gail Yest; Glenda Madlom; Gloria Wall; Gretchen Sampson; Heidi Stewart; Holly Matucheski; Jacqueline Ove; Jane Peterson; Janet Lewellyn; Jean Durch; Jeffery Kindrai; Jim Blaha; Jody Langfeldt; Jody Moesch Ebeling; Joseph Schurhammer; Judith Friederichs; Judith Friederichs (Business Fax); Judy Crouch-Smolarek; Julie WillemsVanDijk; June Meudt; Karen Wertanen; Kathryn Munsey; Kathy Scott; Kaye Thompson; Kayo Nash; Kitty Rahl; Kurt Eggebrecht; Linda Conlon; Linda Dalton; Linda Helmick; Linda Kortbein; Linda McFarlin; Linda Walter; Marianne Stanek; Mary Halada; Mary Mursau; Young, Mary R - DHFS; Michael Steinhauer; Nancy Healy-Haney; Nancy Kreuser; Nathan Luedke; Nicole Hunger; Norene Gilbertson; Pat Grove; Patricia Deragon-Navarro; Patricia Harrington; Patricia Krug; Patti Wohlfeil; Paul Spiegel; Rebecca Johnson; Regina Egan; Rhonda Kolberg; Harris, Robert L - DHFS; Sharon Nelson; Susan Kunferman; Susan Lorenz; Susan Nett; Susan Sheppard; Terese Ellis; Terri Kramolis; Timmers, Terri C - DHFS; Terry Brandenburg; Schlenker, Thomas; Vicki Evenson; Wendy MacDougall; William Crump; William Wucherer
Cc: Warzecha, Charles J - DHFS; Thiboldeaux, Robert L - DHFS; Smith, Walton S - DHFS; Anderson, Henry A - DHFS; Evans, Elizabeth - DHFS; Rheineck, Bruce D - DHFS; Maloney, Jessica J - DHFS; Sponseller, Bart A - DNR; Nehls-Lowe, Henry L - DHFS
Subject: Outdoor Wood Boiler Information 2008

September 17, 2008

Good Afternoon,

The time of the year is here when outdoor wood-fired boiler (OWB) owners begin preparing their units for the long Wisconsin heating season. By the end of September, many units will begin operating, shutting down again the following April.

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. Because of the availability of wood, OWBs, particularly in rural areas, have come to fill an energy void for many Wisconsin residents. OWBs have several attractive features compared to wood stoves. For example, they place the fire hazard and wood handling away from the house. With the increasing reliance on OWBs as an alternative heating source, there has been a corresponding increase in the number of smoke exposure complaints. Simply stated, this is typically associated with an OWB being improperly located and/or operated. The smoke emissions from improperly operated OWBs can create a public health nuisance and in many cases a health hazard for downwind neighbors. This is often the point when you will be contacted for assistance. However, as many of you know, coming up with a solution to prevent smoke exposure is not easy, particularly with OWBs that are poorly sited.

As we related to you last year, we have accrued historical air monitoring data for smoke particulates (PM_{2.5}) related to OWB emissions. In each case, when a visible smoke plume impacts on a neighboring house/property, the Environmental Protection Agency (EPA) PM 2.5 health standards have been exceeded. We know that strong smoke odors along with the visible plume indicate the presence of a variety of irritating chemicals normally found in wood smoke. Typically, there are one or more residents experiencing adverse health effects, i.e., respiratory irritation,

sinus issues, headaches, etc. In consideration of the previous, it is the BEOH position that a "cause and effect" relationship has been established between OWB emissions and adverse health effects in downwind neighbors. We do not feel that air monitoring is essential to establish exposure and health impact. If there are visible emissions and odors at a neighboring residence(s), there is a completed exposure pathway and the potential for adverse health effects. If you feel it important to complement the visual and olfactory evidence of smoke exposure with monitoring, particle monitors can be borrowed through the BEOH/State Laboratory of Hygiene Equipment Loan Program (contact information attached). Again, it is our opinion that monitoring is not integral to establishing exposure to smoke emissions. A visible plume, odors and health/nuisance complaints should be sufficient to establish exposure.

Addressing Problem OWBs

Before moving to full-scale enforcement, there are pre-emptive actions you can take to gain compliance. These include one or more of the following: 1) meeting with the OWB operator to discuss the exposure problem, 2) review wood-burning practices with the operator, 3) check for proper stack height to allow smoke to clear neighboring homes. If you are unable to accomplish corrective action of an OWB emissions exposure issue through "voluntary compliance" approach, some type of stronger, enforcement action may be necessary. We again refer you to a prototype enforcement letter you may wish to consider using (letter attached).

If additional legal action becomes necessary where your efforts at voluntary compliance were not successful, you should consider the enforcement letter. If you have an existing OWB ordinance, it will be much easier to prepare the enforcement letter. You should quote the sections of the ordinance that are being violated in the letter. You may want to add additional emphasis by referring to the Wisconsin Environmental Health Statutes, Chapter 254. Of course any legal action should be discussed with your Corporation Counsel.

In addition to the enforcement letter, please find attached the OWB installation and operation guidelines developed by 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.

More Information on OWBs

The Bureau of Environmental and Occupational Health and the Department of Natural Resources encourage you 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. This will require working with your townships, Board of Health and County Board. We encourage you to share this information with the appropriate officials in your county(s). Having an ordinance in place is the best way to protect the public from smoke exposure issues related to OWBs. You can find the DNR model ordinance at <http://dnr.wi.gov/environmentprotect/ob/modelOrdinance.htm> or contact us for copies of municipal ordinances that we have on file.

You should be aware that the EPA has a voluntary "Orange Tag" program that OWB manufacturers can join. According to the EPA, "The OWHH program encourages manufacturers to improve air quality through developing and distributing cleaner, more efficient outdoor wood-fired hydronic heaters. This program will achieve emission reductions and protect public health sooner than a federal rule." So some manufacturers have joined this program and are making more efficient

OWBs and many have not. Plus there are still many OWBs already in operation that are not part of any program. So, while the next generation of OWBs are more efficient and produce less smoke, emissions are still a concern. It remains imperative that all OWBs be properly located and operated. Having an ordinance is the best, overall option to ensure that this happens. You can find more information on EPA's "Orange Tag Program" at <http://www.epa.gov/woodheaters/>

If have any questions feel free to contact Rob Thiboldeaux at 608-267-6844 or Bill Otto at 608-266-9337. You can email us at Robert.Thiboldeaux@wi.gov or William.Otto@wi.gov . You will also find more information on OWBs at our website <http://dhfs.wisconsin.gov/eh/HlthHaz/fs/waterstoves.htm>.