TITLE 326 AIR POLLUTION CONTROL BOARD

SECOND NOTICE OF COMMENT PERIOD
LSA Document #05-332

DEVELOPMENT OF NEW RULES CONCERNING EMISSIONS FROM OUTDOOR HYDRONIC HEATERS

PURPOSE OF NOTICE

The Indiana Department of Environmental Management (IDEM) has developed draft rule language for a new rule, 326 IAC 4-3, concerning air emissions from outdoor hydronic heaters. By this notice, IDEM is soliciting public comment on the draft rule language. IDEM seeks comment on the affected citations listed and any other provisions of Title 326 that may be affected by this rulemaking.

HISTORY

First Notice of Comment Period: December 1, 2005, Indiana Register (29 IR 901).
Continuation of First Notice of Comment Period: February 1, 2006, Indiana Register (29 IR 1762).

CITATIONS AFFECTED: 326 IAC 4-3.

AUTHORITY: IC 13-14-8; IC 13-17-3-1; IC 13-17-3-4.

SUBJECT MATTER AND BASIC PURPOSE OF RULEMAKING

This rulemaking only applies to outdoor hydronic heaters, also referred to as outdoor wood boilers or outdoor wood burning furnaces. Indoor wood heating appliances are already subject to federal emission limitations for new units. Indoor wood burning appliances and other sources of wood smoke are sufficiently different in potential emissions, stack heights, design, operating conditions, or frequency of operation to distinguish them from outdoor hydronic heaters. After a delay in proceeding following the request for public comments on the First Notice of Comment Period, IDEM is now proposing to move forward with this rulemaking. The proposed requirements in this rulemaking will not be effective until the rulemaking process is complete. The rulemaking process includes two public hearings before the Air Pollution Control Board: preliminary adoption and final adoption. At a minimum, this rulemaking would not be effective until late 2010.

Basic Purpose and Background

In an effort to control heating costs, Indiana citizens are increasingly turning to outdoor hydronic heaters to heat and provide hot water for their homes and other structures. Outdoor hydronic heaters are free standing appliances that burn wood or some other fuel to heat water. The heated water is pumped, typically through underground pipes, to the structure or multiple structures to be heated and the cooled water is returned to the outdoor hydronic heater for reheating. A unit typically looks like a small shed with a short smoke stack and is usually located in close proximity to the building to be heated. Outdoor hydronic heaters are much larger and differ in design, operation, and emissions produced from indoor wood stoves, pellet stoves, fireplaces, and barbecue pits.

According to sales data provided by outdoor wood boiler manufacturers, the Northeastern States for Coordinated Air Use Management (NESCAUM) estimates that 7,518 units have been sold in Indiana since 1990. IDEM has received 41 formal complaints about smoke from outdoor wood boilers located around the state. Some local jurisdictions in Indiana have also received complaints about outdoor hydronic heaters, leading to local bans on the placement of new units in the cities of Indianapolis, Evansville, Petersburg, Loogootee, and Batesville. LaPorte has requirements in place to limit the emissions from new units. Currently, outdoor hydronic heaters are not regulated in Indiana at the state level, nor are they regulated at the national level.

IDEM initiated this rulemaking due to citizen complaints and requests for IDEM to develop rules on outdoor hydronic heaters. On December 1, 2005, IDEM published a First Notice of Comment Period to evaluate potential regulation of emissions from outdoor hydronic heaters. The First Notice established a comment period deadline of January 3, 2006. During the First Notice comment period, IDEM received numerous requests for an extension of the comment period. On February 1, 2006, IDEM published a Continuation of First Notice of Comment Period, providing an extension of the original comment period through March 3, 2006. Approximately 1,600 written comments were submitted to IDEM during the First Notice comment period.

Following the First Notice comment period, state legislation was passed that directed the Environmental Quality Services Council (EQSC) to study and make findings and recommendations concerning the regulation of outdoor hydronic heaters. The EQSC issued their final report on November 1, 2006, finding that emissions from outdoor hydronic heaters is an environmental concern, especially in areas designated as nonattainment for the fine particulate ($PM_{2.5}$) National Ambient Air Quality Standard (NAAQS). The EQSC's report recommended that IDEM not resume this rulemaking until the U.S. Environmental Protection Agency (U.S. EPA) releases state model regulations.

On January 29, 2007, as part of a national effort to reduce the harmful effects of residential wood smoke, the U.S. EPA announced a voluntary partnership program together with the release of state model regulations. The voluntary partnership program consists of an agreement between outdoor hydronic heater manufacturers to make cleaner burning units available to the public beginning in the spring of 2007. There are 11 Phase 2 partners. Units certified as meeting the emissions standards for the voluntary partnership program feature an orange hang tag comparing that particular model's emission performance with U.S. EPA's voluntary Phase 1 standards or a white tag for units meeting U.S. EPA's Phase 2 standards. As of October 15, 2008, the Phase 1 program has been terminated, and the Phase 2 program has started. U.S. EPA has no plans to develop mandatory emission standards for outdoor hydronic heaters.

The Outdoor Hydronic Heater Model Regulation was developed and released by NESCAUM, with technical and financial assistance from U.S. EPA. IDEM has reviewed the model rule and believes that it can be tailored to address concerns about particulate matter emissions from outdoor hydronic heaters through the implementation of emission standards for new units and establishment of operational standards for existing units. The draft rule language proposes an emission limit based on the Phase 2 limit since this rulemaking will not be effective before March 31, 2010, the compliance date in the NESCAUM rule for Phase 2. This Second Notice of Comment Period proposes draft rule language adapted from the provisions contained in the model rule. Since IDEM's proposed program relies on the U.S. EPA certification program, the applicability of the rule is limited to units designed for a thermal output of less than 350,000 British thermal units per hour (Btu/hr).

Outdoor Hydronic Heaters and Wood Smoke

Several factors cause smoke to be an issue with outdoor hydronic heaters that citizens have complained about to IDEM. Larger capacity, low stack heights, design differences, operating conditions, and lower operating temperatures cause more intense smoking and smoldering conditions nearer to ground level than with other wood burning devices.

Stack heights on outdoor hydronic heaters are typically in the range of eight to 10 feet above ground level. Chimneys on homes are almost always above the roof line and are typically 20 to 30 feet above ground level. The lower stack heights on the heater decrease the opportunity for wood smoke to disperse in the surrounding air before affecting nearby individuals and residences at ground level.

The basic design of older outdoor hydronic heaters causes fuel to burn incompletely, or smolder, which can result in thick smoke and high particulate emissions. The firebox in many older outdoor hydronic heaters is surrounded by a water filled jacket. The fire in the combustion chamber heats the water, but at the same time that water surrounding the firebox cools temperatures in the combustion chamber. Cooler combustion temperatures result in incomplete combustion, causing the fire to smoke. Problems with smoke are aggravated if an outdoor wood boiler is not sited properly or not used following manufacturers recommendations.

Another design feature of older outdoor hydronic heaters which results in increased emissions is the way the unit cycles on and off. Unlike natural gas and oil furnaces, outdoor hydronic heaters are not designed to cut off the fuel supply when heat is no longer required. The units are designed to slow combustion by significantly reducing the air supply to the combustion chamber. This results in a slow burning, smoldering fire which causes creosote to form on the inside of the firebox. When heat is again required from the unit, the air flow is restored and the rekindled fire then burns the accumulated creosote, resulting in thick smoke and increased pollutant emissions.

Outdoor hydronic heaters are used not only to provide heat to residences, but also to provide hot water to heat a variety of structures, including barns and warehouses. Outdoor hydronic heaters are also used for domestic hot water needs, as well as to heat swimming pools and hot tubs. Such uses can lead to year round operation of the units. During warm weather conditions the heavy smoke from outdoor hydronic heaters can result in nuisance conditions for nearby residents exposed more directly to the smoke due to an increase in outdoor activities or the opening of windows of the neighboring residence. Temperature inversions cause smoke to stay close to the ground. The smoke drifts across property lines and can penetrate even closed nearby structures, due to the very small size of $PM_{2.5}$.

As a result of the factors listed above, outdoor hydronic heaters have much higher amounts of particulate matter emissions and affect neighboring properties and individuals more directly than other home heating devices. According to a 1998 U.S. EPA report summarizing research on the issue, particulate matter and polycyclic aromatic hydrocarbon (PAH) emissions are much higher for all wood burning appliances than for other home heating appliances, such as for oil or natural gas furnaces. Based on ambient air quality testing performed on a typical unit operating in the field, NESCAUM estimates that currently available outdoor hydronic heaters can produce at least twenty times the amount of particulate matter emissions as a U.S. EPA-certified indoor wood stove, and can emit as much particulate matter as 50 to 500 idling diesel trucks.

Among wood burning appliances, outdoor hydronic heaters have the highest emissions of particulate matter and PAHs. PAHs are a toxic air pollutant. Pellet stoves have the lowest amounts of these pollutant emissions. According to a 2005 report issued by the New York State Office of Attorney General, outdoor hydronic heater emissions of fine particulate matter range from 18 to 147 grams per hour. The 2005 report summarized data from U.S. EPA emissions tests as well as manufacturer supplied emissions tests and found the average outdoor

hydronic heater to emit 72 grams per hour. In comparison, indoor U.S. EPA certified wood stoves emit an average of about 6 grams of $PM_{2.5}$ per hour.

$PM_{2.5}$ is a health concern due to the direct correlation between exposure to $PM_{2.5}$ and an increased risk of respiratory problems, cardiovascular problems, and even premature death. Medical studies show that individuals with preexisting medical conditions, in addition to children and older adults, are especially vulnerable to the health effects of exposure to $PM_{2.5}$.

Pollutants in the emissions from outdoor hydronic heaters also include carbon monoxide, and volatile organic compounds, including air toxics such as formaldehyde, benzene, and a number of trace chemicals.

Summary of Proposed Requirements

• Newly installed units must be certified to meet an emission limit. A list of U.S. EPA Phase 2 certified units is available at:

http://www.epa.gov/burnwise/owhhlist.html

• Existing units may not be operated outside the normal winter heating season unless they have been certified to meet the emission limit.

• Existing units that do not meet emission limit must have a permanent stack extending five feet higher than the peak of any roof structure located within 150 feet of the unit.

• All units must meet a 20% opacity limit and follow fuel use restrictions. Opacity is the measure of how much light is visible through smoke and is used as a visual test for the concentration of particulate matter emissions.

• Sellers of outdoor hydronic units must provide notice to buyers of operating restrictions and notify the department of transaction.

IC 13-14-9-4 Identification of Restrictions and Requirements Not Imposed Under Federal Law

The draft rule imposes restrictions and requirements on persons to whom the draft rule applies that are "not imposed under federal law". This rulemaking establishes stack height requirements for outdoor hydronic heaters not meeting the specified emission limit and a particulate matter emission limit on new units sold in Indiana after a certain date. Particulate matter is one of six criteria pollutants that have been identified by the U.S. EPA as being particularly harmful to humans and the environment. National health standards have been developed for the criteria pollutants and are used as measurements of air quality. U.S. EPA has established annual and 24-hour NAAQS to regulate particulate matter that is less than 2.5 microns in size, which are designed to protect public health. These "fine" particles get deeper into the lungs and do more damage than coarser particles. The measures proposed in this draft rule are not required by federal law, but are developed to prevent local exceedances of the $PM_{2.5}$ standard and to protect public health.

(1) The increasing popularity of the use of outdoor hydronic heaters in Indiana coincides with an increasing number and frequency of formal air quality complaints received by IDEM. Unlike other wood burning home heating appliances, outdoor hydronic heaters are unregulated for emissions under federal law. U.S. EPA announced that it has no plans to move forward with federal requirements while at the same time recognizing the health hazard posed by the devices. U.S. EPA's approach in dealing with the issue involves two programs. First, U.S. EPA created and administers the Voluntary Partnership Program. The Voluntary Partnership Program consists of an agreement between U.S. EPA and several manufacturers to make cleaner burning outdoor hydronic heaters available for purchase. As part of the second program, U.S. EPA provided support in the development of the NESCAUM model regulation for outdoor hydronic heathers and encourages states to consider the use of the model regulation. This rulemaking proposes the adoption of a draft rule which incorporates portions of the NESCAUM Outdoor Hydronic Heater Model Regulation.

(2) The draft rule will have a potential fiscal impact on owners of new units installed after the effective date of this rule and owners of existing units operated after September 30, 2011, who would have to meet stack height requirements, unless the unit is meeting the Phase 2 emission standard. Units not meeting the Phase 2 emission standard would also be restricted to operating during the heating season only. Currently, there are no statewide requirements for the stack height of outdoor hydronic heaters. The total costs of an installed outdoor hydronic heater typically range between $7,000 and $10,000. Installation of outdoor hydronic heaters can represent an expense for the buyer in the amount of approximately $3,000 for the laying of a concrete foundation, the installation of underground piping from the unit to the house, and installation of the unit. These installation costs will vary according to the distance the unit is placed from the structure or structures it heats.

(3) IDEM relied on a variety of recently published materials in the development of the draft rule. The following documents provided the background data on outdoor hydronic heater emissions and the justification for the measures proposed in this draft rule:

Assessment of Outdoor Wood-fired Boilers, NESCAUM, March 2006, available online at:

http://www.nescaum.org/documents/assessment-of-outdoor-wood-fired-boilers

Dispersion Modeling Assessment of Impacts of Outdoor Wood Boiler Emissions in Support of NESCAUM's Model Rule, NYSDEC, January 2006, available online at:

http://www.nescaum.org/documents/woodboilefinal2.pdf/

Emissions from Outdoor Wood-burning Residential Hot Water Furnaces, EPA-600/R-98-017, February 1998, available online at:

http://www.epa.gov/ttn/atw/burn/woodburn1.pdf

EPA Outdoor Wood Fired Hydronic Heaters Program, available at:

http://www.epa.gov/burnwise/

In-Field Ambient Fine Particle Monitoring of an Outdoor Wood Boiler: Public Health Concerns, Phillip R.S. Johnson, NESCAUM, Human and Ecological Risk Assessment, 12: 1153-1170, 2006, available online at:

http://www.nescaum.org/documents/johnson_owb-public-health_hera_2006.pdf/

NESCAUM Outdoor Hydronic Heater Model Regulation, NESCAUM, available online at:

http://www.nescaum.org/documents/modelregulationoutdoorhydronicheatersfinalB.pdf/

Outdoor Wood Boiler Fact Sheet, NESCAUM, January 25, 2007, available online at:

http://www.nescaum.org/documents/owbfactsheetfinal.pdf/

Proposal for a Particulate Matter Emission Standard and Related Provision for New Outdoor Wood-fired Boilers, Vermont Agency of Natural Resources, January 20, 2005, available online at:

http://www.vtwoodsmoke.org/pdf/TechSupp.pdf

Residential Wood Boiler Study, Michigan Department of Environmental Quality, available online at:

http://www.michigan.gov/documents/Residential_Wood_Boiler_Study_plots_118450_7.pdf

Review of AERMOD Modeling for OWB Model Rule, U.S. EPA memorandum from Roger Brode, Research Scientist, January 29, 2007, available online at:

http://www.nescaum.org/documents/rogerbrode-01-29-07.pdf/

Smoke Gets in Your Lungs: Outdoor Wood Boilers in New York State, Elliot Spitzer, Attorney General of New York State, August 2005.

Potential Fiscal Impact

The total cost of an installed outdoor hydronic heater typically costs between $7,000 and $10,000. IDEM is soliciting comments on the estimated cost of a new unit that meets the Phase 2 emission standard and the cost of an existing unit to modify the unit's stack to meet the proposed stack height requirements. IDEM is also interested in data showing how many units are located in Indiana that would need to increase the unit's stack height.

Small Business Assistance Information

IDEM established a compliance and technical assistance (CTAP) program under IC 13-28-3. The program provides assistance to small businesses and information regarding compliance with environmental regulations. In accordance with IC 13-28-3 and IC 13-28-5, there is a small business assistance program ombudsman to provide a point of contact for small businesses affected by environmental regulations. Information on the CTAP program, the monthly CTAP newsletter, and other resources available can be found at:

http://www.in.gov/idem/4108.htm

Small businesses affected by this rulemaking may contact the Small Business Regulatory Coordinator:

Alison Surface
IDEM Compliance and Technical Assistance Program - OPPTA
MC 60-04 IGCS W041
100 North Senate Avenue
Indianapolis, IN 46204-2251
(317) 232-8172 or (800) 988-7901
ctap@idem.in.gov.

The Small Business Assistance Program Ombudsman is:

Brad Baughn
IDEM Small Business Assistance Program Ombudsman
MC 50-01 IGCN 1307
100 North Senate Avenue
Indianapolis, IN 46204-2251
(317) 234-3386
bbaughn@idem.in.gov

Public Participation and Workgroup Information

No workgroup has been established for the rulemaking. If you feel that a workgroup or other informal discussion on the rule is appropriate, please contact Susan Bem, Rule and State Implementation Plan (SIP) Development Section, Office of Air Quality at (317) 233-5697 or (800) 451-6021 (in Indiana). IDEM is interested in making sure the public is aware of this rulemaking and has the opportunity to comment. In addition to the request for public comment contained in this notice, there will also be a public hearing at both the preliminary and final adoption meetings with the Air Pollution Control Board.

SUMMARY/RESPONSE TO COMMENTS FROM THE FIRST COMMENT PERIOD

IDEM requested public comment from December 1, 2005, through March 3, 2006, on alternative ways to achieve the purpose of the rule and suggestions for the development of draft rule language. IDEM received

comments from the following parties by the comment period deadline:

Anonymous 1 (A132)
Anonymous 2 (A241)
Anonymous 3 (A16)
Anonymous 4 (A223)
Anonymous 5 (A1323)
Anonymous 6 (A629)
Signature Unreadable (S163)
Signature Unreadable (PP206)
Signature Unreadable (S282)
Signature Unreadable (S617)
Signature Unreadable (S618)
Signature Unreadable (S624)
Signature Unreadable (S654)
Signature Unreadable (S1368)
Signature Unreadable (S1348)
Signature Unreadable (S1318)
Signature Unreadable (S1308)
Signature Unreadable (S1299)
Signature Unreadable (S1294)
Signature Unreadable (S1272)
Signature Unreadable (S1163)
Signature Unreadable (S932)
Signature Unreadable (S931)
Signature Unreadable (S1001)
Signature Unreadable (S1519)
Signature Unreadable (S948)
Signature Unreadable (S794)
Signature Unreadable (S795)
Signature Unreadable (S800)
Signature Unreadable (S801)
Signature Unreadable (S802)
Signature Unreadable (S808)
Signature Unreadable (S1003)
Signature Unreadable (S189)
Signature Unreadable (S787)
Signature Unreadable (S1551)
Signature Unreadable (S506)
Signature Unreadable (PETITION B)
Signature Unreadable (789)
Signature Unreadable (161)
Signature Unreadable (PETITION C)
Signature Unreadable (PETITION D)
Signature Unreadable (PETITION E)
William and Becky Burton (WBB1211)
John and Nancy Butters (JNB390)
Earl and Gayle Byerley (EGB920)
Larry and Pat Byrd (LPB443)
Jerry and Kim Callahan (JKC1566)
Matt and Linda Cape (MLC1237)
Robert and Georgetta Carr (RGC1239)
Joseph and Sherry Chapo (JC1191)
Fredrick and Carol Clark (FCC1496)
Ronald and Joyce Coffman (RJC748)
L and G Construction (LGC747)
Larry and Vicki Cooper (PETITION A)
Doug and Melody Corey (DMC1165)
Mr. and Mrs. Corwin (C1092)
Larry and Pansy Cox (LPC848)
Wayne and Kathy Craig (WC672)
Manuel and Elizabeth Creech (MEC321)

Patrick and Judy Crouch (PJC36)
Christopher and Joan Crowell (CJC1148)
Charlie and Doris Crum (CDC365)
Brad and Vicki Culy (BVC1085)
Lavina and Robert Cunningham (LRC761)
Jacqui and Leroy Custer (JLC1596)
Mr. and Mrs. Daniel Beatty (DB17)
Randall and Mildred Dauby (RMD244)
James and Carolyn Davers (JCD366)
Betty and Bill Davis (BBD1569)
Mark and Melissa Day (MMD30)
Mark and Melinda Day (MMD860)
Rodney and Rita Deaton (RRD239)
Bob and Mary Denhart (BMD829)
Terry and Kimberly Dixon (TKD1041)
James and Susan Donnelly (JSD10)
James and Susan Donnelly (JSD202)
Ralph and Joan Dove (RJD1078)
Darrell and Judy Dunigan (DDJ471)
Francis and Lavonda Elliot (FLE456)
Jerald and Sharon Emmons (JSE177)
Greg and Judy Englert (GJE602)
Matt and Tammy Feldpausch (MTF576)
Randy and Geraldine Ferguson (RGF1021)
Robert and Rose Fidler (RF490)
Robert and Rose Fielder (PETITION E)
John and Charlotte Finke (JCF245)
Gary and Ruth Fisher (GRF139)
Nick and Norma Foldenauer (NNF1594)
Keith and Leota Foster (KLF944)
Mark and Nancy Franklin (MNF699)
Robert and Katherine Frazier (RKF63)
Walter and Susan Freeman (WSF62)
William and Joyce Frondorf (WJF744)
Wayne and Lyna Fry (WLF1127)
Leo and Theresa Fullenkamp (LTF746)
Christopher and Robyn Furness (CRF477)
Earl and Karen Galloway (EKG41)
R. and Lora Gayle (RLG1419)
Jack and Gladys Gelbert (JGG840)
Lyle and Kathy Gerig (LKG1075)
Jacob and Audra Gerkin (JAG106)
Ralph and Ruth Gerold (RRG1480)
Jack and Gladys Gilbert (JGG130)
Steven and Tamara Gilbert (STG927)
Jerry and Doris Gipson (JDG1568)
Andy and Joan Godsey (AJG1271)
Ralph and Carol Goeppner (RCG797)
Jan and Jule Gogel (JJG1090)
Charlie and Beverly Goller (CBG319)
Jeramy and Kristi Goodnight (JKG1235)
Shayne and Lori Gordon (SLG775)
Oscar and Maurita Green (OMG54)
Tom and Lisa Greene (TLG1463)
Thomas and Lisa Greene (TLG833)
Brady and Della Griffen (BDG1493)
Greg and Sheila Haas (GSH1029)
William and Marcia Hall (WMH549)
Michael and Claudia Hamric (MCH434)
Gerald and Donna Hardy (GDH399)
Daryl and Deborah Harkrider (DDH463)

Rocky and Tammy Harrell (RTH283)
Steve and Theresa Harrison (STH1168)
William and Dorothy Haste (WDH120)
Jerry and Gloria Hayes (TGH336)
Myrna and Joe Heffner (MJH516)
Craig and Amy Heim (CAH577)
Kerry and Tara Heisler (KTH834)
David and Gail Helt (DGH158)
Thomas and Holly Hembree (THH394)
Jonathan and Barbara Hilty (JBH355)
Gregory and Emma Hobbs (GEH844)
Don and Phyllis Hoffman (DPH1139)
Norman and Brenda Hogan (NBH1508)
Mary and Arvin Hopkins (MAH1556)
Kevin and Crissy Huffman (KCH592)
Kevin and Crissy Huffman (KCH867)
Dean and Bonnie Hufford (BH231)
Kevin and Crystal Hughes (KCH696)
Timothy and Terri Hunt (TTH1110)
James and Jean Hynes (JJH1231)
Myron and Sharon James (MSJ516)
Kevin and Beth Jewell (KBJ535)
Kevin and Beth Jewell (KBJ1049)
Mr. and Mrs. John Hayes (JH429)
Gretna and Gordon Johnson (GGJ425)
James and Janice Johnson (JJJ99)
Harold and Pamela Johnson (HPJ1125)
Rex and Clarabelle Jukes (RCJ352)
John and Mary Kaiser (JMK165)
Dale and Patricia Killion (DPK458)
Robert and Debra Killion (RDK1128)
Enos and Ruth King (ERK1592)
Grace and Bill Kirkman (GBK59)
Bill and Rose Knapp (BRK1567)
John and Nikkie Knecht (JNK1454)
Devon and Angela Knepp (PETITION B)
Steve and Sandy Konzen (SSK1464)
Steve and Sandy Konzen (SSK918)
Charles and Jean Kuehn (CJK1382)
Tim and Sherry Kugler (TSK967)
Jerry and Vicki LaPointe (JVL627)
Doug and Jessica Lauderdale (DJL547)
Fielding and Jeannie Lee (FJL196)
Scott and Tracy LeMay (STL1254)
Irvin and Carol Lemler (ICL912)
Sandra and Miguel Leon (SML73)
Miguel and Sandra Leon (MSL792)
Herbert and Rhonda Levitz (HRL1200)
Greg and Linda Longabaugh (GLL556)
Bob and Jane Marquand (PETITION A)
David and Donna Marrs (DDM320)
Pat and Dianna Marrs (PDM406)
Roger and Theresa Martin (RTM417)
Roger and Theresa Martin (RTM964)
Pete and Chris McCollum (PCM179)
Rose and Kenneth McKim (RKM129)
Eli and Phyllis McPike (EPM806)
Robert and Peggy Meadors (RPM1077)
Charles and Beverly Meyer (CBM499)
Sam and Rhonda Miller (SRM996)
Sam and Rhonda Miller (SRM461)

Kevin and Jackie Monk (KJK1483)
Rodney and Kathy Monroe (RKM39)
Jeremy and Marianna Moore (PETITION E)
Don and Michele Morgan (DMM1490)
Keith and Sharon Moseby (KSM745)
Dewey and Joyce Mounce (DJM197)
Larry and Patricia Nicholson (LPN193)
Sherry and Mark O'Connor (MSO93)
Paul and Shirley Oberhaltzer (PSO370)
Larry and Chris Ott (LCO1294)
Larry and Lana Parrish (LLP466)
Dick and Carol Peden (DCP664)
Jim and Susan Peppenger (JSP1294)
Charles and Nancy Peters (CNP1399)
Clint and Sara Phares (CSP753)
Jim and Susan Phillips (JSP695)
Mark and Beth Pontius (MBP1314)
Richard and Brenda Poore (RBP20)
Stephen and Marie Prince (SMP343)
Dwight and Carrie Purkhiser (DCP27)
Roy and Sharon Purlee (RSP400)
Brent and Ann Rains (BAR71)
Leana and Andy Reed (LAR1394)
Terry and Cindy Rice (TCR1037)
Kirk and Rhonda Richardson (KRR1410)
Tami and Jon Ringer (TJR3)
Bob and Anita Rink (BAR707)
Marvin and Carole Robbins (MCR1060)
Greg and Linda Rogers (GLR1115)
Mr. and Mrs. Ron Voegel (V624)
Tim and Dawn Rose (TDR917)
Dan and Sandra Ruf (DSR1219)
Donna and Larry Rush (DLR755)
Vera and Jerry Rusk (VJR968)
Gary and Teresa Rutherford (GTR205)
Ralph and Lisa Saine (RLS1317)
Mr. and Mrs. Sam Mundy (SM131)
Victor and Carla Sankey (VCS1023)
Linda and James Scarlett in a letter with 20 signatures (LJS317)
James and Kathie Schiffli (JKS1512)
Joe and Jennifer Schmidt (JJS1361)
Jim and Carla Schnieders (JCS624)
Fredric and Diane Schubert (FDS637)
Walter and Mary Schuman (WMS710)
Richard and Rita Schutte (RRS1050)
Mark and Paula Scott (MPS1554)
John and Catherine Segraves (JCS1133)
James and Carrie Shinkle (JCS213)
Richard and Tana Shirar (RTS817)
Debbie and Timothy Shireman (DTS1460)
Kenneth and Trudy Siniard (KTS363)
Robert and Karla Smith (RKS1214)
Richard and Rita Speigelhalder (RRS359)
Teri and Kevin Spinks (PETITION A)
Jon and Wendi Steiner (JWS1248)
Gerald and Rosemary Stephens (GRS500)
Lori and Dianna Stephens (LDS498)
Dorothy and Leland Stevenson (DLS491)
Danny and Cheryl Stone (DCS876)
Robert and Margaret Stuckey (RMS754)
Karl and Cathy Suher (KCS820)

William and Lynetta Sullivan (WLS1442)
Rick and Anetta Tatlock (RAT192)
Vernie and Sheila Terrell (PETITION E)
Richard and Wilma Thacker (RWT351)
Matt and Julie Tompkins (MJT1315)
Bryan and Tabatha Touner (BTT831)
Tabatha and Bryan Towner (TBT831)
Mr. and Mrs. Travis Creech (TC446)
John and Cheryl Trowbridge (JCT1474)
Kenny and Lori Troyer (KLT1186)
Melvin and Grace Troyer (MGT1535)
Dianne and Lester Truelove (PETITION B)
Diane and Clara Tutas; Don and Bonnie Andrews (TA882)
Wayne and Mary Umphress (WMU225)
Wayne and Mary Umpress (PETITION E)
Duane and Jaina Voegel (DJV541)
Ray and Shirley Waggoner (RSW512)
Ray and Shirley Waggoner (PETITION E)
Andrew and Holly Walcott (AHW422)
Raymond and Betty Walker (RBW215)
David and Janice Wallace (DJW1046)
Irwin and Geneva Walter (IGW277)
James and Teresa Wasson (JTW728)
Danny and Shirley Watkins (DSW726)
Don and Marlene Wegner (DMW250)
Walter and Elizabeth West (WEW438)
Donald and Jeri Whaley (DJW644)
David and Christine White (DCW1232)
Erich and JuliAnne Wiegand (EJW1274)
Anthony and Phyllis Wilder (APW1246)
Bruce and Shelly Wiles (BSW266)
Mr. and Mrs. William Shepard, Jr. (WS113)
Elmer and Ray Wingard (ERW1143)
Joe and Kacie Withers (JKW579)
Emil and Lora Wolpink (ELW1564)
Carl and Joan Wright (CJW1567)
Mr. and Mrs. Wyngarden (W1436)
Paul and Ida Yoder (PIY1260)
Kevin and Terri Young (KTY1044)
Richard and Donna Young (RDY857)
Brown (B1036)
Burton (B1538)
Burkey (B914)
Culleem (C1427)
Gaskill (G5)
GasAmerica (G960)
Harris (H1501)
Hopkins (H247)
J. E. Smith (JES49)
Kesling (K1507)
Kaminski (K1545)
Lintons (L281)
Morrow (M1534)
Owen (O1294)
Pilman (P1284)
Phipps (P702)
Comments (RS324)
Walker (W1497)
Roy Abel (RA361)
Lori Abel (LA1573)
Glenn Abel (GA1524)

Roger Abel (PETITION B)
Roy Abel (PETITION E)
Robert Abel (PETITION E)
Edward Able (PETITION A)
Jerry Abram (JA327)
David Abram (DA537)
Timothy Acton (TA420)
Mark Adams (MA1184)
Charles Adamson (PETITION E)
Charles Adkins (CA353)
Charles Adkins (CA1066)
C. Advincula (CA572)
Sylvia Albaugh (PETITION B)
C. Albert (CA1001)
Erma Aldriedge (EA292)
Regina Alexander (PETITION A)
Bob Alhorn (PETITION A)
Robert Aliano (RA416)
Robert Aliano (PETITION E)
Bobby Allbright (BA995)
Bobby Allbright (BA475)
Milissa Allbright (PETITION A)
David Allen (DA936)
Richard Allen (RA937)
Robert Allen in a letter with 3 signatures (RA123)
Mary Allen (MA110)
Michael Allen (MA242)
Harry Allen (HA1015)
Michele Allen (PETITION D)
Casey Allen (PETITION E)
Beverly Allender (PETITION C)
James Allender (PETITION C)
Ron Alson (RA1229)
Michael Alstott (MA80)
Connie Alvey (PETITION A)
Alvin, Amanda, Dorothy, Junior, Freeman, and Kenneth Bontrager (B1087)
Robert Amrhein (RA1097)
Jeff Anderson (JA1126)
Edward Anderson (PETITION A)
Richie Anderson (PETITION A)
Monica Anderson (PETITION A)
Michael Anderson (161)
Beth Anderson (PETITION E)
Jeffery Anderson (PETITION E)
John Anderson (PETITION E)
Lee Anderson (PETITION E)
Lisa Anderson (PETITION E)
Robert Anderson (PETITION E)
Kathy Andis (PETITION E)
Bill Andrews (PETITION A)
Stephen Anella (S190)
Mary Ann Chaney (MAC478)
Mary Ann Stoffregen (MS1095)
Mary Ann Bielenberg (MB1557)
Ruth Ann Cain (PETITION A)
Janice Anthony (JA1188)
Arthur, Arlene, Richard, and Avery Hart (H1179)
Kenneth Armstrong (KA310)
Darren Armstrong (DA344)
Larry Armstrong (PETITION E)
Barbara Arnold (PETITION A)

Bill Arnold (PETITION A)
Eddie Arnold (PETITION A)
Scott Arnold (PETITION A)
Joe Arnold (PETITION E)
Robert Arther (PETITION E)
Robert Arthur (RA569)
Sandy Arthur (PETITION E)
Roger Arthur (PETITION E)
GayLynn Arvin (GA397)
Ed Asbury (PETITION E)
Rita Ashby (RA958)
Max Ault (MA1241)
Sandy Ault (161)
Wayne Axsom (WA985)
Gary Axsom (GA374)
Stephanie Babcock (PETITION C)
Don Back (DB1514)
Jeff Bader (PETITION E)
Mel Baechler (PETITION A)
Eugene Baer (PETITION E)
Collen Baer (PETITION E)
Jerry Bailey (JB306)
Ruth Bailey (RB357)
Elizabeth Bailey (EB1039)
Jerry Bailey (PETITION A)
Thomas Bailey (PETITION A)
Mike Bailey (PETITION E)
Debra Baker (DB412)
Lance Baker (LB513)
Eala Baker (EB33)
Fred Baker (FB100)
Wilburn Baker (WB656)
Joe Baker (PETITION A)
Debra Baker (PETITION A)
Cecil Baker (PETITION B)
Harold Baker (PETITION D)
Pauline Baker (PETITION D)
Mike Baker (PETITION D)
Debra Baker (PETITION E)
Steven Baker (PETITION E)
Linda Baker (PETITION E)
Barbara Baker (PETITION E)
Debra Baker (PETITION E)
Lance Baker (PETITION E)
Eric Bakke (EB570)
Connie Baldwin (PETITION E)
Mike Bales (PETITION A)
Jeff Ball (PETITION A)
Jeff Ball (PETITION A)
Doug Bane (DB1542)
Danielle Bane (DB1492)
Lynn Banister (PETITION E)
James Banks (PETITION A)
Amy Banks (PETITION A)
Deana Banks (PETITION E)
Jimmy Banks (PETITION E)
Rachel Banks (PETITION E)
Darrin Banks (PETITION E)
Brian Banner (161)
Joe Barger (PETITION E)
Karen Barger (PETITION E)

Joseph Barker (JB1579)
Kathy Barlow (PETITION E)
Manuel Barnes (PETITION E)
Connie Barret (PETITION E)
Jerry Bartlett (JB300)
Marjorie Bartlett (PETITION D)
Melissa Bartlett (PETITION D)
William Barton (WB402)
W. Barton (WB1207)
John Bassemier (JB228)
Alan Bates (AB1502)
Apryl Batman (PETITION B)
Melissa Batone (PETITION A)
Ruth Bauer (PETITION E)
Mike Baugh (PETITION B)
Duwaine Baughman (DB723)
David Baughn (PETITION A)
Mark Bauman (MB1294)
John Baumgart (PETITION A)
James Baxter (PETITION E)
Tug Beal (TB121)
Stephanie Bean (PETITION E)
Anita Beasley (PETITION A)
Larry Beasley (PETITION A)
Tina Beasly (PETITION B)
Daniel Beatty (DB622)
Carl Beauchamp (PETITION D)
Beth Beauchamp (PETITION D)
Amy Beaver (AB938)
Gracie Beaver (GB1475)
Mike Beaver (PETITION A)
Allan Beavers (161)
Shane Beavers (161)
James Beavers (PETITION E)
Rose Beavers (PETITION E)
Jayme Beck (JB623)
Darryl Beck (PETITION A)
Barry Becker (BB647)
Harold Becker (PETITION D)
Patsy Becker (PETITION E)
T. Beckner (B1428)
Deborah Beckner (DB1451)
Jo Becraft (PETITION E)
Kerry Becraft (PETITION E)
Doug Bedwell (DB1387)
Emma Beechy (EB1470)
John Beechy (JB1108)
Daniel Beechy (DB1100)
Amos Beechy (AB889)
Ron Beeker (RB1488)
Ron Bell (RB404)
Danny Bell (PETITION A)
Ralph Bell (PETITION A)
Wendie Bell (PETITION B)
Laura Benham (PETITION A)
Charles Benhart (PETITION E)
James Bennington (JB954)
Dorothy Bennis (DB1485)
Sharon Benton (SB1472)
James Bep (JB509)
Dinah Berbman (PETITION B)

Lydia Berentes-Russel (LBR74)
Kristy Berg (KB583)
Mike Berger (MB659)
Jim Bergman (PETITION B)
Roy Bergman (PETITION B)
Ryan Bergman (PETITION B)
Imogene Berkenmemer (IB335)
Karen Berman (PETITION B)
Kim Bertolino (PETITION A)
Charles Bertsch (CB849)
Walter Bess (PETITION A)
Angela Betsch (AB1011)
Vic Betz (VB787)
Connie Bever (PETITION E)
Rocky Beyers (PETITION A)
Tim Beyers (PETITION B)
Cheryl Beyers (PETITION B)
Daniel Beyers (PETITION D)
Diane Beyers (PETITION D)
Julia Bickle (JB1073)
Maria Bieker (MB595)
Dale Bienz (DB1484)
Pat Bietsch (PB1071)
Kenneth Bireley (KB444)
Sandra Bixler (SB1585)
Margarette Black (MB1370)
Timothy Blackburn (TB1256)
Charlotte Blackburn (PETITION E)
William Blackwell (PETITION A)
Jim Blackwell (PETITION A)
June Blackwell (PETITION E)
Dick Blackwell (PETITION E)
Ronnie Blake (PETITION E)
Michael Blakesley (MB391)
Gabe Blevins (GB387)
E. Blevins (EB1301)
Bert Blount (BB249)
Charles Blouret (CB612)
Dennis Blythe (PETITION D)
Jeff Boatright (PETITION A)
Douglas Bobb (DB1505)
Jerome Bockelman (PETITION A)
Alan Bocock (PETITION A)
David Boehm (DB1101)
Madonna Boerner (MB798)
Eugene Bohnenberger (EB1294)
Cheryl Bolton (CB396)
Gary Bolton (GB438)
Connie Bolton (CB439)
Gary Bolton (PETITION A)
Hal Bond (HB1303)
Phil, Bonnie, and Lee Fraser (PBLF264)
Kate Bontrager (KB1154)
Kate Bontrager (KB1131)
Gene Bontrager (GB1258)
William Bontrager (WB734)
Larry Borden (PETITION E)
Arlene Borkholder (AB1565)
Toby Borntrager (TB1124)
Dan Bortrager (DB1300)
Joe Both (PETITION E)

Debbie Bottorf (DB1)
Robert Bottorff (RB506)
Thomas Bouck (PETITION E)
Steve Bough (SB671)
Chris Bough (PETITION A)
Steve Bough (PETITION A)
Dinah Bourdon (DB169)
Harlan Bourdon (HB168)
Scott Bowden (PETITION A)
Brad Bowen (BB1468)
Walter Bower (PETITION E)
Barbara Bowers (BB360)
Amie Bowling (AB708)
Dewey Bowling (DB724)
Douglas Bowman (PETITION B)
Roy Box (RB108)
Vicki Boyd (PETITION B)
Darrell Boyd (PETITION B)
Chris Brazel (CB1294)
Marian Brazzell (MB)
Danielle Bredeweg (DB1249)
Vickie Breeden (VB144)
Aaron Brenner (161)
Rosemary Brever (PETITION A)
Brian Sorrells (PETITION E)
Lisa Brice (PETITION A)
Winston Bridges and Melinda Estes (BE1043)
Dan Bridges (PETITION A)
Dan Bridges (PETITION A)
Jack Bridges (PETITION B)
Edna Bridges (PETITION E)
Helen Bridwell (161)
Bill Brim (PETITION A)
Robert Brin (PETITION E)
Tammy Brinegar in a letter with four signatures (TB473)
Lynn Brinegar (PETITION A)
Mike Brinegar (PETITION A)
Henry Brinkman (HB1042)
Jon Britton (JB633)
Bob Broadstreet (BB1222)
Kim Brock (PETITION A)
Billy Brock (PETITION A)
W.D. Brock (PETITION A)
Daniele Brock (PETITION A)
Margaret Brock (PETITION A)
Joy Brock (PETITION E)
David Brook (PETITION E)
Roger Brooks (RB1169)
Ronald Brooks (RB965)
Garry Brooks (GB1551)
Sandy Brooks (SB1551)
Debbie Brooks (PETITION A)
David Brooks (161)
Nancy Brooks (161)
Delores Brosmer (DB568)
Delores Brosmer (DB1441)
Roger Brower (RB1417)
Richard Brown (RB303)
Richard Brown (RB635)
Thomas Brown (TB181)
Richard Brown II (RB86)

Steve Brown (SB286)
Judith Brown (JB994)
Stephen Brown (SB693)
Judith Brown (JB302)
Geraldine Brown (GB1450)
Ernest Brown (EB906)
Stephen Brown (SB752)
Larry Brown (PETITION A)
Paul Brown (PETITION A)
Terri Brown (PETITION A)
Andrew Brown (PETITION A)
Michael Brown (PETITION A)
Helen Brown (PETITION A)
Adam Brown (PETITION A)
Jenny Brown (PETITION A)
Matthew Brown (PETITION A)
Stephen Brown (PETITION A)
Chad Brown (PETITION B)
Robert Brown (161)
Eddie Brown (PETITION C)
Lisa Brown (PETITION C)
Angela Brown (PETITION E)
Arthur Brown (PETITION E)
Steve Brown (PETITION E)
Doug Brown (PETITION E)
Brandon Brown (PETITION E)
Heather Brown (PETITION E)
T. Brown (PETITION E)
Stephen Browning (SB1482)
William Browning (WB884)
Rosa Browning (PETITION A)
Martin Bruhy (PETITION D)
Donna Brumbaugh (DB140)
Kevin Brunch (PETITION A)
Bonnie Bruner (PETITION B)
Larry Brunt (PETITION E)
Bob Buchanon (BB1261)
Joe Bucher (JB469)
Linda Buchta (LB1333)
Darwin Buckmaster (DB1242)
Eric Buehling (EB1275)
Andy Bundy (PETITION E)
James Burch (JB78)
Lynn Burch and Troy Young in two letters with a total of 33 signatures
Beth Burford (PETITION E)
Patricia Burg (PB891)
Chris Burger (PETITION C)
Lacey Burger (PETITION C)
Wilhelima Burkemper (WB1083)
David Burkey (DB881)
Roger Burkhart (PETITION E)
Russell Burnette (RB203)
David Burton (DB401)
David Burton (PETITION E)
Tom Busch (PETITION E)
Steve Busch (PETITION E)
Dan Busch (PETITION E)
Mike Busch (PETITION E)
Wanda Busch (PETITION E)
James Bush (JB506)
Carl Bushee (PETITION A)

William Bushur (WB843)
Mayor Butch Chastain (PETITION A)
George Butcher (GB175)
Herman Butcher (PETITION E)
Betty Butler (BB279)
Chris Butler (PETITION A)
Steve Butler (PETITION A)
Clance Butler (PETITION E)
Julie Butler (PETITION E)
Steve Butterfield (PETITION A)
John Butz (PETITION D)
Carolyn Butz (PETITION D)
John Bynam (PETITION B)
Tom Byrd (PETITION E)
Jessica Byrd (PETITION E)
Jeff C. (last name illegible) (JC34)
Donald Cable (PETITION E)
Edwin Cahill (PETITION A)
Donald Cain (DC1296)
Michelle Cain (PETITION E)
Russell Callahan (PETITION E)
Sue Callahan (PETITION E)
Elizabeth Cameron (PETITION D)
Hillary Campbell (HC185)
Toby Campbell (TC186)
Mark Campbell (MC1183)
S. Campbell (SC1004)
Beatrice Campbell (PETITION E)
Brooke Canada (PETITION E)
Rudy Capella (PETITION E)
Michael Capella (PETITION E)
Willis Capen (WC11)
James Carie (JC532)
Carolyn Sanders (PETITION B)
Cierra Carpenter (PETITION E)
Edward Carper (EC743)
Kent Carr (KC167)
Byron Carr (BC1202)
Deana Carr (PETITION E)
James Carrico (PETITION B)
Rick Carter (RC1544)
Debbie Carter (PETITION A)
Deb Case (PETITION A)
Carl Casebere (CC869)
Thomas Cash (TC1363)
Troy Cash (TC1290)
Christy Cash (CC1147)
Nathan Cash (NC1117)
Lester Cash (LC850)
John Cashman (JC403)
Patrick Cassidy (PC625)
Jim Cassidy (JC489)
Paul Caudell (PC218)
Paul Caudill (PETITION C)
Tom Caudill (PETITION E)
Claude Chandler (CC950)
Jim Chandler (PETITION B)
Jerry Chaney (JC253)
Carl Chaplin (CC339)
Louise Chaplin (LC349)
Steve Chapman (SC309)

Sherry Chapo (SC174)
Jamie Charles (PETITION A)
Karen Charles (PETITION A)
Bucky Charles (789)
Linda Charles (789)
Robert Charles (PETITION E)
Dean Chastain (PETITION A)
Rita Chastain (PETITION A)
John Chastain (PETITION A)
Steven Chastain (PETITION E)
Curtis Chastain (PETITION E)
Tom Chastain (PETITION E)
Dale Chastain (PETITION E)
Frank Cheech (PETITION E)
David Childers (DC787)
Damon Childress (PETITION A)
Debbie Chipman (PETITION A)
Matthew Christie (MC1134)
Robert Chrzan (RC1010)
Citizens Thermal Energy (CTE222)
Jerry Clark (JC270)
Larry Clark (LC379)
David Clark (DC591)
Jamison Clark (JC1519)
Harry Clark (PETITION E)
Greg Clark (PETITION E)
Richard Claussen (RC1266)
Karen Claussen (KC1007)
Sherry Clay (PETITION A)
Adam Claywell (AC1109)
Ben Clements (161)
Terry Clouse (PETITION A)
Janet Clouse (161)
Tom Clouse (161)
Linda Clouse (PETITION D)
Jim Clouse (PETITION D)
Michael Clouse (PETITION E)
Cathy Clouse (PETITION E)
Mike Clouse (PETITION E)
Sue Clouse (PETITION E)
Richard Cobb (PETITION A)
John Cobb (PETITION A)
Ellen Cobb (161)
Tracey Cobb (PETITION E)
Kenneth Cole (KC1392)
Chrystal Cole (CC722)
Nancy Cole (PETITION A)
Rita Cole (PETITION C)
Robert Coleman (RC1257)
Jennifer Coleman (PETITION C)
Jeff Coleman (PETITION C)
Lanny Colgan (PETITION A)
Chrisa Collier (PETITION A)
Ben Collier (PETITION A)
Kelli Collier (PETITION E)
Lori Collier (PETITION E)
Thomas Collier (PETITION E)
Shawn Collingsworth (PETITION A)
Melissa Collingsworth (161)
Anita Collins (AC176)
John Collins (PETITION B)

Micky Collins (PETITION B)
Judy Collins (PETITION E)
Fred Colwell (FC819)
Wesley Combest (WC665)
Sam Combest (SC929)
Bradley Combs (PETITION B)
Erin Compton (161)
Erin Compton (PETITION D)
Bill Conder (PETITION E)
George Conley (PETITION E)
Chris Conley (PETITION E)
John Connely (PETITION E)
Doris Conner (DC102)
Charles Conner (CC898)
Leonard Conner (LC667)
R. Conner (RC679)
Alyssa Conner (PETITION E)
Brent Conner (PETITION E)
Jimmy Connerley (PETITION A)
Cindy Conrad (CC1130)
Carlin Conrad (PETITION A)
Vicki Conrad (PETITION A)
Roger Conrad (PETITION C)
Jack Conrad (PETITION C)
Beth Conrad (PETITION D)
Henderson Construction (HC1028)
Rita Cook (RC516)
Norma Cook (NC516)
Charles Cook (CC1221)
Richard Cook (RC1209)
David Cook (DC1551)
Joann Cook (PETITION C)
Robert Cook (PETITION E)
Ray Cooper (RC1510)
David Cooper (DC838)
Roger Cooper (PETITION B)
Brenda Cooper (PETITION E)
Melissa Cooper (PETITION E)
Jerry Copper (PETITION A)
Nelson Copper (PETITION A)
Larry Copper (PETITION A)
Bruce Corbin (PETITION A)
Vivian Corbin (PETITION E)
Shannon Corliett (PETITION E)
Karen Cornett (PETITION A)
Warren Cornett (PETITION A)
Jim Cornett (PETITION B)
Kirk Corthum (KC1033)
Dana Corthum (DC1517)
Ronald Corthum (RC759)
Wayne, Cory, Anthony, and Ruth Robinson (R409)
Fulton County Vet. Clinic (FCVC1024)
Shirley Courter (PETITION E)
Darrell Courtright (DC31)
Edd Courtright (EC114)
Cheryl Courtright (PETITION B)
EE. Covey (PETITION A)
Marcie Covey (161)
Travis Covey (161)
Rory Cowles (PETITION A)
Jennie Cowles (PETITION A)

Jim Cowles (PETITION A)
Ashley Cowles (PETITION A)
Chase Cowles (PETITION A)
Donna Cowles (PETITION A)
Robert Cox (RC334)
Troy Cox (TC1459)
Tammy Cox (PETITION A)
Lindsey Cox (161)
Rita Cox (161)
Kyle Cox (161)
Deborah Cox (PETITION E)
John Cox (PETITION E)
David Cox (PETITION E)
Mary Craig (MC580)
Donald Craig (DC581)
Leesa Craig (LC585)
Ron Craig (RC587)
Bob Craig (BC1302)
Charles Craig (PETITION A)
Gary Craig (PETITION D)
Phil Craig (PETITION E)
Lowell Crane (PETITION A)
Pat Crane (PETITION A)
Bob Crane (PETITION A)
Judy Crane (PETITION E)
Larry Craney (PETITION B)
Loni Craney (PETITION B)
Bonnie Crecelius (BC105)
Dan Crecelius (DC1228)
Joanna Crecelius (PETITION C)
Loren Crecelius (PETITION C)
Teresa Crichfield (TC984)
Connie Crosby (CC60)
Rick Crosby (PETITION A)
Jimmey Crouch (JC772)
Carl Crouse (CC839)
Joe Crow (PETITION E)
Clyde Crowder (PETITION B)
Sheri Crowelle (SC1001)
Dwayne Crownover (DC1201)
Stephen Culler (SC842)
Bob Cullison (BC267)
Sharon Cullison (PETITION E)
Benjamin Culy (BC1381)
Carole Cummings (PETITION A)
Tim Cummings (PETITION A)
Jason Cummins (JC787)
Duane Cunningham (PETITION E)
Tyler Dages (PETITION B)
Foremans Dairy Farm (FDF908)
Brad Dale (PETITION A)
Matthew Daley (MD902)
Greg Dalton (PETITION A)
Mike Dalton (PETITION E)
Nancy Danner (ND1045)
Timothy Dant (TD1574)
Rhonda Daugherty (RD1551)
Laura Daugherty (PETITION D)
Mike Daugherty (PETITION D)
Jonathon Davis (JD661)
Gary Davis (PETITION A)

Robert Davis (PETITION A)
Tom Davis (PETITION A)
Pearl Davis (PETITION A)
Michael Davis (PETITION E)
Nancy Davisson (ND645)
Mary Dawson (PETITION E)
Donita Day (PETITION B)
Carmen De Barros (CDB1074)
Naomi Dean (ND986)
Timothy Dearth (TD1540)
Casey Dearwester (CD1013)
Jerry Deaton (PETITION A)
Alisha Deaton (161)
Andrew Deavers (PETITION E)
W. Debult (WD1563)
Meredith Deckard (789)
Edna Deckard (789)
Russell Deckard (789)
Melanie Deckard (789)
William Deckard (789)
Greg Deckard (PETITION E)
Bruce Deckard (PETITION E)
Phillip Deckard (PETITION E)
Mellisa Deckard (PETITION E)
Phillip Deer (PETITION E)
Steve Delap (SD784)
Vaughn Delong (VD166)
Otis Delph (OD553)
Anne Delph (AD555)
Anthony Dencall (PETITION A)
Robert Denniston (PETITION E)
Sherry Denton (PETITION A)
Alan Diamond (PETITION E)
Heather Dickenson (PETITION E)
Beverly Dierks (BD1112)
Carol Dieterlen (CD777)
Marvin Dillard (PETITION A)
Cory Dillard (PETITION B)
John Dillman (JD485)
Keith Dillman (KD248)
Phillip Dillman (PETITION A)
Jay Dillman (JD506)
Kenny Dillon (PETITION B)
Daniel Dixon (DD133)
Phil Dixon (PD134)
Lisa Dixon (161)
Charles Dixon (161)
Terri Dixon (PETITION D)
Gary Dixon (PETITION E)
Mary Dodson (PETITION C)
Mike Dohoney (PETITION C)
Joseph Donnersberger (PETITION A)
Max Donovan (MD550)
Helen Donovan (HD534)
Max Donovan (MD961)
Charles Dooley (CD138)
Tony Dorsett (PETITION A)
Brian Dotts (PETITION A)
Jerrod Dotts (PETITION A)
Justin Dotts (PETITION A)
Joye Dougherty (PETITION E)

Mike Dougherty (PETITION E)
Tim Dowel (PETITION E)
John Dowling (PETITION A)
Brad Downham (PETITION A)
Mark Downing (MD963)
Doug Drake (PETITION E)
Dean Drudge (DD892)
Richard Dubaul (RD1002)
Lynn Duckett (LD307)
Lynn Duckett (PETITION E)
Sean Dunbar (PETITION E)
Randy Duncan (PETITION A)
Leroy Duncan (PETITION A)
Kenny Dunn (PETITION C)
Billy Dunn (PETITION E)
Stephen Durbin (SD1519)
Anthony Durcholz (AD1178)
Darren Duvall (DD1247)
Kevin Dwenger (KD799)
Joe Dyers (PETITION A)
Robert Dyson (RD886)
Jason Eads (PETITION E)
Michael Eads (PETITION E)
Claude Earl (PETITION A)
David Earl (PETITION A)
Frank Earl (PETITION A)
Jerry Earl (PETITION B)
Cindy Earl (PETITION E)
Thomas Earl (PETITION E)
Stephen Earley (SE1384)
Stephen Earley (SE1335)
Stephen Earley (SE1555)
Stephen Earley (SE1529)
Donna East (PETITION E)
Mark East (PETITION E)
Vicki East (PETITION E)
George East (PETITION E)
Edwin Easterly (PETITION A)
Susan Easton (PETITION D)
James Eaves (JE1519)
Tony Eberly (TE1268)
Steve Eberly (SE1062)
Mark Eckart (ME812)
Carl Edgerwood (CE236)
Donald Edington (DE298)
Kathy Edington (PETITION E)
James Edington (PETITION E)
Ron, Edna, and Rodney Landis (RL227)
Claver Ehren (CE1098)
Carolyn Eisele (PETITION A)
Edward Elder (EE670)
Deanna Elder (DE678)
Don Elgin (DE84)
Jeff Elkin (789)
John Elkin (789)
Cara Elkins (PETITION E)
Brenda Elkins (PETITION E)
Joe Ellewein (JE1421)
Brenda Elliot (PETITION A)
Greg Ellis (GE172)
Keith Ellis (PETITION B)

Stella Ells (SE1362)
Sam Ely (PETITION A)
Pat Embree (PETITION E)
Geri Embree (PETITION E)
Mary Emmett (ME1079)
Kenneth Emmons (PETITION E)
Jonetta Emmons (PETITION E)
Anthony Emmons (PETITION E)
Clifford Emmons (PETITION E)
Frances Emmons (PETITION E)
Ryan Emmons (PETITION E)
Jessica Emmons (PETITION E)
Stan Endris (PETITION A)
J.K. England (JKE295)
Leslie England (PETITION A)
Sylvia England (PETITION A)
Sherry England (PETITION A)
Rick England (PETITION C)
Jeff Engle (JE1339)
John English (JE878)
Brian Enochs (PETITION A)
David Ensey (DE1530)
Betty Epperson (BE199)
Jarod Erb (JE778)
Mike Erdle (PETITION A)
Marion Eubank (PETITION A)
Kenneth Eubank (PETITION C)
Jennifer Eubanks (PETITION A)
David Euders (DE712)
Donald Evans (DE243)
Shannon Evans (SE787)
Richard Evans (PETITION A)
Janelle Evans (PETITION E)
City of Evansville (E12)
Jeffery Eversole, William and Susan Butler (EB492)
Eshelman Excavating (EE675)
Mike Farley (PETITION A)
Sara Farmer (161)
D. Farrell (PETITION E)
Kent Feder (PETITION E)
Tonya Fender (TF411)
Wanda Fender (WF413)
Rex Fender (PETITION E)
Tonya Fender (PETITION E)
Wanda Fender (PETITION E)
Mike Ferguson (PETITION A)
Jerry Fickas (JF700)
Gerald Fickas (GF544)
Estelle Fields (PETITION C)
Bonita Fields (PETITION D)
Thomas Fields (PETITION E)
Larry Fields (PETITION E)
Roy Fike (RF900)
Greg Finnes (GF1250)
Rick Fischer (RF558)
James Fischer (JF559)
Tony Fischesser (TF646)
Ralph Fish (RF506)
Glen Fisher (GF1295)
Gary Fisher (PETITION A)
James Fisher (PETITION A)

Mark Fitzgerald (161)
Michael Flanet (MF1575)
Loretta Fleener (PETITION A)
Rex Fleetwood (PETITION A)
Dianna Fleetwood (PETITION A)
Chris Fleetwood (PETITION E)
Penny Fleetwood (PETITION E)
Howard Fletcher (HF786)
Jannice Fletcher (PETITION E)
Andrea Flinn (AF787)
Richard Flodder (RF1398)
Patricia Flodder (PF1397)
Ruth Flora (PETITION A)
Roger Floyd (RF405)
Kermit Floyd (PETITION B)
Patricia Flynn (PETITION A)
Debora Flynn (PETITION A)
Sheila Flynn (PETITION A)
Bill Flynn (PETITION E)
Shannon Foddrill (789)
County Folks (CF376)
J.T. Fones (PETITION A)
Tina Forbes (PETITION A)
Jacqueline Ford (PETITION E)
Kenneth Ford (PETITION E)
Ronnie Foster (RF1252)
Erma Foster (PETITION E)
Angie Fox (AF1364)
Darrell Fox (DF1279)
Thomas Fox (TF895)
James Fox (PETITION A)
Randal Fox (PETITION B)
Jerry Fox (161)
Sharon Fox (PETITION E)
Larry Fox (PETITION E)
Thomas Fox (PETITION E)
Ruth Fox (PETITION E)
Tony Fox (PETITION E)
Glenda Fox (PETITION E)
Don Francis (DF285)
Cindy Frazee (CF1259)
Walter Freeman (WF1444)
Robert Freeman (PETITION A)
Owen Freese (PETITION E)
Kim Friend (KF1149)
Toby Fritz (PETITION E)
Diane Fromme (DF624)
Glen Fry (GF1065)
Wayne Fry (WF888)
Gerald Fry (PETITION E)
Emil Fuhrman (EF589)
Hazel Fuhrman (PETITION B)
Victor Fuhrman (PETITION B)
Marlene Fuhrman (PETITION B)
Richard Fulford (RF1424)
Vincent Fulk (VF1012)
B.J. Fulkerson (BJF76)
Louis Fullen (PETITION A)
James Fultz (JF1571)
Lenora Fultz (PETITION E)
Birk Funny Farm (BFF278)

David Futa (DF2)
Leon G. (last name illegible) (LG18)
Dennis Gaff (DG1561)
Aaron Gaff (AG1559)
Chuck Gagner (CG221)
Timothy Gall (TG1531)
Gregg Gallagher (GG384)
Gregg Gallagher (GG1309)
Leo Galley (LG330)
Tony Galloway (PETITION E)
Lacey Gann (LG1001)
K. Gann (KG1001)
Gordon Gant (GG1329)
Cindy Garceau (PETITION A)
Mike Gardner (MG180)
Lisa Gardner (LG312)
Thomas Gardner (TG534)
James Garines (JG383)
Charles Garland (PETITION A)
Loretta Garmon (PETITION B)
Pat Garrett (PG385)
Kevin Garriott (161)
Gerald Gaynor (GG1096)
Kristy Gee (PETITION B)
Lorraine Geis (LG169)
Vince Gelarden (VG1291)
Jack Gelbert (JG1439)
Jerry George (JG208)
Ellen George (EG209)
Mark George (MG1551)
Laura George (161)
Joseph George (161)
Randy George (161)
Kerry George (PETITION E)
Ellen George (PETITION E)
Jerry George (PETITION E)
Danny Gerk (PETITION A)
Vickie Gerkin (PETITION E)
Hazel Gerkin (PETITION E)
Howard Gerold (HG1456)
Joseph Gibb (161)
Chad Gibson (PETITION B)
Gary Gibson (PETITION B)
Mike Gibson (PETITION B)
Marilyn Gifford (PETITION E)
Michael Gifford (PETITION E)
Kathryn Gilbert (KG369)
Robbie Gilespie (PETITION E)
John Gill (JG15)
Sandy Gill (SG1341)
James Gill (PETITION A)
James Gill (PETITION A)
John Gill Shirley Dotts (PETITION A)
Paul Gillespie (PETITION A)
Michael Gillespie (PETITION E)
Bruce Gilliat (BG910)
Sandra Gilliatt (SG837)
Jesse Gilliland (PETITION A)
Philip Gitlen (PG219)
Hamer Glen (PETITION A)
Johnny Glover (JG195)

Anna Gobert (AG465)
Timothy Godbey (TG14)
Buck Godsey (PETITION A)
Wilma Godsey (PETITION E)
Byron Goen (BG58)
Betty Goen (PETITION E)
Larry Goettel (LG19)
James Golden (PETITION E)
Robert Golding (RG934)
Bob Goldsberry (PETITION A)
Donald Goldsberry (PETITION A)
Maynard Good (MG1103)
Linnea Good (LG897)
Sherie Good (PETITION A)
Patricia Goodyear and Joe Nash (GN171)
Gary Gordon (PETITION A)
Robert Gordon (PETITION A)
Gordon Plumbing (GP29)
Andrea Gorrell (AG1161)
David Graber (DG1067)
Floyd Graber (FG926)
Melvin Graber (PETITION B)
Marvin Graber (PETITION B)
Nathan Graber (PETITION B)
Matthew Graber (PETITION B)
Steven Graf (PETITION A)
Ray Graften (PETITION B)
Beth Grafton (PETITION B)
Don Gratzer (PETITION A)
Tom Graves (PETITION D)
Shannon Graves (PETITION D)
Jared Graves (PETITION D)
David Graves (PETITION D)
Carolyn Graves (PETITION D)
Arthur Grawcock (AG1422)
Shawn Gray (SG1345)
Ted Gray (TG1038)
Larry Gray (PETITION A)
Danny Green (DG65)
Samuel Green (SG697)
James Green (PETITION A)
Bill Greene (BF566)
Steve Greeson (SG668)
Ruth Greiwe (RG1072)
John Griffith (JG1546)
Trevor Griffith (TG747)
Martin Griffiths (MG1582)
Cory Griffiths (CG1580)
Dorothy Grimes (DG127)
Jim Grimes (JG187)
Gary Grissom (GG128)
Tim Grissom in a letter with 12 signatures (TG211)
Billy Grissom (PETITION A)
Clifford Grissom (PETITION E)
Stephen Grose (SG536)
Stephen Grose (SG981)
Carly Grounds (161)
Brandon Grounds (161)
Lexi Grounds (161)
Daron Growden (DG787)
James Grubb (JG871)

Leah Grubbs (PETITION A)
Cassandra Guippner (CG787)
Mildred Gulley (PETITION E)
Charlie Gulley (PETITION E)
Daniel Gunselman (DG538)
Sandy Guthrie (PETITION E)
Jeff Haas (PETITION E)
Barb Hager (PETITION B)
Mirian Hale (MH573)
Dan Hale (PETITION E)
Andrea Haley (PETITION A)
John Hall (JH143)
Anah Hall (AH454)
Leasa Hall (LH314)
Mr. Hall (MH316)
Terrie Hall (TH1532)
Connie Hall (PETITION A)
Tom Hall (PETITION A)
Max Hall (PETITION A)
Jerry Hall (PETITION E)
Jerry Halloway (JH624)
Rachel Halt (PETITION E)
William Hamblin (PETITION E)
Michelle Hamer (MH149)
Eric Hamer (PETITION A)
Ron Hamilton (RH433)
Merlin Hamke (MH362)
Merlin Hamke (PETITION A)
Stephen Hammer (PETITION A)
Cindy Hammersley (PETITION E)
Trudy Hammond (TH304)
Alexia Hamric (AH497)
Claudia Hamric (CH502)
Larry Hancock (PETITION A)
Jim Hand (PETITION A)
Robert Haney (RH680)
Loren Hannum (LH479)
Tom Hardwich (PETITION A)
Beverly Hardwick (PETITION E)
Rick Hardwick (PETITION E)
Powers Hardwoods (PH380)
Phyllis Hare (PH1551)
David Hargett (DH153)
Randy Harker (PETITION A)
Ronnie Harper (PETITION A)
Cerri Harper (161)
Brad Harper (161)
Ralph Harrell (PETITION D)
Ann Harrell (PETITION E)
Andy Harrell (PETITION E)
Timothy Harrington (TH1016)
Jerry Harris (JH56)
Jeannie Harris (JH26)
Scot Harris (SH542)
Ray Harris (RH1324)
Vicki Harris (VH1174)
Donald Harris (DH973)
Richard Harris (PETITION E)
Jeannie Harris (PETITION E)
Eric Harrison (EH787)
Mark Harrison (PETITION A)

Judy Harrison (PETITION A)
Anne Harshbarger (AH395)
Amy Hart (161)
Roger Hartman (RH1360)
Leo Hartman (LH1356)
Rebecca Hartman (RH1047)
Michael Hassellburg (MH421)
Andrew Hassfurther (AH543)
Andrew Hassfurther (AH862)
David Haste (PETITION A)
David Haste (PETITION A)
Jill Hatfield (PETITION E)
Scott Hatfield (PETITION E)
Jill Hatfield (PETITION E)
Perry Hathaway (PH836)
Jeff Hathaway (PETITION E)
Jack Hathaway (PETITION E)
Jerry Hattabaugh (PETITION A)
Lois Hatton (LH290)
Debby Hauer (PETITION A)
Marie Hawkins (MH24)
Gilbert Hawkins (GH730)
Jeff Hawkins (PETITION A)
Floyd Hawkins (PETITION B)
Floyd Hawkins (PETITION B)
Kate Hawkins (PETITION B)
Brian Hawkins (PETITION B)
James Hawkins (PETITION B)
Debbie Hawkins (161)
Jerry Hawkins (161)
Malinda Hawkins (PETITION E)
Kenneth Hawkins (PETITION E)
Vernon Hawkins (PETITION E)
Scott Hayes (PETITION A)
J.D. Hayes (JH506)
Gloria Hayes (PETITION E)
Terry Hayes (PETITION E)
Ed Hayes (PETITION E)
John Hayes (PETITION E)
Ken Hays (KH77)
Debby Haywood (PETITION E)
Brian Hayworth (BH1288)
Howard Hazeldean (HH1393)
Marilyn Heady (PETITION E)
Neala Hechathorn (NH1430)
Becky Hedge (PETITION E)
Donald Hedrick (DH1486)
James Hedrick (PETITION E)
Marlon Heffner (MH501)
Gerhard Hehrig (GG683)
Mark Heine (MH1584)
Lorraine Heinstra (LH1340)
Ronald Helma (RH1449)
Clayton Helming (CH787)
Dennis Helmuth (DH751)
Dan Helton (DH847)
Patricia Helton (PETITION E)
Jeremy Hembric (JH619)
Arlene Henderliden (PETITION A)
Kyle Henderlider (PETITION A)
Keith Henderson (KH1177)

Herbert Henderson (HH1173)
Greg Henderson (PETITION A)
Dennis Henderson (PETITION A)
Robert Henderson (PETITION A)
Greg Henderson (161)
Charles Hendrixon (CH1129)
Charles Hendrixon III (CH1129C)
Theresa Hendrixson (TH1129)
Chuck Henry (CH1158)
O. Henry (PETITION E)
David Hensly (PETITION C)
Marnita Hensly (PETITION E)
Phil Hensly (PETITION E)
Sam Herman (SH284)
Rick Herman (RH1516)
Jody Hermer (JH624)
Dale Hershberger (DH1032)
Tammy Hert (PETITION B)
R. Hertig (RH1009)
Karen Hess (KH540)
Mike Hiatt (MH974)
Joe Hickes (PETITION E)
James Hickman (161)
Vicky Hicks (PETITION E)
Lenora Higgins (LH688)
Anna Hildenbrand (PETITION E)
Lee Hiles (PETITION E)
Rich Hill (RH717)
Paul Hill (PETITION A)
John Hill (PETITION A)
Sue Hillenburg (PETITION B)
Rachel Hillenburg (789)
Linda Hillinburg (PETITION E)
Judy Hillman (JH1378)
Noah Hilty (NH893)
Larry Hoard (LH328)
Robin Hochstrasser (RH911)
Joseph Hodalj (JH791)
Melanie Hodge (PETITION E)
Mark Hoeppner (MH1053)
Max Hoeppner (MH1052)
David Hoff (DH1355)
Irene Hoff (IH1061)
Carolyn Hoff (CH930)
Melvyn Hofferth (MH976)
Paul Hoffman (PH624)
Dustin Hoffman (PETITION C)
Mel Hoffmann (MH1068)
Stanley Hofmann (SH1343)
Leon Hofmann (LH1084)
Carolyn Hogan (PETITION A)
Tracy Hogan (161)
Wayne Hold (PETITION A)
Darrell Hold (PETITION A)
Jenetta Holdsclaw (789)
Jerry Holland (JH419)
Steve Holland (PETITION E)
Leslie Hollard (PETITION E)
Kathy Hollifield (PETITION A)
Jeff Hollinger (JH1306)
Darin Hollingsworth (DW1440)

Gary Holloway (GH280)
Heather Holmes (PETITION A)
Larry Holmes (PETITION E)
Jeremy Holsapple (JH109)
Gwen Holsapple (PETITION A)
Danny Holt (DH66)
Greg Holt (GH69)
K. Holt (PETITION A)
Norman Holt (PETITION B)
Ed Holt (PETITION B)
Robert Holt (PETITION E)
Lexie Holtsclaw (PETITION E)
Clarence Hood (CH725)
Patricia Hoopengarner (PH418)
Keith Hopf (KH863)
Larry Hopkins (LH85)
Russell Hopkins (RH323)
Gerald Hopkins (PETITION B)
L.M. Hopper (LH1520)
Carmen Hopper (PETITION A)
Charlie Hopper (PETITION A)
Bill Hopper (PETITION B)
Jared Hopper (PETITION B)
Kim Hopper (PETITION B)
Barbara Hopper (PETITION E)
Douglas Horner (DH377)
Anita Horner (PETITION E)
Margaret Hornly (MH1373)
Henry Horstman (HH440)
Dan Horstman (DH765)
Bill Hosted (BH1586)
Paul Hosted (PH1578)
Marceda Hosted (MH1576)
Floyd Hostetler (FH1199)
David Hostetler (DH1533)
Kathy Hostetler (PETITION A)
Kelly Hottell (PETITION E)
Richard Houchin (PETITION A)
Bryan Houmes (BH1230)
John Hovis (PETITION A)
Anita Howard (AH1455)
Shawn Howard (SH1453)
Cheryl Howard (PETITION A)
Louis Howard (PETITION A)
Becky Hoyis (PETITION B)
John Hrynk (JH1144)
John Hrynk (JH943)
Herb Hubner (HH68)
Carl Hudgens (PETITION A)
Jetta Hudgens (PETITION A)
Anna Hudson (PETITION E)
Daniel Hudson (PETITION E)
Nathan Huebschman (NH552)
Herb Huel (HH1294)
William Huffman (WH894)
David Huggins (DH1311)
Nancy Huggins (NH1152)
Bonnie Hughes (PETITION E)
Jerald Hughes (PETITION E)
C. Hughes (PETITION E)
Tom Hughes (PETITION E)

Hannah Humbert (HH787)
William Hunnicut (WH162)
Melvin Hunsucher (PETITION A)
Kent Hunter (KH1025)
Jim Hunter (161)
Shannon Hunter (PETITION E)
Kevin Huntley (KH449)
Mark Hursey (MH1114)
James Hurt (PETITION B)
Marlo Hurt (PETITION E)
Ronald Hurt (PETITION E)
Kevin Hutchinson (KH506)
Becky Hutslar (BH91)
Michael Hutt (MH949)
Kevin Imlay (KI855)
Indiana Farm Bureau (IFB79)
City of Indianapolis (I4)
Steve Ingle (PETITION A)
Peggy Ingle (PETITION E)
Don Ingle (PETITION E)
Dan Ingram (DI216)
Charles Ingram (PETITION A)
Richard Inman (PETITION A)
Bob Inman (PETITION A)
Robert Inman (PETITION E)
James Innis in a letter signed by four citizens (JI201)
Glenn Irwin (PETITION A)
Danny Irwin (789)
Rita Irwin (789)
Sandy Isaacs (PETITION B)
Jim Isaacs (PETITION B)
Tom Isaacs (PETITION B)
Doug Isenbarger (DI1548)
Bonita Isenberg (BI389)
Charla Ivey (PETITION B)
Rose Jackson (RJ1017)
Jerry Jackson (PETITION E)
Hazel James (HJ516)
Sharon Jantyen (SJ1551)
Mary Jean (MJ103)
David Jenkins (DJ782)
Sutton Jenkins (PETITION A)
John Jenkins (PETITION E)
Susan Jenkins (PETITION E)
Walter Jenkins (PETITION E)
Jenna Lampert (JL787)
Walter Jennett (PETITION B)
Melissa Jennings (MJ1001)
Bruam Jigjes (PETITION E)
Carol Johnson (CJ240)
James Johnson (JJ1491)
James Johnson (JJ373)
Michael Johnson (MJ979)
John Johnson (PETITION A)
Rita Johnson (PETITION A)
Roy Johnson (PETITION A)
Richard Johnson (PETITION A)
James Johnson (PETITION A)
Troy Johnson (PETITION A)
Jamie Johnson (PETITION A)
A.J. Johnson (PETITION A)

Jeremy Johnson (PETITION A)
Lisa Johnson (PETITION A)
Lee Johnson (PETITION A)
James Johnson (PETITION B)
Deb Johnson (PETITION E)
Kat Johnson (PETITION E)
Robin Johnson (PETITION E)
Donna Johnson (PETITION E)
Stephanie Johnson (PETITION E)
Dallas Johnson (PETITION E)
Lloyd Johnson (PETITION E)
Sam Jolley (PETITION A)
LaDonna Jolliff (LJ439)
Paul Jones (PJ35)
Sam Jones (SJ652)
Norman Jones (NJ442)
Marlen Jones (MJ650)
Donald Jones (DJ301)
Janet Jones (JJ125)
Rudy Jones (RJ578)
Ray Jones (RJ1224)
Joe Jones (JJ648)
Kenneth Jones (KJ1541)
Carin Jones (CJ1521)
Robert Jones (RJ1515)
Richard Jones (RJ832)
Chris Jones (CJ681)
Jordon Jones (JJ787)
Danny Jones (PETITION A)
Kenneth Jones (PETITION A)
Shane Jones (PETITION A)
Tonya Jones (PETITION A)
William Jones (PETITION A)
Kathy Jones (PETITION A)
Daniel Jones (PETITION A)
Janice Jones (PETITION A)
Gregory Jones (PETITION A)
Eric Jones (PETITION A)
Gregory Jones (PETITION A)
Lori Jones (PETITION A)
Ronald Jones (PETITION A)
Charles Jones (PETITION B)
Amy Jones (PETITION B)
Phillip Jones (PETITION B)
Cheryl Jones (PETITION B)
Leo Jones (PETITION B)
Andrea Jones (PETITION B)
Eric Jones (PETITION B)
Cleo Jones (PETITION B)
Gladys Jones (PETITION B)
Rudy Jones (PETITION B)
Joy Jones (PETITION B)
Sonny Jones (161)
Clarence Jones (161)
J.F. Jones (PETITION E)
Mary Jones (PETITION E)
Jeff Jones (PETITION E)
K.G. Jones (PETITION E)
Wade Jones (PETITION E)
Darlene Jordan (PETITION A)
Mollie Judah (PETITION E)

Vicky Judah (PETITION E)
Lyndsay Kahlenbeck (LK945)
Daniel Kain (DK1166)
Ken Kaiser (KK198)
M. Kaiser (MK164)
Kristin Kaiser (KK154)
Alec Kalla (AK457)
Karen Karr (KK50)
Jim Karr (PETITION A)
Kevin Karr (PETITION A)
William Kauffman (WK947)
Tonnesa Keck (TK1562)
Robert Keck (RK773)
Joe Kecka (JK506)
Jamess Keeton (PETITION A)
John Kehrwald (JK214)
Carol Keilein (CK624)
Mike Keilein (MK624)
Claude Kein (PETITION D)
Janice Kein (PETITION E)
LaRon Keith (LK265)
Tracey Keith (TK428)
Robert Keller (RK913)
Denise Keller (PETITION E)
Richard Keller (PETITION E)
Michael Kelley (MK1264)
Douglas Kelley (DK1263)
Randy Kelley (PETITION A)
Kellie Kelley (PETITION A)
Karyl Kelly (KK1107)
Jim Kelly (PETITION A)
Bart Kempf (BK787)
Sawna Kenney (PETITION A)
Dave Kent (PETITION B)
Steve Kern (SK1536)
Lori Kern (PETITION A)
Gerald Kern (PETITION A)
Kelly Kern (PETITION A)
Rodney Kern (PETITION A)
James Kern (PETITION E)
John Kettinger (JK156)
Rita Key (RK64)
Terry Key (PETITION A)
Brandon Key (PETITION A)
John Key (PETITION A)
William Key (PETITION C)
George Key (PETITION C)
Wayne Kidd (PETITION E)
Herman Kidd (PETITION E)
Improving Kids Environment (IKE381)
Valerie Kidwell (PETITION B)
William Kidwell (PETITION B)
Robert Kieffer (RK1056)
Kenny Kimble (KK263)
Kenneth Kimble (KK371)
Becky Kimble (BK1513)
Kenneth Kimble (KK856)
Kenny Kimble (PETITION E)
Lois Kinch (LK764)
Margaret Kincheloe (MK313)
John King (JK338)

Terry King (TK407)
Wayne King (WK1082)
Daryl King (DK824)
Melvin King (MK736)
Robert King (RK756)
H. King (PETITION A)
Ronald King (PETITION C)
Janie King (PETITION E)
Robert King (PETITION E)
Debbie King (PETITION E)
David King (PETITION E)
David King (PETITION E)
Shelly King (PETITION E)
Tyler King (PETITION E)
Jeff King (PETITION E)
Loretta King (PETITION E)
Gene King (PETITION E)
Stacey King (PETITION E)
Darla King (PETITION E)
Lisa Kinnaman (161)
Richard Kinser (PETITION E)
Denny Kirk (PETITION A)
Kathy Kirk (PETITION A)
Jeff Kirk (PETITION E)
Elery Kirkman (EK347)
Barry Kirkman (PETITION A)
John Kirkman (PETITION E)
Allan Kirkpatrick (AK845)
David Kitirst (DK1577)
Donald Klein (DK823)
Kayla Kleinletter (KK787)
Linus Kluemper (LK582)
Jim Kluesner (JK574)
James Kluesner (JK1511)
Linus Klumper (LK1220)
Tom Klutz (TK721)
Tony Knght (PETITION C)
David Knight (DK32)
Rosy Knight (PETITION E)
Charles Knipstein (CK1245)
Thane Knox (TK1243)
Eric Koch (EK96)
Eric Koch (PETITION E)
Tucker Koentz (TK846)
Alma Kohnen (AK1070)
Bob Kolish (PETITION A)
William Koopman (WK1176)
Sherry Kopsho (PETITION A)
Charles Koressel (CK1054)
Ronald Korte (PETITION A)
Joyce Korte (PETITION A)
Scott Kovener (SC72)
Russell Krenke (PETITION E)
Donald Kressley (DK669)
Donald Krissley (DK966)
Madonna Kukman (MK1040)
Randall L. Danielson (RD7)
Randy Lacky (PETITION E)
Bobbie Lake (PETITION E)
William Lam (WL1319)
Jimmy Lamb (JL586)

Norma Lamb (NL588)
Jasper Lamb (PETITION A)
Linda Lamb (PETITION E)
Erica Lampert (EL787)
Nathan Lampert (NL787)
J. Landis (JL1255)
Bonnie Landritt (PETITION E)
Anthony Landrum (AL916)
Michael Lane (ML229)
Y. Lane (YL1008)
Jason Lane (161)
Mike Lane (PETITION E)
Peggy Lane (PETITION E)
Gary Lane (PETITION E)
Earl Laney (PETITION E)
Melissa Langley (PETITION E)
John Languell (JL459)
Terri Languell (TL460)
David Larocca (PETITION A)
Jeff Larson (JL747)
Harold Lasly (PETITION E)
Joan Laughlin (JL1375)
Robert Lavenou (RL1412)
Sue Lawyer (PETITION A)
Roland Lawyer (PETITION E)
William Leak (WL1172)
Joseph Leamon (JL1236)
Earl Leas (EL1142)
George Leaster (PETITION E)
Sandy Leatherman (SL124)
Danny Leckron (DL1503)
Janet Ledford (PETITION E)
Darla Lee (DL289)
Steve Lee (SL990)
Morgan Lee (PETITION A)
Mary Lee Hughes (PETITION A)
Donna Lee (PETITION E)
Jon Lee (PETITION E)
Amanda Lee (PETITION E)
Dave Lee (PETITION E)
Billy Leinenbach (BL616)
Meghan Leinenbach (ML1519)
Sharon Leister (SL1406)
Donna Leister (PETITION E)
John Lemke (JL484)
Brett Lemond (PETITION B)
Albert Lestinsky (AL1337)
Bob Letterman (PETITION B)
Dennis Levee (DL272)
Francis Lewis (FL1099)
Edgar Lewis (PETITION B)
Norma Lewis (PETITION B)
Ernest Lewis (PETITION B)
Jill Lewis (PETITION B)
Tricia Lewis (PETITION D)
Philip Lewis (PETITION D)
Larry Lewis (PETITION E)
Marcia Liby (ML1400)
James Lincher (PETITION E)
Wilfred Lindauer (WL257)
Wilfred Lindauer (WL1589)

Frank Lindeman (FL575)
John Lindsay (JL1447)
Steve Lindsey (SL567)
Steve Lindsey (SL915)
Cindy Lindsey (PETITION B)
Kevin Lindsey (PETITION B)
Craig Lindstrom (CL919)
Louis Lingg (LL1349)
Rick Lint (PETITION E)
Dorothy Lintz (PETITION E)
Jerry Lintz (PETITION E)
Laurencia Listerman (LL1081)
Wanda Liutz (PETITION E)
Joshua Lively (161)
Vera Lively (161)
Ellen Lively (161)
Dave Lively (161)
Lloyd Livingston (LL269)
Adam Livingston (AL609)
Manuael Lochard (ML828)
Eugene Lohenstein (EL1396)
Samuel Lombest (SL1358)
Melvin Long (ML607)
Charles Longabaugh (CL537)
Roy Longest (PETITION C)
Stanley Lopossa (SL1217)
Rebecca Lottes (PETITION B)
Mary Lou and John Pyles (MLJP274)
Mary Lou Gilliam (PETITION A)
Lisa Love (PETITION A)
Paula Lowery (PETITION A)
Tom Lucas (PETITION A)
Donna Lucas (PETITION E)
Ronald Lucas (PETITION E)
Linda Luebbehiesen (LL545)
Don Luedtke (DL1196)
Traci Lueken (TL787)
Robert Luke Martin (RM713)
Frick Lumber Company (FLC769)
William Lundy (PETITION D)
Billy Luttell (PETITION A)
Bill Luttell (PETITION A)
Terry Luttrell (PETITION A)
Mike Lutz (ML1367)
Gary Lynch (PETITION E)
Julie Lynch (PETITION E)
David Lynn (DL476)
Janet Lynn (PETITION E)
David Lynn (PETITION E)
Bruce Lynn (PETITION E)
Sarah Lynn (PETITION E)
Mark Lynn (PETITION E)
Kevin Lynn (PETITION E)
Mary M. Seifert (MS6)
Hochbaum Machine Services (HMS822)
Larry Mack (PETITION E)
Eric Mack (PETITION E)
Cheryl Mack (PETITION E)
Blaine Mackey (BM255)
Bridget Mackey (BM256)
Thomas Macy (TM297)

Larry Maddox (PETITION E)
Nathan Mader (NM673)
Glen Main (GM1336)
Mike Majors (MM410)
Bruce Majors (BM511)
Mike Majors (PETITION E)
Bruce Majors (PETITION E)
Ted Malecki (TM982)
James Mancourt (JM924)
Justin Mann (JM21)
Dennis Mann (DM692)
Brian Mann (BM953)
Susi Mann (PETITION A)
Justin Mann (PETITION A)
Beth Manning (PETITION D)
Ernest Manning (PETITION E)
Peggy Manship (PM88)
Linda Manship (PETITION C)
Natalie Manship (PETITION C)
David Manship (PETITION C)
Allan Manship (PETITION C)
Bill Mapes (PETITION E)
Michael Marcum (MM1376)
Dennis Marczak (DM427)
Steve Markle (PETITION A)
Leon Marrs (LM291)
William Marsh (WM1414)
Jane Marshall (JM1527)
Jane Marshall (JM980)
William Martin (WM487)
Mary Martin (MM268)
Robert Martin (RM533)
Gregory Martin (GM560)
Carlyle Martin (CM1432)
Brad Martin (BM1297)
Christopher Martin (CM1262)
Donna Martin (DM970)
Louis Martin (LM1593)
Kenneth Martin (KM1523)
Kenneth Martin (KM1522)
Donna Martin (DM1478)
Gail Martin (GM853)
Eugene Martin (EM868)
Robert Martin (RM742)
Gary Martin (PETITION A)
Karen Martin (PETITION A)
Barb Martin (PETITION A)
Michnel Martin (PETITION A)
Portia Martin (PETITION B)
Jim Martin (PETITION B)
Theresa Martin (161)
Duane Martin (161)
Rick Martin (PETITION E)
Nancy Martin (PETITION E)
Donnie Martin (PETITION E)
Rick Martin (PETITION E)
Barb Martin (PETITION E)
Bob Martindale (PETITION E)
Louis Mason (PETITION E)
Gary Masterson (GM865)
Roger Mathew (RM803)

Kristie Mathews (PETITION E)
Amy Maurer (AM687)
Mike Mawson (PETITION E)
William Maxwell (WM1193)
Royce May (RM254)
Bruce May (BM415)
Robert May (RM75)
Jim May (JM1027)
Patsy May (PM1019)
Brad May (PETITION A)
Kitty May (PETITION D)
Karen May (PETITION D)
Tom May Lisa Dalton (PETITION E)
Mike May (PETITION E)
Bernie May (PETITION E)
Royce May (PETITION E)
Bruce May (PETITION E)
Karla May (PETITION E)
John McBride (PETITION A)
Sheryl McBride (PETITION A)
Kevin McBride (PETITION B)
Bob McCain (BM506)
B. McCameron (PETITION A)
Tim McCameron (PETITION A)
Donny McCart (PETITION A)
Chris McCart (PETITION A)
Annette McCart (PETITION A)
Raymond McClaren (RM628)
Ronald McClaren (RM634)
David McClelland (DM899)
Carol McCloud (PETITION A)
Doug McComb (DM1294)
Stephen McCombs (SM662)
William McConaha (WM1118)
Gordon McCord (GM1171)
Joe McCord (JM1405)
Mike McCoy (MM977)
Rick McCracken (PETITION E)
Debbie McCray (PETITION E)
Melvin McCullough (MM1489)
L.V. McDaniel (LM375)
Merle McDaniel (MM1371)
Gary McDonald (GM70)
Marty McDonald (161)
Danielle McDonaold (PETITION E)
James McEwen (JM1425)
Lilly McFarland (PETITION E)
Jill McFarland (PETITION E)
Scott McFarland (PETITION E)
Kenny McFarland (PETITION E)
Dana McGill (DM841)
Josh McGill (PETITION E)
Jamie McGill (PETITION E)
Tim McGill (PETITION E)
Gary McGill (PETITION E)
Kristi McGillem (KM563)
Richard McGowen (RM224)
Neva McGuire (NM486)
Chuck McGuire (PETITION A)
Richard McIlvaine (161)
Denny McIntosh (DM217)

Ken McKey (PETITION E)
Candice McKing (CM1162)
Cathy McKinney (CM53)
Terry McKinney (TM1391)
Charles McKnight (CM830)
Barbara McKnight (PETITION E)
Leslie McMahon (PETITION E)
Sandra McMillin (SM483)
Jerry McMindes (JM851)
Annabelle McNeely (AM907)
Larry McNoble (PETITION E)
James McPhereson (PETITION E)
Vicki McPherson (PETITION E)
Robert McPike (RM448)
Thelma McPike (TM354)
Jerry McPike (JM630)
J.D. McPike (PETITION A)
Tina McPike (PETITION A)
Bob McPike (PETITION A)
Nick McPike (PETITION A)
Karen McPike (PETITION D)
Randy McPike (PETITION D)
Robert McPike (PETITION E)
Josh McWhirter (JM1331)
Autumn McWhirter (AM1006)
Jerry Meadows (161)
Deborah Medaris (PETITION A)
Mark Medaris (PETITION A)
Cecil Melton (PETITION A)
Paul Melton (PETITION A)
Bryan Melvin (PETITION B)
Gilberto Mercimontes (GM1471)
Crystal Merkley (CM604)
Darlene Merkley (DM624)
Laurie Merkley (LM624)
Thomas Merkley (TM624)
Jennifer Merkley (JM624)
David Merkley (DM624)
Stephen Merkley (SM624)
J. Merkley (JM600)
Jason Merrell (JM701)
Russell Merrill (PETITION A)
Don Merrion (DM1583)
Robert Metz (RM462)
Marvin Michael (MM1547)
Jan Michael (JM779)
Heather Michael (PETITION A)
Allan Michalow (AM329)
Richard Mike (PETITION E)
Ed Mikeis (PETITION A)
Jerry Miller (JM293)
Edmund Miller (EM626)
Jane Miller (JM350)
Margaret Miller (MM1132)
J. Miller (JM1374)
Debra Miller (DM1210)
Daniel Miller (DM1552)
Morma Miller (MN861)
Mark Miller (MM877)
Jerry Miller (JM749)
Carole Miller (CM758)

Daniel Miller (DM763)
Jerry Miller (JM1030)
Dennis Miller (DM1026)
Carl Miller (161)
Tommy Miller (161)
Mary Miller (PETITION C)
Marian Miller (PETITION E)
Chales Miller (PETITION E)
Tracy Miller (PETITION E)
Edward Miller (PETITION E)
Elonnede Milligan (EM157)
Tammy Milligan (PETITION A)
Paul Mills (PM811)
John Mills (PETITION B)
Larry Mills (PETITION E)
Larry Mills (PETITION E)
Pam Mills (PETITION E)
Brenda Mills (PETITION E)
Keith Milt (KM1352)
James Minnis (JM613)
John Minnix (JM757)
Glen Mitchel (PETITION D)
Hugh Mitchell (HM273)
Lee Mitchell (LM766)
Gary Mitchell (PETITION A)
Michael Mitchell (PETITION E)
Paul Mitchell (PETITION E)
Gary Mitchell (PETITION E)
Phillip Moffatt (PETITION C)
Kaylie Moher (PETITION A)
C. Molden (CM1528)
Gregory Molder (GM1506)
Edwin Moll (EM1153)
Edwin Moll (EM774)
Heather Monk (HM456)
Lanny Monroe (LM42)
Bryan Montgomery in a letter with six signatures (BM505)
Rodney Montgomery (RM378)
Danny Moody (PETITION A)
Clifford Moon (PETITION A)
Frank Moore (FM137)
Marc Moore (MM494)
Cathy Moore (CM470)
Devon Moore (DM437)
Dustin Moore (PETITION A)
Mary Moore (PETITION E)
John Moore (PETITION E)
Yolanda Morgan (YM1420)
Mike Morris (PETITION A)
Marry Morris (PETITION E)
Bill Morris (PETITION E)
Edgar Morrison (PETITION A)
Craig Mosburg (CM682)
Corey Mosier (CM663)
Eric Mott (EM1519)
Dale Moughler (DM781)
Rebecca Mounce (PETITION A)
Danny Mounce (PETITION A)
Bert Mounce (PETITION A)
Bert Mounce (PETITION A)
Bert Mounce (PETITION A)

Richard Mountcastle (RM689)
Farmer Mullins (FM1064)
Kathleen Mulso (KM1014)
James Munciesr (JM1141)
Ed Mundy (PETITION A)
Crystal Mundy (PETITION A)
Kyle Mundy (PETITION A)
Robert Mundy, Ron Killiens, and Damen Walt (MKW539)
Melissa Murphey (PETITION E)
Kenneth Murphy (KM1334)
Michael Murphy (PETITION A)
Mike Murphy (PETITION E)
Angela Myers (AM260)
Leon Myers (LM107)
Lori Myers (LM1457)
Terrie Myers (TM818)
Jack Myers (JM750)
Angela Myers (161)
Kevin Myers (PETITION D)
Jennifer Myers (PETITION E)
Mike Mynatt (PETITION E)
Steven Mynhier (SM854)
David Nail (DN1539)
Don Naugle (DN437)
John Nead (JN230)
Michael Neal (PETITION E)
Roger Neely (161)
Debbie Neely (161)
Jimmy Neeriemer (JN1443)
Steve Neldeer (STN1001)
Jeremy Nelson (JN614)
Michael Nelson (MN1434)
Nancy Nelson (NN686)
Helen Nelson (PETITION A)
Terry Nessmer (TN624)
Fred Nethercutt (FN1401)
Gary Neuman (GN1342)
Terry Newlin (PETITION B)
Carrie Newlin (PETITION B)
Danny Newlin (PETITION B)
Jack Newman (PETITION E)
Lisa Newman (PETITION E)
Keith Newnum (KN1445)
Kenneth Newton (KN660)
Kathryn Newton (PETITION A)
Gary Nicholas (GN296)
Richard Nicholson (RN873)
Ann Nicholson (PETITION A)
Angel Nicholson (789)
Wendell Nikirk (WN116)
Edward Nilson (PETITION E)
Bonnie Nixon (PETITION B)
Thomas Noble (TN1446)
Donald Nolan (PETITION A)
Sharon Nolan (PETITION D)
Larry Noll (LN1386)
Don Noll (DN1344)
John Noll (JN1327)
Karen Noll (KN1320)
Chad Noll (CN1570)
Lori Norklun (PETITION A)

Eric Norklun (PETITION A)
Shelly Norman (SN1001)
Randy Norman (PETITION E)
Gerald Norris (GN1180)
Jerry Norris (PETITION A)
Terri Norris (PETITION A)
Jerry Norris (PETITION A)
Chris Norris (PETITION B)
Helen Norton (PETITION A)
Uriah Novarro (UN787)
Don Nunemaker (DN232)
Shirley Nunley (PETITION E)
Vallonia Nursery (VN191)
Thomas O'Banion (TO1435)
Joe O'Daniel (JO1519)
Carl O'Farley (PETITION A)
Steven Oakes (PETITION E)
James Oberholtzer (JO337)
Amanda Ochs (PETITION A)
Donald Oglesbee (DO1145)
B. Ohe (PETITION A)
Scott Oldham (SO1423)
Maurice Oldham (PETITION D)
Pam Oldham (PETITION E)
Danielle Oliver (PETITION E)
S. Olling (O1429)
Angie Olver (PETITION B)
Shane Ooley (PETITION A)
Mr. or Mrs. Gerberding (G372)
Marilyn Oren (PETITION B)
Lisa Osborne (PETITION E)
Rick Osmon (PETITION E)
Ervin Otte (EO998)
Ervin Otte (EO430)
Brian Otwell (161)
Steve Owens (PETITION A)
Curtis Owens (PETITION E)
Dennie Oxley (DO640)
Andrea Pace (AP905)
Nick Pace (PETITION E)
Jeffrey Padgett (JP25)
William Padgett (WP1321)
Virgil Padgett (PETITION E)
Hoosier Pallet Recycling (HPR890)
Competitive Pallet Service (CPS731)
Kurt Palmer (KP767)
Robert Pankop (RP1448)
Bernard Parker (BP98)
Don Parker (161)
Brett Parker (PETITION E)
William Parkes (PETITION A)
Valarie Parkes (PETITION A)
Lawrence Parks (LP762)
Daniel Parlette (DP1091)
Erica Parsons (EP787)
Christopher Pate (CP711)
Jennifer Pate (JP715)
Theresa Pate (PETITION A)
Ruby Patten (PETITION D)
Ryan Patterson (RP506)
Robert Patterson (PETITION E)

Susie Patton (PETITION A)
Kristin Patton (PETITION E)
Kevin Patton (PETITION E)
Charles Payne (PETITION A)
Brenda Payne (PETITION A)
Brent Payton (PETITION A)
Gary Peach (GP1418)
Tim Peckin (TP1304)
Zach Peek (ZP787)
Scott Pelath (SP67)
Daniel Pelham (DP1415)
Randy Pemberton (PETITION A)
Peter Pemberton (PETITION A)
David Pemberton (PETITION E)
Eudoris Pennington (EP1136)
Mary Pennington (MP1034)
C. Peteron (CP1526)
Mark Peters (PETITION E)
Virginia Peterson (VP1365)
Milton Petrie (161)
Nathan Pfefferkorn (NP1473)
Randy Phelp (PETITION A)
Stanley Phillip (PETITION D)
Thomas Phillip (PETITION E)
Rick Phillip (PETITION E)
Onida Phillips (PETITION A)
Allison Phillips (PETITION D)
Nora Phillips (PETITION D)
Tom Phillips (PETITION E)
David Phillips (PETITION E)
Tom Phillips (PETITION E)
Jane Phillips (PETITION E)
Paul Phipps (PP237)
John Pickens (PETITION E)
Donald Picou (DP392)
Steven Pierce (SP1294)
Roger Pierce (PETITION A)
Kim Pierce (PETITION E)
Thaddeus Pietraszak (TP1106)
Barbara Piller (BP928)
Michelle Pippenger (MP1218)
Tom Pizarck (TP1265)
Mary Jane Plummer (MJP46)
Robert Plummer (PETITION E)
Loretta Polaski (PETITION A)
Larry Pontius (LP975)
Cynthia Porter (PETITION A)
Carl Porter (PETITION B)
Deanna Porter (PETITION B)
Barry Porter (PETITION E)
Susan Porter (PETITION E)
Michael Portteus (MP432)
Michael Posthuma (MP885)
Ray Potts (RP621)
Lloyd Powell (LP252)
Larry Powell (LP1057)
James Powell (JP771)
Randall Powell (PETITION A)
Jeff Powell (PETITION E)
Bernard Powell (PETITION E)
Phillip Powlen (PP1181)

Robert Pray (161)
Charles Precht (CP1093)
Brian Presley (BP1330)
Bill Presley (BP1273)
Bill Presley (BP1135)
Matt Previtt (161)
Harry Prewitt (PETITION E)
Kaci Prewitt (PETITION E)
Karen Price (KP923)
Lynetta Price (PETITION D)
Richard Price (PETITION E)
Tara Pridemore (PETITION A)
Jason Pridemore (PETITION A)
Carol Prince (PETITION A)
Kent Pritchard (PETITION A)
Amber Pritchard (PETITION A)
Amber Pritchard (PETITION A)
Mike Pritchett (MP993)
Mike Pritchett (MP325)
Sarah Prosa (PETITION A)
Stephen Provo (SP1504)
Winford Pruett (WP112)
Betty Pruett (PETITION A)
William Pruett (PETITION B)
James Pruett (PETITION B)
Tony Pruitt (PETITION A)
Robert Pton (789)
Michael Pugh (PETITION A)
Kory Pugh (PETITION E)
Pat Pugh (PETITION E)
Tony Pundy (PETITION A)
Terry Purdy (PETITION A)
Anita Purdy (PETITION E)
Troy Purdy (PETITION E)
Tony Purdy (PETITION E)
Roger Purkhiser (RP22)
Ralph Purkhiser (RP23)
James Purkhiser (PETITION A)
Gene Purlee (GP333)
William Pursell (WP386)
North Putnam High School (NPHS732)
Don Quackenbrush (PETITION D)
Missy Qualkenbush (PETITION A)
Sandy Qualkenbush (PETITION B)
Randy Qualkenbush (PETITION B)
Dennis Qualkenbush (PETITION B)
Russell Qualkenbush (PETITION B)
Logan Quinn (LQ787)
Raymond Radcliff (PETITION C)
Jamie Radcliff (PETITION E)
Charles Radcliff (PETITION E)
John Raeburn (JR37)
Dale Rainey (PETITION A)
Linda Rainey (PETITION E)
Delores Rainey (PETITION E)
Patti Raley (PR904)
Jarrod Ramer (JR1294)
Marsha Ramer (MR1581)
Gene Ramey (PETITION A)
James Ramsay (JR643)
Chris Ramsey (CR155)

Chris Ramsey (PETITION E)
B.J. Ramsey (PETITION E)
Tina Randolp (PETITION A)
Joe Randolph (JR118)
Dana Randolph (PETITION A)
Charles Randolph (PETITION A)
Lacie Randolph (PETITION A)
Wade Raney (PETITION A)
Tara Rasche (TR787)
Darlene Ratliff (PETITION A)
Traci Ravovich (PETITION A)
Sharon Ray (PETITION A)
Maysel Ray (PETITION A)
Wayne Ray (PETITION A)
Otis Ray (PETITION A)
Don Ray (PETITION C)
Bradley Recht (BR1294)
Dennis Redding (DR1287)
Helen Redicker (HR455)
Jeremy Reece (JR1251)
David Reed (DR946)
Robert Reed (RR146)
Andy Reed (AR584)
Kimberly Reed (KR1307)
Tom Reed (TR1146)
Kelly Reed (KR1089)
David Reed (DR1477)
Kelly Reed (PETITION E)
Charles Rees (CR1385)
David Reese (PETITION E)
John Reeves (JR636)
John Rehm (JR709)
John Rehm (JR714)
Ray Reichard (RR1035)
Misty Reinhart (PETITION B)
Brett Reis (BR620)
Jerry Renneker (JR939)
Scott Renner (SR1411)
Kenny Reuter (PETITION A)
Tammy Reuter (PETITION A)
Terry Reutman (TR655)
Lisa Reynolds (PETITION A)
Erma Reynolds (PETITION A)
Brenda Reynolds (PETITION A)
Eric Reynolds (PETITION A)
Robert Reynolds (161)
Brian Rhodes (PETITION A)
Steve Rhorer (PETITION A)
Floyd Richards (FR259)
Jerry Richardson (JR441)
Rhonda Richardson (RR1494)
Lisa Riddell (LR55)
Barbara Riemensperger (BR1467)
Donald Rihm (DR1409)
Rita Riley (RR126)
Glen Riley (GR135)
Terry Riley (PETITION C)
Jim Riley (PETITION C)
Jon Ringer (JR805)
Tim Ritchison (PETITION A)
Philip Ritter (PETITION E)

Neil Roark (NR1227)
Jeremy Robbins (JR1326)
Ben Robbins (PETITION A)
Dorrie Robbins (PETITION A)
Glenn Robbins (PETITION A)
J.K. Robbins (161)
John Robbins (PETITION E)
Paul Robert (PR1350)
Mark Roberts (MR182)
Ray Roberts (PETITION A)
Robbie Roberts (PETITION A)
Danny Roberts (PETITION B)
Dan Roberts (PETITION E)
Brian Roberts (PETITION E)
Robin Roberts (PETITION E)
Walter Roberts (PETITION E)
Shelley Roberts (PETITION E)
Loren Roberts (PETITION E)
Matthew Roberts (PETITION E)
Greg Roberts (PETITION E)
Theresa Roberts (PETITION E)
Joe Roberts (PETITION E)
Wanda Roberts (PETITION E)
Robbie Roberts. (PETITION E)
Douglas Robertson (DR1155)
David Robertson (DR1138)
Alice Robertson (AR1005)
Misty Robertson (PETITION E)
Kevin Robertson (PETITION E)
Nancy Robertson (PETITION E)
Rim Robertson (PETITION E)
Chad Robertson (PETITION E)
Jack Robinson (JR506)
Wayne Robinson (PETITION E)
Cory Robinson (PETITION E)
Anthony Robinson (PETITION E)
Ruth Robinson (PETITION E)
Kathy Robison (PETITION E)
Gary Robling (GR1328)
Brenda Rodgers (PETITION B)
Kathy Rodman (PETITION A)
Kay Rodman (PETITION E)
Bruce Rodman (PETITION E)
Waitis Rogers III (WR1390)
Kathleen Rogers (KR474)
Tobie Rogers (PETITION A)
Todd Rogers (PETITION A)
Donna Rohman (DR1069)
Seven Roll (PETITION D)
David Rollins (PETITION A)
Mike Rollins (161)
Josh Rollins (161)
Cameron Rollins (161)
Connie Rollins (161)
Tom Rollins (161)
Linda Rollman (PETITION A)
Lawrence Rome (LR1379)
Kevin Romzek (KR1051)
Claude Roop (PETITION A)
Rosetta Root (PETITION E)
Paul Root (PETITION E)

Raymond Roscoe (RR1223)
Jan Rosenbaum (PETITION A)
Jackie Rottger (JR1137)
Gregg Roudebush (GR810)
Loretta Rouse (PETITION C)
Jerry Rowland (JR145)
Mary Roy (PETITION E)
Richard Rumple (RR326)
Eric Rusby (ER388)
Scott Rush (PETITION E)
David Russell (DR358)
Doris Russell (DR122)
Jeff Russell (PETITION A)
Jim Russell (PETITION A)
Richard Rutledge (RR1018)
Nick Ryan (PETITION A)
Sue Ryan (PETITION E)
Paul Salcius (PS989)
Lisa Sallade (PETITION E)
Sandra Salmon (PETITION B)
Larry Salmon (PETITION B)
Stanley Salmon (PETITION B)
Rachel Saltsgaver (RS275)
Jimmie Sams (PETITION A)
Charles Sanders (CS251)
Kenny Sanders (PETITION A)
Cheryl Sanders (PETITION A)
Kenny Sanders (PETITION B)
William Sanders (PETITION B)
Jeff Sands (JS1280)
Holly Sands (HS1525)
Dave Sargent (DS115)
Richard Sargent (RS610)
Jean Sauntry (JS1076)
Save the Dunes Council (SDC951)
Alfred Schaefer (AS596)
Gale Schaffer (GS1113)
Curt Scharold (CS1140)
Judith Scheree (JS1001)
Eric Scherscher (PETITION A)
Eric Scheumann and Julie McColluch (SM382)
Bill Scheumann (BS1048)
Raymond Schick (RS136)
Donja Schindler (DS1380)
Sherri Schipp (SS561)
John Schipp (JS562)
Scott Schipp (SS594)
Glen Schleneker (GS774)
Kevin Schmitt (KS605)
Kim Schnell (KS787)
Lisa Schocke (PETITION C)
Dan Schory and Carol Marboch (DSCM1116)
Shari Schrader (SS1372)
Calvin Schrader (PETITION A)
Calvin Schrader (PETITION E)
Samantha Schreiber (PETITION A)
Cecilia Schroeder (CS1088)
Wayne Schroeder (PETITION A)
Charlene Schroer (CS1476)
Al Schultz (AS874)
Patti Schumacher (PETITION E)

Donald Schuman (DS909)
Nicole Schutte (NS793)
Richard Schwartz (RS515)
Leroy Schwartz (LS593)
Frank Schwartz (FS597)
Richard Schwartz (RS1206)
Mindy Scott (MS51)
Chris Scott (CS38)
Paul Scott (PS271)
Mike Scott (MS305)
Sam Scott (SS1195)
Michael Scott (MS859)
Louise Scott (PETITION A)
Wilson Scott (789)
Kathy Scott (PETITION E)
Ron Scowden (RS783)
Art Scully (161)
David Sealott (PETITION E)
Jerry Searfoss (JS1353)
Mike Sears (MD1205)
Janet Sears (PETITION A)
Carol Sears (PETITION E)
Robert Sears (PETITION E)
Cindy Sears (PETITION E)
Tim Sebree (PETITION E)
Kevin Seckinger (KS1208)
Jimmie Secrest (JS676)
Lyda Secuda (LS1587)
Tammy Sedan (TS1407)
Chris See (PETITION A)
Doug Seitz (DS603)
Brian Seitz (BS557)
Danielle Self (PETITION A)
David Self (PETITION A)
John Senefeld (JS1156)
Delores Settles (PETITION A)
Mary Seufert (MS653)
Edward Sevits (ES1518)
Cathy Seymoure (CS651)
Cathy Seymoure (CS210)
Marilyn Shaffer (MS959)
Ross Shaffer (RS956)
Mike Shaffer (PETITION E)
Donald Shake (PETITION A)
Ralph Sharp (RS414)
Ralph Sharpe (PETITION A)
Dana Shasten (PETITION A)
William Shasten (PETITION A)
Theron Shaw Jr. (TS200)
Don Shaw (DS150)
D. Shaw (DS565)
Mike Shaw (PETITION A)
Linda Shedd (PETITION E)
Marvin Sheese (MS294)
Gary Sheese (GS1286)
Scott Sheese (SS1058)
Terry Shepard (PETITION E)
Dick Sheppard (DS1543)
Dale Shew (DS760)
James Shingle (PETITION C)
Brenda Shipman (PETITION A)

Steve Shireman (SS1452)
Justin Shirley (PETITION A)
Paul Shirley (PETITION A)
Darrin Shirley (PETITION A)
Clyde Shirley (PETITION E)
Michael Short (MS866)
Samuel Short (PETITION B)
Eric Shoults (PETITION A)
Kim Showalter (PETITION B)
Janice Siepler (JS81)
No Signature (NS690)
No Signature (NS691)
Jeannette Silvers (JS101)
Jeanne Silvers (JS94)
Ron Silvers (PETITION A)
Roe Simmerman (RS408)
Jaynell Simmons (PETITION A)
John Simmons (PETITION B)
Sherry Simmons (PETITION E)
Earl Simon (ES1549)
Charles Simon (CS1487)
Lorie Simon (LS804)
Josie Simpson (PETITION A)
Owen Simpson (PETITION C)
Marsha Simpson (PETITION C)
Lisa Simpson (PETITION E)
Lori Sims (PETITION B)
Teresa Sims (161)
John Singer (PETITION E)
Neil Sipes (PETITION B)
Kelly Sipes (161)
Andy Sipes (161)
Debra Sizemore (PETITION A)
Dan Skaggs (DS160)
Chester Skeen (CS1588)
Harley Skirvin (HS322)
Chris Slonaker (CS674)
Jim Small (JS1204)
Jim Small (JS740)
Heather Smart (HS695)
Steve Smiley (PETITION A)
Ann Smith (AS262)
David Smith (DS424)
Gary Smith (GS451)
R. Smith (RS308)
David Smith (DS1289)
Sharon Smith (SS1270)
Jeff Smith (JS1203)
Rita Smith (RS962)
James Smith (JS1500)
David Smith (PETITION A)
Larry Smith (PETITION A)
Dean Smith (PETITION A)
Ronnie Smith (PETITION A)
Joshua Smith (PETITION A)
Boyce Smith (PETITION A)
John Smith (PETITION A)
Kay Smith (PETITION A)
Alice Smith (PETITION A)
Allen Smith (PETITION A)
Travis Smith (PETITION A)

Kris Smith (PETITION A)
Michael Smith (MS506)
Chris Smith (PETITION B)
Annetta Smith (789)
Jessica Smith (789)
Brenda Smith (161)
Karen Smith (PETITION E)
Betty Smith (PETITION E)
Michael Smith (PETITION E)
Lori Smith (PETITION E)
Jeff Smith (PETITION E)
Tim Smith (PETITION E)
Vincent Smoch (VS1359)
James Smoles (PETITION A)
Paul Smoot (PS61)
Cynthia Smuck (CS1595)
Wayne Snyder (WS194)
Bruce Snyder (BS858)
Todd Snyder (TS716)
Holly Soders (PETITION E)
Lewis Soloe (LS1590)
Roy Sorg (RS1182)
Heather Sorg (PETITION A)
Karen Sorrell (PETITION A)
Fred Sorrells (FS1366)
Charlote Sorrells (PETITION A)
Kurt Sorrells (PETITION B)
Zachary Sovern (ZS147)
Kenneth Sovern (KS971)
Tanya Sovern (PETITION A)
Kenneth Sovern (161)
Brian Sowder (PETITION A)
Joe Sowders (PETITION A)
April Sowders (PETITION E)
Donna Sowders (PETITION E)
William Sowders (PETITION E)
Amy Sowders (PETITION E)
Jacob Sowders (PETITION E)
April Sowders (PETITION E)
Russell Sparkman (RS935)
Elda Sparkman (ES940)
William Sparks (WS821)
Stacey Sparks (PETITION A)
Kevin Spear (PETITION A)
Lana Spears (PETITION A)
Mary Speer (PETITION D)
Jon Spencer (JS611)
Jason Spicer (PETITION A)
Ronald Spiegel (RS1102)
Dana Spradlin (DS246)
Dana Spradlin (DS1560)
Angie Springer (AS1292)
Mark Springsteen (MS1310)
Mark Springstun (MS546)
Darrell Sprinkle (DS606)
Darrell Sprinkle (DS880)
Charlotte Sproces (PETITION A)
Mike Stacy (MS364)
Evelyn Stafford (ES47)
Tom Staggs (PETITION E)
Marie Staley (PETITION E)

Judy Stalker (PETITION A)
Fred Stanford (FS1031)
Stephen Stanley (PETITION E)
Connie Stanley (PETITION E)
S. Stannard (PETITION E)
Clinton Stannard (PETITION E)
Laura Stapert (LS1283)
Mike Stark (MS318)
Martha Starr (789)
Joseph Starr (789)
Frank Stayer (FS1216)
Karen Stealey (KS346)
Brent Steele (BS13)
Mary Steele (MS276)
Van Stephens (VS548)
Catherine Stephenson (PETITION E)
Mary Stephenson (PETITION E)
Wesley Stephenson (PETITION E)
Sally Stevens (SS615)
Teri Stevens (PETITION A)
Kenneth Stevens (PETITION A)
Christopher Stevens (PETITION B)
Michael Stevens (PETITION E)
Ivan Stewart (IS173)
Frank Stewart (PETITION A)
Max Stewart (PETITION A)
Danny Stewart (PETITION A)
Sally Stewart (PETITION A)
Misty Stewart (PETITION B)
Mark Stier (MS142)
Joseph Stierwalt (JS684)
Jayne Stiffler (JS1187)
Jayne Stiffler (JS1197)
Ed Stiffler (PETITION E)
J.R. Stigall (PETITION A)
Lora Stine (LS287)
Steve Stiner (SS780)
Bill Stip (PETITION A)
Nathan Stipp (PETITION A)
Jessie Stitsworth (JS1277)
Chip Stitsworth (CS1276)
Dale Stockman (DS1164)
Jane Stockman (PETITION E)
Jane Stockman (PETITION E)
Larry Stockton (LS972)
M. Stoddard (MS1298)
Pam Stoelting (PS658)
Jerry Stoelting (JS658)
Cecil Stogdil (PETITION E)
Emma Stogdill (PETITION E)
Cecil Stogdill (PETITION E)
Breda Stogsdill (PETITION E)
James Stogsdill (PETITION E)
Stephen Stone (SS178)
Dale Stone (DS1122)
Terry Stone (PETITION A)
Debbie Stone (PETITION A)
Sharon Stone (PETITION B)
Tony Stone (PETITION B)
Joey Stone (789)
Jerry Stone (789)

Stoney Acres Woodworking (SAW694)
William Stott (WS1519)
Michelle Stout (MS204)
Steven Stroud (PETITION A)
Carl Stroud (PETITION C)
Katherine Stroud (PETITION C)
Rex Stroud (PETITION E)
Mike Strunk (MS119)
Jim Strunk (PETITION A)
Mike Strunk (PETITION A)
K. Stubblefield (KS1537)
Roger Stucker (PETITION A)
Dennis Stutzman (DS1159)
Craig Stutzman (CS1123)
Herman Stutzman (HS1055)
Wendelin Sue Holmes (WH92)
John Suglivan (PETITION E)
Courtney Sullivan (161)
Gary Sullivan (PETITION E)
Billy Sullivan (PETITION E)
Cheryl Sullivan (PETITION E)
Floyd Sullivan (PETITION E)
John Sullivan (PETITION E)
Randal Sullriav (PETITION E)
Charlie Sullvan (PETITION E)
Nancy Summer (PETITION B)
Penny Summers (PETITION B)
Joe Summers (PETITION B)
Dottie Summitt (DS356)
Richard Sutton in a letter containing a list of eight Clay City residents
Rachel Sutton (PETITION B)
Brian Sutton (PETITION B)
Belinda Swango (PETITION E)
Mike Swango (PETITION E)
Jon Swanson (JS1498)
Richard Swayze (PETITION B)
Fran Swayze (PETITION B)
Joe Sweeney (JS1481)
James Swim (JS1240)
Bob Switch (PETITION E)
Charlie Switch (PETITION E)
Debbie Sykes (PETITION E)
Diane Szczepanski (DS1170)
Louis Tackett (PETITION E)
Randy Tailer (RT506)
Patty Talcott (PT207)
Billy Talcott (PETITION C)
Gene Tatman (GT826)
Peggy Taylor (PT482)
James Taylor (JT875)
Steve Taylor (PETITION A)
Paul Taylor (PETITION B)
Troy Taylor (789)
Kyle Taylor (PETITION E)
Kevin Taylor (PETITION E)
Regina Taylor (PETITION E)
Marilyn Taylor (PETITION E)
Bonnie Taylor (PETITION E)
Mark Taylor (PETITION E)
Don Taylor (PETITION E)
Travis Taylor (PETITION E)

Stephen Tegtmeyer (ST1059)
Nancy Telgemeyer (NT342)
Walter Temple (WT809)
Beth Terrell (BT159)
Fran Terrell (PETITION A)
Shirley Terrell (PETITION A)
Joe Terrell (PETITION A)
James Terrell (PETITION A)
Alice Terrell (PETITION D)
Brian Terrell (PETITION E)
Grace Terrell (PETITION E)
Cassandra Terry (PETITION A)
Helen Terry (PETITION B)
Carroll Terry (PETITION B)
James Terry (PETITION D)
Judith Terry (PETITION D)
Richard Thacker (RT1167)
James Tharp (JT1351)
C. Thomas (PETITION A)
Adam Thomas (PETITION A)
Gerrit Thompson (GT488)
Bill Thompson (BT1402)
Earl Thompson (ET1313)
Randy Thompson (RT1086)
Nelva Thompson (NT703)
David Thompson (DT705)
R. Thompson (PETITION E)
Kathy Thompson (PETITION E)
Robert Thomson (PETITION A)
Alfred Thralls (AT1198)
Doug Threet (PETITION E)
Toby Tincher (PETITION A)
Phil Tincher (PETITION A)
Rita Tincher (PETITION E)
William Tippie (WT1461)
Kelly Tipton (KT265)
Rita Tipton (789)
Wes Tipton (PETITION E)
Richard Tirley (RT677)
Tim Toborg (TT220)
Leo Toby (LT453)
Pamela Todd (PT447)
Danielle Todd (PETITION D)
Mary Todd (PETITION E)
Thomas Todd (PETITION E)
Carie Todd (PETITION E)
Danny Todd (PETITION E)
Scotty Tolbert (PETITION C)
Jane Tolbert (PETITION C)
Barbara Tolbert (PETITION E)
Joe Toliver (PETITION A)
Mark Toliver (PETITION A)
Andrea Tolliver (PETITION A)
Martin Tow (MT367)
Martin Tow (PETITION B)
Gary Townsend (GT685)
Amber Townsend (PETITION A)
Timothy Trabel (TT733)
Ryan Tracy (RT1357)
Audobon Trails Coach Lines (ATCL727)
CV Tree Service (CVTS718)

Teresa Trick (TT1157)
Mike Triplett (PETITION A)
Loland Troutman (PETITION B)
Bonnie Troutman (PETITION B)
Laura Troutman (PETITION B)
Bonnie Troutman (PETITION B)
Jim Troutman (PETITION B)
Pat Troutman (PETITION B)
Jeff Troutman (PETITION B)
Janet Trowbridge (PETITION E)
Richard Troyes (PETITION A)
Tammy Troyes (PETITION A)
Judy Tucker (PETITION A)
John Tuddy (JT452)
John Tuddy (JT1404)
Kimberly Tuddy (KT1395)
Angelia Tuell (PETITION C)
Michey Tuell (PETITION C)
Jenny Tuell (PETITION C)
Eugene Turczynski (ET1105)
Patty Turner (PETITION A)
Randy Turner (PETITION A)
Dianna Turner (PETITION D)
Jeff Turner (PETITION E)
Tim Turner (PETITION E)
Nancy Turner (PETITION E)
Timothy Turpin (PETITION A)
Erwin Tuttle (PETITION C)
Chris Underwood (PETITION E)
Mike Van Winkle (MVW598)
David Van Gorder (DVG1294)
Kent Van Gorder (KVG1294)
Joe Van Wye (JVW1282)
Duane Van Houten (DVH825)
R.J. VanEvery (RJV1338)
Duane VanHouten (DVH571)
Jack Vaughn (JV261)
Delores Vaughn (DV398)
Sandra Vaught (PETITION A)
Cynthia Veiseman (CV1293)
John Verhunce (JH1225)
Randy Verkler (RV852)
Harriet Verkler (HV864)
William Verseman (WV1285)
Lynn Vesely (LV1431)
Harold Vice (HV238)
Vigo County Park and Recreation Department (VCPRD637)
Mark Vincent (MV1190)
Rachel Voegel (RV787)
Charles Voegul (CV608)
Chrystal Vogel (CV1278)
Walter Voly (WV1408)
Brian Vonderheide (BV493)
Dan Voyles (DV87)
Martin Wachtskilter (MW1438)
Sanford Wade (SW90)
Kim Wade (KW89)
Michael Wade (161)
Lynn Wade (PETITION E)
George Wade (PETITION E)
David Wade (PETITION E)

Judith Waggoner (JW601)
Jon Wagner (JW816)
Heidi Wagner (PETITION E)
Robert Wagner (PETITION E)
L.D. Wagoner (PETITION A)
Warren Walborn (WW952
Paul Walden (PETITION A)
Mark Walerko (MW933)
Phillip Walker (PW426)
Brad Walker (BW212)
Robert Walker (RW1591)
Donald Walker (DW720)
Bryon Walker (PETITION A)
Anita Walker (PETITION E)
Christa Walls (CW706)
Joy Walt (JW518)
Bill Walt (PETITION A)
Dout Walten (PETITION C)
Geneva Walter (GW698)
Deonna Walters (PETITION A)
Greg Walters (PETITION E)
Glenda Walton (PETITION B)
Darla Wampler (DW40)
Judith Wampler (JW1466)
Phyllis Wampler (PW1104)
Eugene Wampler (EW870)
Mark Waninger (MW1281)
Greg Ward (GW48)
Mike Ward (MW97)
Tim Ward (PETITION E)
Cindy Ward (PETITION E)
Jim Ward (PETITION E)
Nolan Warner (NW1473)
Ron Warren (PETITION B)
Cliff Warren (PETITION B)
Linda Watson (161)
David Watts (PETITION E)
Robert Way (PETITION E)
Kevin Way (PETITION E)
Jamie Wayman (161)
Thomas Weatherwax (TW1462)
Angela Weaver (PETITION E)
Donald Webb (DW1332)
James Webb (JW1312)
Brandon Webb (BW1253)
F. Webb (PETITION B)
Debora Webber (DW1121)
Carl Weber (PETITION A)
Larry Weddel (PETITION A)
Ann Weddle (PETITION D)
Don Wedgewood (PETITION A)
Kenneth Weeber (KW1267)
James Weeber (JW1269)
Toma Weitzel (TW1185)
Lee Welder (PETITION A)
Gary Wellman (GW901)
Ricky Wells (PETITION C)
Shannon Wells (PETITION C)
Jacklyn Wells (PETITION C)
Carson Wells (PETITION E)
Justin Wells (PETITION E)

Duane Welp (DW1403)
Larry Welsh (LW1465)
Cedonia Weninger (PETITION B)
Howard Wente (HW152)
Virgil Werner (VW827)
Scott Werstler (SW883)
Gary Wessel (PETITION E)
Cindy Wessel (PETITION E)
Brian West (BW435)
Lori West (LW467)
John West (JW1347)
W. West (W1426)
Matt West (MW787)
Lori West (PETITION B)
Tony West (PETITION B)
Robert Westover (RW1458)
R. Wever (RW423)
Roland Wever (RW348)
Roland Wever (RW1120)
Jacqueline Whaley (JW496)
Karen Whaley (KW234)
Kenny Wheatley (KW649)
Kenny Wheeler (PETITION A)
Jeanne Wheeler (PETITION E)
Nathan Whetzel (NW1346)
Robert Whisman (RW1416)
Tim White (TW922)
Harold White (PETITION A)
Russell White (PETITION A)
Charles White (PETITION A)
Harold White (PETITION A)
Patty White (161)
Kelsey White (PETITION C)
Edward White (PETITION C)
Tracy White (PETITION E)
Kim White (PETITION E)
Russell White (PETITION E)
Linda Whitted (PETITION A)
Patti Whittington (PW776)
Janet Wigley (PETITION A)
Shelley Wigley (PETITION A)
Richard Wigly (PETITION A)
Marvin Wilkerson (MW704)
Cliff Wilkinson (CW887)
K.W. (last name unreadable) (KW315)
Mark Williams (MW183)
Terri Williams (TW184)
Danny Williams (DW624)
Gerald Williams (GW1551)
Gerald Williams (PETITION A)
Dave Williams (PETITION A)
Bob Williams (PETITION A)
Sue Williams (PETITION A)
Steve Williams (PETITION A)
Tim Williams (PETITION A)
James Williams (PETITION B)
Cynthia Williams (PETITION B)
Jeff Williams (PETITION B)
Ellen Williams (PETITION E)
Harold Williams (PETITION E)
Penny Williamson (PETITION E)

Patricia Willis (PW599)
Samson, Wilma, and Angela Eicher (E1316)
Pamela Wilson (PW1022)
David Wilson (DW299)
Mike Wilson (MW1238)
Jocelyn Wilson (JW1001)
Bobbi Wilson (BW787)
Teresa Wilson (PETITION A)
Charles Wilson (PETITION A)
Mike Wilson (PETITION A)
Bobby Wilson (161)
Terry Wilson (PETITION E)
Catharine Wilt (CW345)
Olga Wiltekind (OW1080)
Pat Winegar (PETITION A)
K.E. Wineinger (PETITION A)
A.F. Wineinger (PETITION A)
Randy Wininger (PETITION B)
Vicki Wininger (PETITION B)
Brian Wininger (PETITION B)
Tammy Wininger (PETITION B)
Merlin Wininger (PETITION B)
Bethann Winnenger (PETITION B)
Patty Winner (PETITION A)
Vernon Wise (VW666)
John Wisley (161)
Marge Wissman (MW1063)
Leroy Wolber (LW796)
Jean Wolf (JW1377)
James Wolff (JW1354)
Bryan Wood (BW1509)
Justin Wood (JW787)
Anita Woodard (AW657)
Max Woodbury (MW1495)
Dale Woodhouse (DW1325)
Robert Woodling (RW28)
Vicki Woods (PETITION A)
Bill Woody (PETITION E)
Suzi Woody (PETITION E)
Jim Woody (PETITION E)
Alice Wooten (AW1189)
Melinda Wornell (PETITION E)
Mike Worthington (MW1413)
Dennis Wortinger (DW104)
Joe Wray (PETITION E)
William Wright (WW82)
Cyril Wright (PETITION A)
Angel Wright (161)
Kenny Wright (PETITION C)
Davey Wright (PETITION C)
Ark Wright (PETITION E)
Marty Wyatt (PETITION A)
Sue Wyhoff (PETITION E)
Jason Wyman (PETITION B)
Max Wymer (MW1150)
Max Wymer (MW1094)
Ernest Wyttenbach (PETITION A)
T. Y. Okosun (TYO235)
John Yakimich (JY1433)
Donald Yates (DY393)
D.C. Yeary (PETITION E)

Blake Yeary (PETITION E)
C.C. Yeary (PETITION E)
Elma Yoder (EY1389)
Harley Yoder (HY1160)
Daniel Yoder (DY719)
Gerald Yoder (GY785)
Jerry Yother (PETITION A)
Anette Young (AY311)
Chris Young (CY564)
Stephanie Young (SY1175)
Marty Young (MY1192)
Stacy Young (SY1111)
Robert Young (RY969)
R. Young (RY1499)
Walter Young (WY729)
Nile Young (NY506)
Troy Young (TY506)
Darrell Young (161)
Tracy Young (PETITION E)
Vernon Young (PETITION E)
Edna Young (PETITION E)
Howard Younger (HY43)
David Zeeks (PETITION A)
Luella Zehr (LZ111)
Jennifer Zehr (JZ787)
Michele Zehr (MZ787)
Melody Ziehill (PETITION E)
John Zile (JZ495)
Aaron Zimmerman (AZ896)
Larry Zoglman (LZ1383)
Rob Zollman (RZ1388)
Don Zumhingst (DZ1194)
Gloria Zwayer (GZ288)

Following is a summary of the comments received and IDEM's responses thereto:

Comments regarding the First Notice of Comment Period

Comment: IDEM should publish notice of rulemaking in the newspaper and ensure that citizens have enough time to get informed and comment on the proposal. (KS346, BB279)

Response: IDEM has met all statutory requirements regarding the publication of the First Notice of Comment Period. Pursuant to Indiana Code 13-14-9-3, notice of a first public comment period was published in the Indiana Register on December 1, 2005. IC 13-14-9-2 requires a comment period of at least 30 days for a first public comment period, which was met by the original First Notice comment deadline of January 3, 2006. Due to the high amount of interest in commenting expressed by citizens, this First Notice of Comment Period was extended through March 3, 2006.

IDEM will publish notices of the two public hearings that will be held on this rulemaking in both the Indiana Register and the Indianapolis Star. Going beyond what is required by law, IDEM will attempt to identify parties potentially interested in the subject matter of this rulemaking and contact these individuals with mailed notices and any additional information regarding new developments. Because there are approximately 7,500 outdoor hydronic heaters in operation in Indiana, and the units are currently unregulated, IDEM was not able to identify and contact individual owners with the First Notice of Comment Period. Parties who provided formal comments on this rulemaking during the First Notice of Comment Period and whose address was discernable were added to the interested parties list for this rulemaking and will be notified regarding the availability of this notice containing draft rule language and the opportunity for public comment. Any party wishing to be added to IDEM's interested parties list may contact Susan Bem, Rule and State Implementation Plan (SIP) Development Section at (317) 233-5697. IDEM appreciates receiving email addresses as part of the contact information, so that we can use email to notify interested parties of future developments regarding this rulemaking.

Comments regarding complaints

Comment: Under certain wind and weather conditions, smoke from an outdoor wood boiler fills the road. (DB1, ER388)

Comment: The notion that smoke from outdoor wood boilers can drift across nearby roadways and block visibility for drivers is false. (WW952, MS318, DM427)

Comment: I've never seen smoke thick enough to obscure roadways from driver visibility. (MS318, MB)

Response: Current administrative rules regarding opacity (326 IAC 5-1) and fugitive dust emissions (326 IAC 6-4) do not specifically address emissions from outdoor hydronic heaters, but may be used to address situations where thick smoke exists or where smoke is visibly crossing property lines. The basic purpose of this rulemaking is to address products of incomplete combustion and particulate matter emissions from outdoor hydronic heaters, because of the pollutants they emit and the impact of these pollutants on human health and enjoyment of property. The draft rule would effectively prevent smoke from new units obscuring visibility on public roads through the implementation of emission standards.

Comment: OSHA mandates stringent clean air requirements in funeral homes to protect embalmers from formaldehyde fumes, requiring adequate ventilation. Ventilation brings in fresh air from outdoors, which smells of smoke due to a nearby outdoor wood boiler. (RD7)

Response: IDEM recognizes that indoor air quality is closely tied with outdoor air quality. Although this draft rule does not directly regulate indoor air quality, it establishes standards that will result in significant emissions reductions from outdoor hydronic heaters. As a result, indoor air quality should improve where outdoor hydronic heaters are a major source of airborne pollutants.

Comment: The presence of outdoor wood boilers has affected my property value. (TA882)

Response: IDEM is concerned about the impact of emissions from outdoor hydronic heaters on human health and the environment. The draft rule establishes emission standards, stack height requirements, and operational restrictions to reduce the amount of emissions and their impact on neighboring properties. The draft rule does not address any potential aesthetic or other non-environmental concerns that may impact property values; however, a reduction in emission impacts should also help minimize the negative effect on these concerns.

Comment: The small number of outdoor wood boilers in Indiana does not warrant a rulemaking. (BI389, KK856)

Response: The Northeast States for Coordinated Air Use Management (NESCAUM) estimates that at least 7,518 units were sold in Indiana between 1990 and 2005. The purpose of this rule is to assure that new outdoor hydronic heaters purchased and installed in Indiana will not have a significant adverse impact on the environment, while minimizing the adverse impact of existing units.

Comment: How many of the ten complaints received by IDEM about outdoor wood boilers are repeats from the same person? (DM427)

Comment: Who complained about smoke from outdoor wood boilers? (MM494, VD166)

Comment: Would like to see statistical summary of outdoor wood boiler complaints IDEM has received. (WH162, VD166, MR182)

Comment: Rulemaking should not be based on complaints of ten people or less since 2002. (TW1462, RW28, RB303, IFB79, RDB431, LW467, JN230, DS160, TH1016)

Comment: I have an outdoor wood boiler, and my neighbors haven't complained. (RH433, TH304, RM224, DCP27, FJL196, CE236, LPN193, A1323)

Response: IDEM has received 41 separate formal complaints through July 2009 from citizens throughout the state regarding smoke from outdoor hydronic heaters (multiple complaints by the same person or about the same unit count as a single complaint in IDEM's formal complaint tracking system). These numbers do not include complaints made to local air pollution control boards or local health agencies. IDEM has also received a number of informal contacts from citizens who are concerned about the health effects of smoke from outdoor hydronic heaters, but who have decided to not file a formal complaint against their neighbor. IDEM believes a state rulemaking is appropriate given the potential unregulated particulate matter emissions from the units, the increasing popularity of units in more heavily populated residential areas, and the corresponding increase in the numbers of complaints. Since this rulemaking was initiated in 2006 additional complaints have been received: 2 in 2007, 10 in 2008, and 5 in 2009 though July. The following is a summary of the formal complaints IDEM has received through July 2009:

Year	Number of Formal Complaints
2002	1
2003	3
2004	1
2005	5
2006	14
2007	2
2008	10
2009 (through 7/09)	5
Total	**41**

Comments regarding health effects of exposure to wood smoke from outdoor hydronic heaters

Comment: Constituent contends that smoke emitted from nearby outdoor wood boiler becomes more

pungent as the furnace ages. (SP67)

Comment: Smoke from a nearby outdoor wood boiler aggravates asthma and causes respiratory problems (DB1, DTB95, CS1476, LJ439)

Comment: Smoke from outdoor wood boilers expose neighbors to smoke and acrid smells, which cause tearing eyes, mucous, and throat problems. (ER388)

Comment: Work and recreation outdoors in the vicinity of an outdoor wood boiler in operation is done in the constant presence of smoke (DB1, RD7, MSO93, DTB95, ER388, CS1476, RS935, FDS637)

Comment: Outdoor wood boilers allow people to burn wood without aggravating asthma as an indoor wood stove would. (GR810, BA475)

Comment: Outdoor wood boilers eliminate wood smoke in the home caused by burning an indoor wood stove, improving respiratory health. (PH418, PG219, SRM996, WR1390)

Comment: The well understood detrimental health effects of exposure to wood smoke justifies IDEM's efforts to develop regulation on outdoor wood boilers. (SM382)

Comment: My constituent is concerned about health risks caused by outdoor wood boilers. (SP67)

Comment: If homes had better insulation or better weather seals on windows and doors, smoke from neighboring outdoor wood boilers may not be an issue. (PCM179)

Comment: Even with house closed up, smoke from nearby outdoor wood boiler enters the house. Homes have ridge vents, a roof jack, and vented soffits to encourage ventilation. (MS6, JSD10, ES940, FDS637, CS651)

Comment: How much harmful emissions should citizens be exposed to from outdoor wood boilers before concern is warranted? (JSD10)

Comment: Owners of outdoor wood boilers should be required to take action to reduce emissions if a neighbor within 200 yards of the unit can demonstrate a serious health problem such as asthma, cystic fibrosis, or emphysema. (DN232)

Response: Wood smoke is a complex mixture of small particles and gases produced during the combustion process. Particulate matter in wood smoke is the main health concern due to the direct correlation between exposure to particulate matter and an increased risk of respiratory and cardiovascular problems, and even premature death. Individuals with pre-existing respiratory or cardiovascular health issues, in addition to children and the elderly, are especially vulnerable to the health effects of exposure to airborne particulate matter. IDEM has proposed draft rule language that ensures newly installed outdoor hydronic heaters are subject to emission standards and stack height requirements that minimize the impact of smoke from the outdoor hydronic heater on the health of Indiana residents. While existing units may continue to operate, operational requirements such as the type of fuel used and the prohibition on use during warm weather months will provide a measure of relief from the negative health effects of wood smoke.

Comments regarding potential operating restrictions

Comment: The use of outdoor wood boilers should be restricted during the late spring, summer, and early fall. (MSO93, RS935)

Comment: Outdoor wood boilers are sometimes operated year round for hot water. (DB1, DA936, RS935, IKE381)

Comment: IDEM could consider regulation or banning the operation of outdoor wood boilers during summer months. (VF1012)

Comment: IDEM could implement a program that would restrict wood burning activities during designated impaired air quality periods. (SM382)

Comment: The operation of outdoor wood boilers should be prohibited during warm weather if it is being used strictly for heating domestic hot water. (RS136)

Comment: Banning the use of outdoor wood boilers on particular days or times of day would be difficult to enforce. (E12)

Comment: Prohibiting the use of outdoor wood boilers during certain times is inconsistent with the desire of neighbors to enjoy air quality conducive to their health regardless of the time of year. (TYO235)

Response: IDEM recognizes that emissions from outdoor hydronic heaters are a year-round concern, but that the effects of wood smoke on surrounding properties and individuals are exacerbated by the increased outdoor activity and the opening of home windows for ventilation during warm weather months. IDEM is proposing in this draft rule that the use of all outdoor hydronic heaters be limited to the traditional winter heating season, unless the particular unit has been certified to meet Phase 2 emission standards. Outdoor hydronic heaters are sometimes used during warm weather to heat water for hot tubs or in-ground swimming pools. Phase 2 emission standards were established by NESCAUM as part of the model state regulation developed with the assistance of U.S. EPA and state regulatory officials. The Phase 2 emission standard of 0.32 lb/mmBtu heat output is based on air quality modeling performed by NESCAUM demonstrating the amount of emissions possible without causing local exceedances of the 24-hour NAAQS for fine particulate matter of 35$\mu g/m^3$.

Comments regarding stack heights

Comment: Stack height requirements are a reasonable form of regulation (RRS366, JB633, RM628, MJA188, JTW728, TM1391)

Comment: The smoke stacks on outdoor wood boilers are too close to the ground and smoke is emitted at ground level. (DB1, MS6, DTB95, IKE381)

Comment: IDEM should increase stack heights for outdoor wood boilers by requiring minimum stack heights. (MSO93, HM273, TJR3, LM107, WS113, RS136, AM260, SDC951, CC950, VJR968, JBH355, DR946)

Comment: IDEM should impose a stack height requirement for outdoor wood boilers to be located within a given distance from a residential dwelling. (BFF278, DR946)

Comment: Stack height requirements are only a cover up for the poor design of outdoor wood boilers, which leads to incomplete combustion. (JSD10)

Comment: Stack heights do not address harmful emissions from outdoor wood boilers nor do they address weather conditions that could expose neighbors to these emissions. (TYO235)

Comment: Extending the stack height may not appease outdoor wood boiler owners because it will compromise the efficiency of an already low efficiency device. (TYO235)

Comment: Stack height requirements may result in more pollutants as the fire in the outdoor wood boiler may not draw as well. (CM470)

Comment: Smoke stacks on outdoor wood boilers should be as high as a chimney on a house so that the smoke is up higher when it comes out of the stack. (LJ439)

Comment: New outdoor wood boiler installations located within one hundred (100) feet of an adjacent or nearby residential structure (on property not served by the outdoor wood boiler) should include a chimney height which is not less than the height of the roof line of the adjacent or nearby residential structure. (PG219)

Comment: Increasing stack height will address the few complaints received about smoke from outdoor wood boilers. (DS760, GM1171, JTW728, JW921)

Comment: A taller stack has not addressed the smoke problem from the outdoor wood boiler operated by my neighbor. (MS653)

Comment: Stack heights on outdoor wood boilers are higher than the range of eight to ten feet above ground level stated in the First Notice. (DM427)

Comment: Stack height requirements are only going to cost people who are trying to get ahead by cutting corners. (MB)

Comment: Proper stack height and siting regulations would be the best way to alleviate complaints concerning outdoor wood boilers in Indiana. (CV1278, RS515, GJE602, DS603, CM604, KS605, DS606, ML607, CV608, AL609, RS610, JS611, CB612, JM613, JN614, SS615, BL616, S617, S618, JH619, BR620, RP621, DB622, JB623, DM624, V624, JCS624, TN624, JH624, LM624, PH624, JH624, DW624, S624, TM624, JM624, DF624, DM624, SM624, CK624, MK624, S654, TR655, WB656, AW657, PS658, JS658, MB659, KN660, JD661, SM662, CM663, DCP664, WC665, VW666, JW518, JC532, RM533, TG534, KBJ535, SG536, DA537, DG538, MKW539, KH540, DJV541, SH542, AH543, GF544, LL545, MS546, DJL547, VS548, WMH549, MD550, CL537, NH552, OD553, HD534, AD555, GLL556, BS557, RF558, JF559, GM560, SS561, JS562, KM563, CY564, DS565, BF566, SL567, DB568, RA569, EB570, DVH571, CA572, MH573, JK574, FL575, MTF576, CAH577, RJ578, JKW579, MC580, DC581, LK582, KB583, AR584, LC585, JL586, RC587, NL588, EF589, DC591, KCH592, LS593, SS594, MB595, AS596, FS597, MVW598, PW599, JM600, JW601, LW1465, JN1443, WF1444, KN1445, TN1446, JLC1596, WLS1442, DB1441, JCT1474, NP1473, SB1472, GM1471, MJA1469 BB1468, BR1467, JW1466, JG1439, TLG1463, DW1440, MW1438, NW1473, W1436,TO1435, MN1434, JY1433, CM1432, LV1431, NH1430, O1429, B1428, C1427,W1426, JM1425, RF1424, SO1423, AG1422, JE1421, YM1420, RLG1419, GP1418, RB1417, RW1416, DP1415, WM1414, MW1413, RL1412, SR1411, KRR1410, DR1409, WV1408, TS1407, SL1406, JM1405, S1368, JT1404, DDW1403, BT1402, FN1401, ML1400, CNP1399, RF1398, PF1397, EL1396, KT 1395, LAR1394, HH1393, KC1392, EY1389, RZ1388, LN1386, CR1385, SE1384, LZ1383, CJK1382, BC1381, SS1372, MM1371, MB1370, LG169, LR1379, JH1378, JW1377, MM1376, JL1375, LH1356, DH1355, JW1354, JS1353, KM1352, JT1351, LL1349, S1348, NW1346, SG1345, DW1325, HB1303, SE1335, DN1344, SH1343, GN1342, SG1341, LH1340, JE1339, RJV1338, AL1337, GM1336, KM1334, LB1333, DW1332, JM1331, BP1330, GG1329, GR1328, JN1327, JR1326, FS1366, RH1324, EJB1322, WP1321, KN1320, WL1319, S1318, RLS1317, E1316, MJT1315, MBP1314, ET1313, JW1312, DH1311, MS1310, GG1309, S1308, KR1307, JH1306, TP1304, EB1301, BC1302, DB1300, TE1268, S1299, MS1298, CV1293, BM1297, DC1296, GF1295, DM1294, JSP1294, CB1294, JR1294, SP1294, EB1294, LCO1294, BR1294, DVG1294, S1294,HH1294, HH1294, KVG1294, MB1294, AS1292, VG1291, TC1290, DS1289, DR1287, GS1286, WV1285, P1284, LS1283, JVW1282, MW1281, JS1280, DF1279, JS1277, CS1276, EB1275, BP1273, S1272, AJG1271, SS1270, KW1267, JW1269, RC1266, TP1265, MK1264, DK1263, CM1262, BB1261, PIY1260, CF1259, GB1258, RC1257, TB1256, JL1255, STL1254, BW1253, RF1252, JR1251, GF1250, DB1249, JWS1248, DD1247, APW1246, CK1245, TK1243, DB1242, MA1241, JS1240, MW1238, MLC1237, JL1236, JKG1235, JMB1233, DCW1232, KLT1186, JJH1231, BH1230, RA1229, NR1227, RJ1224, RR1223, BB1222, CC1221, LK1220, DSR1219, MP1218, SL1217, FS1216, RKS1214, DBB1213, CJA1212, WBB1211, DM1210, RC1209, KS1208, RS1206, MD1205, JS1204, JS1203, BC1202, JA1188, JS1187, TW1185, MA1184, MC1183, RS1182, PP1181, GN1180, H1179, AD1178, KH1177, WK1176, SY1175, VH1174, HH1173, DS1170, RB1169, STH1168, AW1189, DC1201, HRL1200, FH1199, AT1198, JS1197, SS1195, DZ1194, WM1193, MY1192,

JC1191, MV1190, DK1166, DMC1165, DS1164, S1163, CM1162, AG1161, HY1160, DS1159, CH1158, TT1157, JS1156, DR1155, NH1152, MW1150, KF1149, CJC1148, CC1147, TR1146, DO1145, JH1144, ERW1143, EL1142, JM1141, CS1140, DR1138, DPH1139, JR1137, EP1136, BP1135, MC1134, JCS1133, AM1006, CC1130, RDK1128, WLF1127, JA1126, HPJ1125, TB1124, CS1123, DS1122, DW1121, WM1118, NC1117, DSCM1116, GLR1115, BD1112, GS1113, TTH1110, AC1109, JB1108, KK1107, TP1106, ET1105, PW1104, MG1103, RS1102, DB1101, DB1100, FL1099, CE1098, RA1097, GG1096, MS1095, MW1094, CP1093, JJG1090, DP1091, KR1089, CS1088, B1087, RT1086, BVC1085, LG1084, WB1083, WK1082, LL1081, 0W1080, ME1079, RJD1078, RPM1077, JS1076, LKG1075, CDB1074, JB1073, RG1072, PB1071, AK1070, DR1069, MH1068, DG1067, GF1065, FM1064, MW1063, SE1062, IH1061, MCR1060, ST1059, SS1058, LP1057, RK1056, HS1055, CK1054, MH1053, MH1052, KR1051, RRS1050, KBJ1049, BS1048, RG1047, DJW1046, ND1045, KTY1044, BE1043, HB1042, TKD1041, MK1040, EB1039, TG1038, MP1034, TCR1037, B1036, RR1035, KC1033, DH1032, FS1031, JH1225, PR1350, BB647, JJ648, KW649, TG14, GP29, MA242, DE243, RMD244, BB249, JC253, BM255, BM256, WL257, BM953, TSK967, DK966, TM982, SG981, MJ979, KRB978, MM977, MH976, LP975, MH974, DH973, LS972, KS971, KM970, RY969, RB965, RTM964, MD963, RS962, MD961, G960, MS959, RA958, C957, RS956, BV493, STG927, SC929, BP928, FG926, S932, S931, CH930, JW1001, JS1001, SC1001, S1001, CA1001, SN1001, LMA1001, MJ1001, STN1001, LG1001, KG1001, CS1595, NNF1594, LM1593, ERK1592, RW1591, LS1590, WL1589, CS1588, LS1587, BH1586, SB1585, MH1584, DM1583, MG1582, MR1581, CG1580, JB1579, PH1578, DK1577, MH1576, MF1575, TD1574, LA1573, JF157, CN1570, BBD1569, JDG1568, CJW1567, BRK1567, JKC1566, AB1556, ELW1564, WD1563, TK1562, DG1561, DS1560, AF1559, MB1557, MAH1556, SE1555, MPS1554, RNA1553, DM1552, RC1554, K1545, JG1546, MM1547, DI1548, ES1549, DB1542, KJ1541, TD1540, DN1539, B1538, KS1537, SK1536, MGT1535, M1534, DH1533, TH1532, TG1531, DE1530, SE1529, CM1528, DP1526, HS1525, GA1524, KM1523, KM1522, CJ1521, LH1520, JE1519, S1519, WS1519, SD1519, EM1519, JO1519, JC1519, ML1519, ES1518, DC1517, RH1516, RJ1515, DB1514, BK1513, JKS1512, JK1511, RC1510, BW1509, K1507, GM1506, DB1505, SP1504, DL1503, AB1502, H1501, J1500, RY1499, W1497, JS1498, FCC1496, HG1456, DB1492, RR1494, MW1495, BDG1493, DMM1490, MM1489, RB1488, CS1487, DH1486, DB1484, KJK1483, SB1482, JS1481, RRG1480, DTS1460, TC1459, RW1458, LM1457, AG1455, JNK1454, SH1453, SS1452, DB1451, GB1450, RH1449, RP1448, DM1478, DR1477, S948, MH949, WK947, JH943, RTS817, TM818, FC819, KCS820, WS821, HMS822, DK823, DK824, DVH825, GT826, VW827, ML828, BMD829, CM830, BTT831, RJ832, TLG833, KTH834, DLA835, PH836, SG837, DC838, CC839, JGG840, DM841, SC842, WB843, GEH844, AK845, TK846, DH847, LPC848, CB849, LC850, JM851, RV852, GM853, SM854, KI855, KK856, RDY857, BS858, MS859, MMD860, MN861, AG862, KH863, HV864, GM865, MS866, KCH867, EM868, CC869, EW870, JG871, KSB872, AS874, JT875, DCS876, MM877, JE878, DS880, DB881, SW883, WB884, MP885, RD 886, CW887, WF888, AB889, HPR890, PB891, DD892, NG893, WH894, TF895, AZ896, LG897, CC898, DM899, RF900, GW901, MD902, DMB903, PR904, AP905, EB906, AM907, FDF908, DS909, BG910, RH911, ICL912, RK913, B914, SL915, AL916, TDR917, EGB920, TW922, KP923, JM924, LC667, SG668, DK669, EE670, SB671, WC672, NM673, CS674, EE675, JS676, RT677, DE678, RC679, RH680, CJ681, CM682, GT685, NN686, AM687, LG688, RM689, NS690, NS691, SAW694, HS695, JSP695, SG697, MNF699, JM701, P702, NT703, MW704, DT705, CW706, BAR707, AB708, JR709, WMS710, CP711, DE712, RM713, JR714, JP715, TS716, RH717, CVTS718, DY719, DW720, TK721, CC722, DB723, DB724, CH725, DSW726, ATCL727, WY729, GH730, CPS731, NPHS732, TT733, WB734, PBA735, MK736, DM437, GB438, CB439, JS740, RM742, EC743, WJF744, KSM745, LTF746, LGC747, TG747, JL747, RJC748, JM749, JM750, DH751, SB752, CSP753, RMS754, DLR755, RK756, JM757, CM758, LRC761, LP762, DM763, LK764, DH765, LM766, KP767, HDB768, FLC769, JP771, JC772, EM774, GS774, SLG775, PW776, CD777, JE778, JM779, SS780, DM781, DJ782, RS783, SD784, GY785, HF786, JH791, NS793, S794, S795, LW796, RCG797, MB798, KD799, S800, S801, S802, RM803, LS804, JR805, EPM806, DTB807, S808, WT809, JM1030, GSH1029, HC1028,, JM1027, DM1026, KH1025, FCVC1024, VCS1023, RGF1021, RD1002, PM1019, RR1018, RJ1017, HA1015, KM1014, CD1013, AB1011, RC1010, RH1009, YL1008, KC1007, AR1005, SC1004, S1003, S189, S787, SE787, EL787, LQ787, EP787, CG787, JL787, MW787, VB787, TR787, UN787, JZ787, JJ787, BW787, VR787, JC787, BK787, JW787, KS787, HH787, NL787, DC787, KK787, AF787, MZ787, TL787, EH787, DG787, CG787, ZP787, S1551, RD1551, MG1551, GW1551, GB1551, SB1551, SJ1551, PH1551, DC1551, DS1380, RGC1239, DS760, CH1129, CH1129C, ML1367, MM1132, CV1278, JL1447, WT1461, KB1131)

Response: Following the NESCAUM state model rule, IDEM is proposing stack height requirements for units not meeting Phase 2 emission limits. Under the draft rule, minimum stack heights would be imposed on all units not meeting Phase 2 emission standards after September 30, 2011. Under the draft rule, units required to meet a minimum stack height must have a permanent stack extending five (5) feet higher than the peak of any roof structure located within 150 feet of the unit. Currently, stack heights on outdoor hydronic heaters are typically in the range of eight (8) to ten (10) feet above ground level. Air quality modeling used to establish the Phase 1 and 2 emission limits demonstrates that increased stack heights provide improved dispersion of the particulate matter emissions. Increased stack heights may affect air flow rates in the combustion process, therefore it is possible that an increase in stack height may result in an increase in overall emissions from the unit. However, there is no

available test data to demonstrate whether or how an increase in stack height affects overall emissions. Stack heights were found to make a difference in the air quality modeling and are proposed as an additional control measure to minimize the impact of smoke from outdoor hydronic heaters on neighboring properties.

Comments regarding setback requirements

Comment: Outdoor wood boilers should be required to meet minimum property setbacks. (E12, TA882, TJR3, SDC951, BA995, CM470)

Comment: IDEM should restrict the construction and operation of a unit within a certain distance from neighboring residences. (SM382, LM107, RM628, CS210, BA475)

Comment: Any new outdoor wood boiler should be required to be at least 100 yards away from the nearest living quarters. (DN232)

Comment: Minimum distances from neighboring homes and property lines ought to be greater than the 200 to 500 feet required by states such as Vermont, Connecticut, and Washington. (TYO235)

Comment: There should be regulations governing where outdoor wood boilers can be installed and operated. (RS935, MH1114, JL1447)

Comment: New rules should address placement of outdoor wood boilers in relation to distance from residences, proximity to large trees, and air flow. (CS210)

Comment: Siting requirements from 326 IAC 4 might be a good starting point. (E12)

Comment: Installation and operation of outdoor wood boilers should only be permitted on properties of a specified size or greater. (E12, TJR3)

Comment: Siting provisions from the outdoor wood boiler industry's "best burn practices" is worth considering as a way to reduce the number of complaints until the ASTM testing protocol is completed and a standard test methodology in place. (FM137)

Comment: IDEM should only adopt rules providing guidance on the location of new outdoor wood boilers that would be acceptable and enforceable, such as guidance distributed by the outdoor wood boiler manufacturers. (RS136)

Response: Except when otherwise authorized by statute, facility siting is a land use decision which is an authority reserved for local governments. Therefore, it will not be included in the draft regulation.

Comments regarding local regulations

Comment: Siting and stack height requirements are justified in some instances but should be based on local requirements and not mandated statewide. (JK214, IFB79, DM692)

Comment: Zoning ordinances can be used to limit the location or operation of units in inappropriate areas or during inappropriate times of the year. (WW82, IFB79)

Comment: Decisions regarding the regulation of outdoor wood boilers should be left up to local authorities and not done on a statewide level. (RRD239, SC309, KH77, TA420, WT1461, IFB79, ZS147, MT367, JJ373, JC489, KD248, IGW277, DC1228, WP386, TH1016)

Comment: Banning units from residential neighborhoods or towns should be left up to local authorities on an individual basis. (MS142, JK156, JD485, GW698, PC625, JVL627, LC379, JJ1491, IFB79)

Comment: Regulations concerning outdoor wood boilers should be decided in either a referendum in the next election or through the legislative process. (JL484)

Response: IDEM believes a statewide approach adapted from NESCAUM's model regulation for outdoor hydronic heaters is an appropriate way to reduce particulate matter emissions from the units in a manner that is practical and predictable for buyers as well as for manufacturers. However, whether to allow or restrict the location of these devices within the jurisdiction of a local government is a local land use decision appropriately reserved for local governments. Currently, several Indiana communities have local ordinances prohibiting the placement of new units in those jurisdictions. These local ordinances will not by affected by this state rulemaking, as this rule specifically allows local ordinances to be more restrictive than the state rules.

Comments regarding regulation in urban and suburban areas

Comment: In densely populated areas, ordinances restricting emissions are justified. (WW952)

Comment: The use of outdoor wood boilers could or should be restricted in residential areas, including residential areas outside of incorporated city limits. (MSO93, GG683, DS115, SDC951, RS359, RM628)

Comment: There should be an allowance for smokeless outdoor wood boiler models in urban areas, but conventional models should be prohibited in urban areas. (RS136)

Comment: In densely populated areas these furnaces equipped with short flue pipes and perhaps improperly fueled and maintained could easily be considered a nuisance and a health hazard. (G372)

Comment: Banning units from residential neighborhoods or towns should be left up to local authorities on an individual basis. (MS142, JK156, JD485, GW698, PC625, JVL627, LC379, JJ1491, IFB79)

Comment: Most subdivisions have covenants in place that would prevent the installation of outdoor wood boilers where they would be a problem. (WM1414)

Comment: Reasonable urban placement and population density concerns could be addressed in future regulations. (SC174)

Comment: Regulations for outdoor wood boilers may be appropriate in densely populated areas, but should

be unregulated in rural areas. (GSH1029)

Comment: Outdoor wood boilers should only be allowed to operate in the country. (DTB95)

Comment: They may not be suitable for use in densely populated areas such as subdivisions or in city or town, but in rural areas outdoor wood boilers are a great way to heat. (RP22, MA80, DE84, LH85, JC270, KLF944, JF700, SU163, PP237, DN232, WT1461, VN191, RSP400, MP432, KK371)

Comment: I live in a rural area, I burn an outdoor wood boiler, and I don't bother anyone. (THH394, WM487, JF700, MH1114, TBA480)

Comment: I live in a rural area, have neighbors that burn wood, and they don't bother anyone. (DPK45, DR358)

Comment: I live in a rural area, I burn wood, and I don't bother anyone. (JVL627, SB286, SC309, DP814, AM329, CA353, WL1172, JR643)

Comment: I live in a residential area, I burn wood, and I don't bother anyone (EK347, ND645)

Response: The draft rule will reduce air pollution emissions from new units to minimize the impact of smoke from outdoor hydronic heaters on neighboring properties. Phase 2 outdoor hydronic heaters will have approximately the same air pollution levels as indoor wood stoves meeting U.S. EPA's current emission limits.

Comments regarding building code requirements

Comment: IDEM should consider requesting that the State Building Commission incorporate stack height and siting requirements into the State Building Code (E12)

Comment: New construction should be required to have an alternative source of heat installed other than a wood burning unit. (SM382)

Response: IDEM has chosen to focus its efforts in this environmental rulemaking on the management of the potential particulate matter emissions by establishing emission standards for new outdoor hydronic heaters. Stack heights were found to make a difference in the air quality modeling and are proposed as an additional control measure to minimize the impact of smoke from outdoor hydronic heaters on neighboring properties. Units meeting the Phase 2 emission limit are not subject to any stack height requirement under the draft rule because they emit at approximately the same level as U.S. EPA certified indoor wood stoves which do not have stack height regulations.

Comments regarding the use of add-on controls

Comment: An afterburner might be a marketable product to address emissions from outdoor wood boilers. (JSD202)

Comment: To address health effects from smoke caused by burning wood, IDEM could suggest to people that catalytic converters be installed. (AK4457)

Comment: There might be catalytic converters available similar to the ones used on wood stoves that allow a clean secondary burn and reduced pollutants. (DF2)

Comment: Catalytic converters will not adequately address emissions problems, just as they have not adequately addressed dangerous pollutants from automobiles. (TYO235)

Comment: Technologies such as catalytic converters and other emissions control devices make wood burning efficient and cause less smoke emissions. (WW952)

Comment: Add on controls or alterations to existing furnaces are unnecessary and an unfair expense. (KC167, DB169, HB168)

Response: IDEM is unaware of any available add-on controls designed for existing outdoor hydronic heaters. There are model lines available that incorporate additional control technologies in the design of the unit, such as in the case of units with catalytic converters. The draft rule requiring new units to meet a specific and measurable particulate matter emission standard will account for any emission reductions attributable to the incorporation of controls in the design of the outdoor hydronic heater.

Comments regarding the type of fuels burned

Comment: There should be a requirement for the types of fuels burned in outdoor wood boilers. (DA936)

Comment: Fuel for outdoor wood boilers must be free of any hazardous substances it may have come into contact with. For example, using pallets for fuel that may have previously been used to store hazardous substances would not be acceptable fuel for outdoor wood boilers. (LK945)

Comment: Burning materials other than clean wood, natural gas, propane, and the like should be clearly prohibited. (E12, IKE381)

Comment: An outdoor wood boiler operator has burned treated lumber. (RD7)

Comment: Neighbor uses outdoor wood boiler to burn garbage and other refuse. (ES940)

Comment: IDEM should specify an acceptable moisture content of wood that may be burned in outdoor wood boilers. (MSO93)

Comment: Regulations regarding moisture content of wood that may be burned in outdoor wood boilers would be impractical, difficult to monitor and/or enforce. (E12, RW28, A241, PH380, BI389)

Comment: Moisture content of wood would be difficult for consumers to verify for compliance purposes. (CM470)

Comment: How an owner operates an outdoor wood boiler, in addition to moisture content of the wood

burned and the height of the stack affect the unit's efficiency. (CRF477)

Comment: IDEM should specify that only dry, seasoned wood may be burned in outdoor wood boilers. (DA936, DN232)

Comment: Prohibit outdoor wood boiler use as an incinerator. (RS136)

Comment: The worst emissions from outdoor wood boilers come from burning trash and refuse wood products, and will damage the unit. (DC31)

Comment: It is important to distinguish between wood stoves that are operated properly and those not operated properly. (MS142, JR939)

Comment: Problems from the use of outdoor wood boilers primarily arise because operators do not follow the manufacturers' recommendations. (IFB79, RG934)

Comment: Outdoor wood boilers can burn corn and pellets very cleanly. (RB635, CG221, MS142)

Comment: New regulations on outdoor wood boilers should not apply to appliances that can only burn corn and pellet fuel. (CG221)

Comment: Outdoor wood boilers help dispose of burnable trash. (GRF139)

Response: The type of fuel burned in outdoor hydronic heaters can have a great impact on the emissions from the units. The draft rule allows clean wood, wood pellets made from clean wood, and other fuels as specified by the manufacturer. Several manufacturers have done testing on corn units and U.S. EPA expects that units meeting the Phase 2 certification level will be on the market in the future. Emissions from burning some materials are toxic so burning these materials is strictly prohibited. Prohibited materials include garbage, tires, plastics, construction and demolition debris, and treated woods.

Comments regarding public education and awareness

Comment: IDEM should educate the public on particulate matter and emissions from outdoor wood boilers. (JSD10)

Comment: A campaign to increase public awareness on the health and environmental effects of wood smoke should be considered. (SM382)

Comment: IDEM should educate the public on proper installation and operation of all wood burning devices. (DL476, RG934)

Comment: IDEM could request State Building Commission assistance in providing public information and outreach to contractors and County Building Commissioners on any outdoor wood boiler requirements. (E12)

Comment: IDEM should educate the public on alternative heat sources that are neighbor friendly. (JSD10, IKE381)

Response: IDEM believes that public understanding of the issues involved with outdoor hydronic heaters is important and will lead to a better informed dialogue about the appropriate actions in this rulemaking. Near the beginning of this rulemaking, IDEM prepared and mailed out an informational memorandum to the approximately 1,600 names and addresses of parties who have previously expressed interest in the issue. IDEM's web site (www.in.gov/idem) has been updated to include information on proper operation of hydronic heaters, and a press release was issued to provide notice of the status of this rulemaking to the media for publication.

Comment: Non-EPA certified indoor wood stoves are a significant source of particulate matter emissions, therefore IDEM should implement a program to encourage citizens to exchange their current non-EPA Phase 2 certified indoor wood stoves for a certified one. (SM382)

Response: As explained below, this suggested action has merit, however, IDEM has no funds to provide incentives for such a program and it is still necessary to make sure that newly installed outdoor hydronic heaters are as clean as reasonably possible so that air quality does not deteriorate. Depending on the topography and weather conditions of the surrounding areas, indoor wood stoves manufactured prior to U.S. EPA certification requirements can account for a significant portion of particulate matter emissions. In 1988, the U.S. EPA established federal regulations to limit emissions from residential wood heaters. Certified indoor wood stoves are more efficient and emit 50% to 60% less particulate matter air pollution, as compared to non-certified wood stoves. Some communities in other states have implemented a voluntary wood stove change-out program to achieve ambient particulate matter emission reductions. The pilot wood stove change-out programs were designed to assist residents in replacing older indoor wood stoves with new U.S. EPA certified indoor heaters.

Comment: Proper installation and operation of outdoor wood boilers requires that the unit be sized to meet the demand load. If this is done, the boiler will run at 75 to 80 percent capacity full time and provide an even burn at peak heating efficiency. (JR939)

Response: The large capacity of the firebox is a selling point for some manufacturers, allowing operators to load the outdoor hydronic heater with more fuel, extending the need for reloading to longer intervals. An overloaded unit too large for the actual heat demand contributes to the smoldering, smoky conditions often associated with the units. IDEM believes that stack height requirements and emission standards set forth in the draft rule will address this concern, as units will have to become more efficient in order to be sold and operated in Indiana.

Comments regarding manufacturers

Comment: Owners and installers should be required to comply with manufacturer recommendations and

should be required to obtain permits. (TA882)

Comment: IDEM should consider adopting the outdoor wood boiler industry's "best burn practices". (PG219, JC270)

Comment: There should be regulations on outdoor wood boilers in the manufacturing process and at the point of sale for the units. (DA936)

Comment: IDEM should contact outdoor wood boiler manufacturers and notify them that the State is looking at emissions from their units and suggest they market only high efficient units in Indiana. (JSD10)

Comment: IDEM should require that outdoor wood boiler dealers provide customers with information on the health and environmental effects of wood smoke, as well as operational and maintenance requirements for outdoor wood boilers. (SM382)

Comment: IDEM should work with manufacturers to continue research and design towards better technology. (MH1114)

Comment: IDEM might create a registration system for new outdoor wood boilers to keep track of where units are located for fire emergency response purposes. (RM628)

Comment: IDEM could encourage the outdoor wood boiler industry to create cleaner-burning units by offering financial incentives to people who purchase cleaner units, by creating restrictions that apply to standard outdoor wood boilers but exempting cleaner units, and by establishing standards for clean technology and publicizing the models that meet those standards. (A241)

Comment: Manufacturers should improve outdoor wood boiler design to reduce emissions. (DN232, JB954)

Response: Outdoor hydronic heater manufacturers, through the trade group Hearth, Patio, and Barbecue Association (HPBA) have created a list of operating and placement recommendations titled "best burn practices". The best burn practices specify the types of fuels that may be burned in an outdoor hydronic heater and recommend setback distances and minimum stack heights. The industry's best burn practices do not address potential local exeedences of the $PM_{2.5}$ NAAQS caused by the units. IDEM believes that new outdoor hydronic heaters should be held to emissions standards similar to those already in place for new indoor wood heaters. The draft rule language provides notice to manufacturers of the requirements that will need to be met for outdoor hydronic heaters to be sold in Indiana. Units meeting Phase 2 emission standards will not be required to meet stack height requirements under the draft rule. The draft rule requires sellers of an outdoor hydronic heater to provide notice to the buyer of the rule requirements. The seller is to obtain a signed document acknowledging receipt by the buyer of the rule requirements. The seller will then be required to forward that signed acknowledgment, which will include a description of the model and the location where it is to be installed, to IDEM.

Comment: IDEM should contact Indiana's United States Senators and Representatives to request their assistance on the issue of outdoor wood boilers. (JSD10)

Response: The environmental rulemaking process does not require IDEM to seek assistance from federal lawmakers in regards to state rulemakings, however, federal lawmakers are encouraged to participate in the rulemaking process if they so desire. IDEM received one letter from Senator Richard Lugar's office during the First Notice comment period. This letter did not take a position on the issue of outdoor hydronic heaters; it merely requested that IDEM consider an attached letter from a constituent to Senator Lugar.

Comments regarding emissions from the use of outdoor hydronic heaters

Comment: IDEM should more aggressively monitor smoke opacity levels of the smoke emitted from outdoor wood boilers. Units should be observed for four hours for an accurate reading. (JSD10)

Comment: IDEM should test emissions from outdoor wood boilers. (JSD10)

Comment: IDEM should contact the state health department to seek their assistance on toxic emissions from outdoor wood boilers. (JSD10)

Comment: IDEM should either establish or consider establishing emission standards for outdoor wood boilers. (MSO93, E12, IKE381, SM382)

Comment: IDEM should require that existing units be required to meet the same standards as new units and subject to emission standards. (SM382)

Comment: IDEM should make a rule for outdoor wood boilers that subjects them to the same standards required of indoor wood stoves. (GZ288)

Comment: IDEM should regulate particulate matter levels to protect human health and air quality. IDEM should then consider whether stack height requirements and particulate matter emissions standards are sufficient in addressing the health and quality of life issues for the public. (CC950)

Response: New outdoor hydronic heaters meeting the requirements of the draft rule in terms of emissions and stack height requirements will positively address health and quality of life issues for neighbors. Units meeting Phase 2 emission standards offer a significant reduction in potential particulate matter emissions, and air quality modeling demonstrates that Phase 2 emission standards will prevent an outdoor hydronic heater from causing localized exceedences of the fine particulate matter NAAQS. Existing units will eventually wear out and be replaced by new units, and until then, will continue to be addressed at the state level through existing opacity and fugitive dust rules, plus the proposed stack height, fuel restrictions, and seasonal operation requirements.

Comment: IDEM should not develop emissions standards applicable within Indiana until the national standard test method has been developed. (PG219, JK214, WW82, FM137, RW28, SC174, DM427, BW435, TH1129, VCPRD637, IFB79)

Response: An ASTM test method was finalized in 2009, ASTM E2618-09, for the determination of emissions from outdoor hydronic heaters. U.S. EPA and several manufacturers have agreed on modified method 28 test protocol for the purposes of U.S. EPA's Outdoor Wood-fired Hydronic Heater Program. This voluntary program involves select units offered for sale by the manufacturers. These select units are certified to meet a certain particulate matter emission limit. The draft rule requires that manufacturers conduct emissions testing in accordance with U.S. EPA's program. IDEM understands that U.S. EPA will keep using the method 28 protocol, plus a portion of the ASTM method that is for continuous feed models (i.e., pellet-fired models) and the appendix that relates to heat storage models.

Comment: Emissions standards will not address citizen complaints, which are caused primarily by siting and inadequate stack heights. (PG219)

Comment: Establishing emissions standards does not appear reasonable when outdoor wood boilers are in populated neighborhoods, and may make sense only for units in rural areas. (TYO235)

Comment: Particulate matter emission limits is in essence a backdoor ban of outdoor wood boilers and is an arbitrary limit in the absence of standard test methodology. (FM137)

Comment: IDEM could identify the cleanest burning outdoor wood boilers available and make their typical emissions the maximum acceptable. Requirements can then be made more stringent as the industry introduces cleaner-burning appliances. (CM470)

Response: IDEM believes that the combination of emission standards for new units and stack height requirements for units not meeting these emission standards will effectively address citizen complaints by reducing potential particulate matter emissions. The emission standards are met by some currently available outdoor hydronic heater models.

Comment: Why is there concern for volatile organic compounds from outdoor wood boilers? (GB387)

Comment: Pollutants attributed to wood smoke, mentioned in the First Notice, such as formaldehyde, benzene, and polycyclate are not substances normally found in wood. (BW435)

Response: Wood smoke is a complex mixture of gases and small particles. The negative health effects of exposure to particulate matter are well documented, although other pollutants exist within wood smoke that could be hazardous to human health in sufficient concentrations. Many of the pollutants attributed to wood smoke, such as formaldehyde, benzene, and polycyclic aromatic hydrocarbons are produced as a result of the chemical changes that take place during the combustion process.

Comment: Vermont's proposed emission standards sound reasonable. (JJ1491, WP386)

Comment: How will IDEM's proposed rulemaking differ from the experience in Vermont, where siting restrictions and stack height requirements passed in 1997 were deemed ineffective in addressing the problem of smoke from outdoor wood boilers? (BW435)

Response: IDEM's draft rule is patterned after NESCAUM's Outdoor Hydronic Heater Model Regulation, which was developed to incorporate lessons learned by state regulatory agencies from experience in attempting to address smoke from outdoor hydronic heaters. The NESCAUM model offers a regulatory approach, and was crafted in light of newly available data regarding unit emissions and air quality modeling showing the dispersion of particulate matter generated.

Comments regarding the need for additional information

Comment: IDEM needs to conduct more research in regards to outdoor wood boilers before coming to any decisions. (BH1288, DMW250, JS684, WC11, DS246, PS271, TK428, GB175, DC102)

Comment: There is not enough information available to establish emission standards for outdoor wood boilers. (DM427, BW435, LW467)

Comment: Potentially high emissions of particulate matter is unsubstantiated. What is the scientific basis for the assertion that outdoor wood boilers are typically many times larger than an indoor wood stove with potentially high emissions of particulate matter? (DM427)

Response: Since IDEM initiated this rulemaking in December of 2005, several new sources of information on outdoor hydronic heater emissions have become available, providing further documentation of the nature of particulate matter emissions from the units. The State of New York's Office of Attorney General issued a report titled "Smoke Gets in Your Lungs: Outdoor Wood Boilers in New York State" in October of 2005. NESCAUM issued a comprehensive report titled "Assessment of Outdoor Wood-fired Boilers" dated March 28, 2006. Further information about outdoor hydronic heater emissions can also be found in a recent study published in the Journal of Human and Ecological Risk Assessment titled "In-field Ambient Fine Particle Monitoring of an Outdoor Wood Boiler: Public Health Concerns". These and other resources on the emission characteristics of outdoor hydronic heaters make it clear that outdoor hydronic heaters produce much more particulate matter emissions on a grams per hour basis than other wood burning devices. This increased understanding of the potential emissions from outdoor hydronic heaters provides a solid basis for the emission standards and stack height requirements set forth in the proposed rule.

Comment: Please provide a comparison of wood smoke emissions to other heating fuel emissions. (MA80, SL990, PT207, DS424, BW435, GT488, DF2, JG15, GM70)

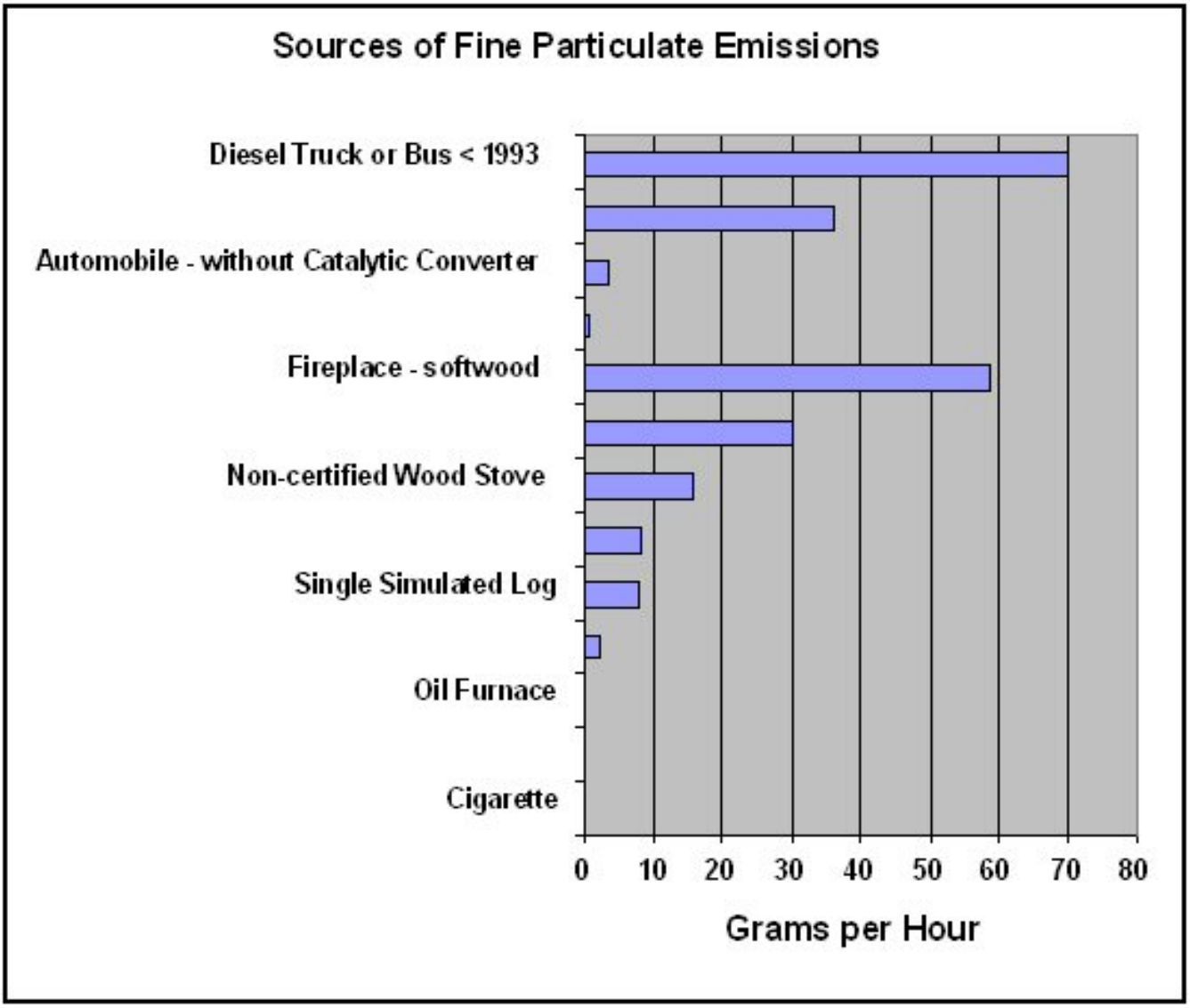
Response: The following chart of wood smoke emissions is converted to lb/MMBtu input from numbers expressed in mg/MJ input published in the 1998 EPA study titled "Emissions from Outdoor Wood-Burning Residential Hot Water Furnaces" (EPA/600/SR-98/017) and is presented for comparison of other heating fuel emissions with the Phase 2 outdoor hydronic heater emission standard of 0.32 lb/MMBtu heat output.

Combustion Device	**Particulate lb/MMBtu input**
Conventional Natural Gas	0.00102344
High Efficiency Natural Gas	0.00100018
Conventional Oil	0.035122607
Retention Head Oil	0.007443201
Conventional Wood Stove (Pre-NSPS)	1.828236353
Certified NonCatalytic Wood Stove	0.890858172
Certified Catalytic Wood Stove	0.988550191
Certified Pellet	0.255860049
Outdoor Wood Boiler Model A	2.43764847
Outdoor Wood Boiler Model B	1.584006306
Outdoor Hydronic Heater Phase 2	0.32 lb/MMBtu heat output (based on 100% efficiency – as efficiency is reduced, the limit is lowered)

The Phase 2 outdoor hydronic heater emission standard is expressed in terms of pounds per million British thermal units of heat output, which relates to the amount of heated water produced by the unit. Heat output based standards allow manufacturers to meet the standard by not only reducing the concentration of particulate matter in the unit's exhaust, but also by designing units that burn the fuel more efficiently.

Another method commonly used to describe particulate matter emissions is in grams per hour. The following chart of emissions illustrates the amount of particulate matter emitted on an average grams per hour basis for several sources.

Source	**PM emissions in Grams/hour**
Cigarette	0.4 grams/hour (0.8 grams/pack)
Gas or Propane Furnace	0.001 grams/hour
Oil Furnace	0.02 grams/hour
Pellet Stove	2.4 grams/hour
Single Simulated Log	8 grams/hour
Certified Wood Stove	8.2 grams/hour
Non-certified Wood Stove	15.6 grams/hour
Fireplace - hardwood	30 grams/hour
Fireplace - softwood	59 grams/hour
Automobile with Catalytic Converter	0.66 grams/hour
Automobile without Catalytic Converter	3.5 grams/hour
Diesel 14 ton Truck or Bus > 1994	36 grams/hour
Diesel Truck or Bus < 1993	70 grams/hour
Outdoor Hydronic Heater	18 to 147 grams/hour
Phase 2 Outdoor Hydronic Heater	4.9 to 18 grams/hour (based on highest individual test runs of U.S. EPA certified Phase 2 units)



From a variety of sources compiled by Mary J. Rozenberg, Burning Issues/ Clean Air Revival, Inc., 12/1/98 (http://burningissues.org/comp-emmis-part-sources.htm).

A report published by the State of New York's Office of the Attorney General listed emissions from different outdoor hydronic heater models and found a range from 18 grams per hour to 147 grams per hour, for an average particulate matter emission of all units of 72 grams per hour. ("Smoke Gets in Your Lungs: Outdoor Wood Boilers in New York State", available at http://www.vtwoodsmoke.org/pdf/NY-OWB8-05)

Comment: IDEM should conduct and publish an emission study to determine particulate levels at various distances with differing types of woods and cure levels to determine the polluting potential of outdoor wood boilers. (DN232)

Comment: IDEM should provide detailed information on emissions from wood burning. (RKM39, BJF76)

Comment: Please provide data on the percentage of particulate pollution that is attributable to wood stoves. (BS13)

Response: According to a U.S. EPA study "A Summary of the Emissions Characterization and Noncancer Respiratory Effects of Wood Smoke" (EPA-453/R-93-096), as much as 80% of particulate matter measured in nighttime ambient air can be attributable to wood smoke, however, there are many factors that may influence the actual contribution from wood smoke to ambient particulate matter concentrations. It is unclear what percentage of airborne particulate matter attributable to wood smoke comes from outdoor hydronic heater emissions. However, IDEM has determined that their impact warrants a rule consistent with the NESCAUM model regulation.

Comment: What is the effect of emissions from outdoor wood boilers on ground water? (JSD202)

Response: It is unclear the extent to which smoke from outdoor hydronic heaters, as opposed to smoke from other wood burning sources, affects groundwater. It is accepted that some constituents of wood smoke can be found in rain and fog water, which could eventually introduce that constituent into the groundwater.

Comments regarding national regulations

Comment: Indiana should join the several states that have petitioned U.S. EPA to address emissions from outdoor wood boilers on a national scale. (JSD10, IKE381)

Comment: There should be a rulemaking at the federal level addressing outdoor wood boilers. (SDC951, CRF477)

Comment: U.S. EPA has exempted outdoor wood boilers from emissions regulations, and why should the state regulate them if the U.S. EPA has not done so? If outdoor wood boilers were thought to be a significant source of pollution, U.S. EPA would have already established emission standards as they have for indoor wood stoves. (WW952, MB391)

Response: U.S. EPA has decided to not regulate outdoor hydronic heaters, instead relying on other measures to reduce emissions from the units. U.S. EPA believes that cleaner burning outdoor hydronic heaters will become available for consumers much more quickly through participation in their Voluntary Partnership Program. The voluntary program initially involves ten outdoor hydronic heater manufacturers that have signed an agreement to develop and make available cleaner burning models beginning in the spring of 2007. There are currently eleven manufacturers that have signed on to be Phase 2 partners. Under the agreement, the new, cleaner units will be identified through a white or orange hang tag that describes tested emission levels. The emission standard developed under the initial Voluntary Partnership Program requires that participating models emit no more than 0.6 pounds of particulate matter per million BTUs of heat input. U.S. EPA's Voluntary Partnership Program includes a Phase 2 where models certified to emit no more 0.32 pounds of particulate matter per million BTUs of heat input.

U.S. EPA's decision to not regulate on a national level is also based in part on the U.S. EPA's involvement in the development of NESCAUM's draft model rule. U.S. EPA believes that the model rule can be tailored and implemented by states to better address concerns about emissions from outdoor hydronic heaters.

Comment: No states have adopted state-wide rules regarding outdoor wood boilers. (WW952)

Response: Vermont, Washington, Maine, Massachusetts, New Hampshire, New Jersey, and Connecticut have adopted statewide regulations regarding the use of outdoor hydronic heaters. Several other states are considering state level regulation as more information about particulate matter emissions from the units becomes available. In addition to the growing awareness of the nature of emissions from outdoor hydronic heaters, regulations are being considered at the state level as a result of the U.S. EPA decision to not regulate the devices on a national level, as was done with indoor wood stoves.

Comments regarding the regulation of existing outdoor hydronic heaters

Comment: If restrictions are imposed, existing units should be grandfathered to protect people who invested thousands of dollars in an outdoor wood boiler and those who would have to spend thousands more to replace them with an alternative home heating device. (RF405, PW1022, WC11, LPB443, MJA188, JCF245, KCH696)

Comment: Grandfathering existing outdoor wood boilers from being subject to new regulations may not allow concerns regarding the impacts of existing units to be adequately addressed. (E12)

Comment: The decision whether or not to grandfather existing units must be made by determining whether or not it is fair to grandfather pollution into a neighborhood, or to grandfather the longer existing right to clean air. (TYO235)

Comment: Retroactive rules have always been and will continue to be poor government policy. (PH380)

Response: IDEM believes that the draft rule adequately balances the interests of owners of existing units with the interests of the neighboring citizens and properties affected by emissions. Existing outdoor hydronic heaters will be permitted to operate at their current location subject to operating standards such as the type of fuel used and seasonal operating restrictions. Effective September 30, 2011, all existing units not certified to meet the Phase 2 emissions limit will be required to meet a stack height requirement.

Comments generally opposed to any restriction on the use of outdoor hydronic heaters

Comment: There should be no restriction or ban on the use of outdoor wood boilers. (AB938, KK198, DMW250, DF285, SB286, JP25, RWT351, MK164, JMK165, GN171, TM354, NBH1508, KT265, LK265, PS271, LJS317, VCPRD637, GW48, PS61, GH280, AM329, DS356, AH497, JH56, DG65, SC72, LBR74, IFB79, JK338, KG369, GA374, JC403, MCH434, AH454, JW496, JL459, LLP466, JB469, RG934, GB1475, BW212, JCS213, RBW215, PBLF264, MM268, JES49, RKF63, PDM406, TL460, KW234, KCH696, JW921, PETITION D)

Comment: There should be no ban or unattainable restriction on the use of outdoor wood boilers. (NDB1305, DL1196, CV1278, RS515, GJE602, DS603, CM604, KS605, DS606, ML607, CV608, AL609, RS610, JS611, CB612, JM613, JN614, SS615, BL616, S617, S618, JH619, BR620, RP621, DB622, JB623, DM624, V624, JCS624, TN624, JH624, LM624, PH624, JH624, DW624, S624, TM624, JM624, DF624, DM624, SM624, CK624, MK624, S654, TR655, WB656, AW657, PS658, JS658, MB659, KN660, JD661, SM662, CM663, DCP664, WC665, VW666, JW518, JC532, RM533, TG534, KBJ535, SG536, DA537, DG538, MKW539, KH540, DJV541, SH542, AH543, GF544, LL545, MS546, DJL547, VS548, WMH549, MD550, CL537, NH552, OD553, HD534, AD555, GLL556, BS557, RF558, JF559, GM560, SS561, JS562, KM563, CY564, DS565, BF566, SL567, DB568, RA569, EB570, DVH571, CA572, MH573, JK574, FL575, MTF576, CAH577, RJ578, JKW579, MC580, DC581, LK582, KB583, AR584, LC585, JL586, RC587, NL588, EF589, DC591, KCH592, LS593, SS594, MB595, AS596, FS597, MVW598, PW599, JM600, JW601, LW1465, JN1443, WF1444, KN1445, TN1446, JLC1596, WLS1442,

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DN1539, B1538, KS1537, SK1536, MGT1535, M1534, DH1533, TH1532, TG1531, DE1530, SE1529, CM1528, DP1526, HS1525, GA1524, KM1523, KM1522, CJ1521, LH1520, JE1519, S1519, WS1519, SD1519, EM1519, JO1519, JC1519, ML1519, ES1518, DC1517, RH1516, RJ1515, DB1514, BK1513, JKS1512, JK1511, RC1510, BW1509, K1507, GM1506, DB1505, SP1504, DL1503, AB1502, H1501, J1500, RY1499, W1497, JS1498, FCC1496, HG1456, DB1492, RR1494, MW1495, BDG1493, DMM1490, MM1489, RB1488, CS1487, DH1486, DB1484, KJK1483, SB1482, JS1481, RRG1480, DTS1460, TC1459, RW1458, LM1457, AG1455, JNK1454, SH1453, SS1452, DB1451, GB1450, RH1449, RP1448, DM1478, DR1477, S948, MH949, WK947, JH943, RTS817, TM818, FC819, KCS820, WS821, HMS822, DK823, DK824, DVH825, GT826, VW827, ML828, BMD829, CM830, BTT831, RJ832, TLG833, KTH834, DLA835, PH836, SG837, DC838, CC839, JGG840, DM841, SC842, WB843, GEH844, AK845, TK846, DH847, LPC848, CB849, LC850, JM851, RV852, GM853, SM854, KI855, KK856, RDY857, BS858, MS859, MMD860, MN861, AG862, KH863, HV864, GM865, MS866, KCH867, EM868, CC869, EW870, JG871, KSB872, AS874, JT875, DCS876, MM877, JE878, DS880, DB881, SW883, WB884, MP885, RD 886, CW887, WF888, AB889, HPR890, PB891, DD892, NG893, WH894, TF895, AZ896, LG897, CC898, DM899, RF900, GW901, MD902, DMB903, PR904, AP905, EB906, AM907, FDF908, DS909, BG910, RH911, ICL912, RK913, B914, SL915, AL916, TDR917, EGB920, TW922, KP923, JM924, LC667, SG668, DK669, EE670, SB671, WC672, NM673, CS674, EE675, JS676, RT677, DE678, RC679, RH680, CJ681, CM682, GT685, NN686, AM687, LG688, RM689, NS690, NS691, SAW694, HS695, JSP695, SG697, MNF699, JM701, P702, NT703, MW704, DT705, CW706, BAR707, AB708, JR709, WMS710, CP711, DE712, RM713, JR714, JP715,

TS716, RH717, CVTS718, DY719, DW720, TK721, CC722, DB723, DB724, CH725, DSW726, ATCL727, WY729, GH730, CPS731, NPHS732, TT733, WB734, PBA735, MK736, DM437, GB438, CB439, JS740, RM742, EC743, WJF744, KSM745, LTF746, LGC747, TG747, JL747, RJC748, JM749, JM750, DH751, SB752, CSP753, RMS754, DLR755, RK756, JM757, CM758, LRC761, LP762, DM763, LK764, DH765, LM766, KP767, HDB768, FLC769, JP771, JC772, EM774, GS774, SLG775, PW776, CD777, JE778, JM779, SS780, DM781, DJ782, RS783, SD784, GY785, HF786, JH791, NS793, S794, S795, LW796, RCG797, MB798, KD799, S800, S801, S802, RM803, LS804, JR805, EPM806, DTB807, S808, WT809, JM1030, GSH1029, HC1028,, JM1027, DM1026, KH1025, FCVC1024, VCS1023, RGF1021, RD1002, PM1019, RR1018, RJ1017, HA1015, KM1014, CD1013, AB1011, RC1010, RH1009, YL1008, KC1007, AR1005, SC1004, S1003, S189, S787, SE787, EL787, LQ787, EP787, CG787, JL787, MW787, VB787, TR787, UN787, JZ787, JJ787, BW787, VR787, JC787, BK787, JW787, KS787, HH787, NL787, DC787, KK787, AF787, MZ787, TL787, EH787, DG787, CG787, ZP787, S1551, RD1551, MG1551, GW1551, GB1551, SB1551, SJ1551, PH1551, DC1551, DS1380, RGC1239, DS760, CH1129, CH1129C, ML1367, MM1132, CV1278, JL1447, WT1461, KB1131)

Comment: The use of outdoor wood boilers should be banned except for the primary heating of a home. (MSO93)

Comment: Constituent would like IDEM to consider banning outdoor wood boilers. (SP67)

Comment: Banning the use of outdoor wood boilers would benefit everyone by clearly promoting health by ensuring clean air. (TYO235)

Comment: Ban units in their current design and require new designs to incorporate technology intended to increase efficiency instead of burn time. (A241)

Comment: There should be no ban on outdoor wood boilers. (RA937, RRS359, RS414, WW82, KB1154, PW1022, DH66, EK347, DM427, WSF62, WH92, TK428, JH143, H247, GRF139, MP325, RDB431, HHB445, JM630, GTR205, DM217, JCF245, IGW277, WEW438, JB954, EB1470, KR474, A629, TBT831)

Comment: Petition against the Ban of Outdoor Wood Furnace in the State of Indiana. (PETITION A)

Comment: A ban would only stifle manufacturer's research and design efforts to develop better units while hurting rural farmers that will have to seek other energy sources. (WW82)

Comment: A ban could lead to more home made units in rural areas. (WW82, LW467)

Comment: There should be no excessively restrictive regulations on the use of outdoor wood boilers. (TH1129)

Comment: There should be no outright ban on using wood to heat homes. (AK457, MS204, PM88. TGH336, FR259, BC105, DW104, MK313, RCJ352, A223, TB121)

Comment: Against any restriction on the use of wood for heating purposes. (ME812, JD485, GGJ425, JAG106, GCB117, JV261, CS251, ND986, BP98, LP252, EB33, PJC36, JR37, JR118, JSE177, CC339, BH341, CB396, MH421, KD248, JB302, RA361, CH502, C1092, DR122, JW816)

Comment: We are for outside wood boilers. (JI201)

Comment: Petition opposing IDEM proposal of Rule 326 IAC 4-3 (the banning of woodburning furnaces). (PETITION B)

Comment: We are opposed to this rulemaking. (TW1462, THH394, BW435, HH440, BG58, DB140, DJ301, RM75, DV87, KW89, JS94, MA110, DD133, KK154, LG312, CBG319, RH323, RS324, DA344, AG465, PT447, WB1207, SB693, MW183, TW184, HC185, TC186, JG187, PC218, WP112, MH316, IB335, PSO370, RL227, JJ125, BSW266, RS308, RW348, DV398, DB401, HR455, RN873, 789, PETITION C, EK96, WMU225, RM254, MM410, DB412, TF411, WF413, BM415, JB509, BM511, RSW512, LB513, RM448, RA416, R409, RF490, PETITION E)

Response: The draft rule does not ban outdoor hydronic heaters. Existing units may continue to operate with some reasonable restrictions after September 20, 2011. IDEM believes that new outdoor hydronic heaters should be required to meet health based emissions standards comparable to those imposed by U.S. EPA on new indoor wood stoves. New outdoor hydronic heaters will not be available for purchase in Indiana after the effective date of this rule unless the unit has been certified by independent testing to meet certain emission standards. Units meeting the health-based standards proposed in this draft rule, and which are fueled properly and appropriately located will continue to be a home heating option for Indiana consumers.

Comments regarding the potential economic impact of this rulemaking

Comment: The cost of the units should be enough to prevent people from misusing outdoor wood boilers. (KK263)

Comment: A restriction or ban would financially compromise or even devastate many farm and agricultural based operations that rely on outdoor wood boilers. (SC174)

There should be no restriction or ban on the use of outdoor wood boilers in rural areas. (GW698, JD485, VN191, O1429)

Comment: The use of wood for heating can effect a very important savings for citizens. (AK457, MS318, THH394, GW698, JF700, PC625, DMW250, DL289, EK347, DDH463, LG18, CS38, JG195, AS262, MEC321, SL990, KH449, EB492, DS760, PP237, LH290, LC379, FLE456, GT488, GBK59, MP993, JB994, SMP343, LK265, GW48, JH109, JH143, MJB258, TC984, LG19, BAR71, GRF139, BB279, JK338, DM692, WS194, TT220,

A16, DCP27, VB144, KC167, GN296, JB306, LG330, TK407, SSK918, JW1347, HH68, GH69, LPN193, JM980, RIB332, MVB368, CF376, PG385, BI389, JH429, BA475, MAC478, LH479, TM1391, RM634, LL269, DL1196, GSH1029)

Comment: Banning the use of stoves, fireplaces, and outdoor wood boilers would be a hardship for lower or fixed income persons who cannot afford electricity or gas for home heating. (HM273, WS113, VJR968, SSK1464, MB, JVL627, KW315, PS989, RTM417, SL124, SM131, JB300, SC309, SRM996, KTS363, AHW422, EJB1020, EJW1274, SE1362, JJJ99, WDH120, DW40, PS61, RA123, NJ442, MEB464, JH419, GM70, KW89, JS94, DD133, BT159, JL459, LW467, TB473, NM486, BM505, BC105, RBP20, RP23, MMD30, EKG41, MJP46, RKF63, RK64, DW104, WN116, DB169, HB168, JG208, TG211, DI216, JCF245, RS275, IGW277, DE298, MK313, LH314, DDM320, RB357, RM378, PDM406, WEW438, HM456, SM483, GR810, SSK918, DC1228, WL1172, JR643, PG385, TBA480, GR135, LS287, DN437, JR441, JW816, RGF1021, 789, PETITION D)

Comment: As fuel costs escalate, outdoor wood furnaces can help families heat their homes and businesses while controlling expenses. (VJR968, SJ652, KK198, JC270, PW1022, DH66, GG128, DS150, DGH158, MS204, RRD239, AY311, JKB436, TC446, JS684, JP25, MS51, WH92, MLJP274, EB492, CDC365, DS424, MM494, MK164, JMK165, GN171, DJM197, JNB390, TA420, JT452, JM1527, MEB464, CM53, DB140, SC72, IFB79, GE172, DCP27, RB108, MJA188, FJL196, DR358, GA397, RSP400, BB360, BH231, WT809, MN1434, PETITION D)

Comment: With the increasing cost of heating through natural gas and electricity, Hoosiers should be free to employ other, more economical methods to heat their homes. (DO640)

Comment: There are many people who burn wood out of financial necessity, as alternative fuel costs are much higher than the cost of heating with wood. (PCM179, G372, SC174, ME812, RB303, MS204, AY311, JKB436, MH24, SL990, EM157, BE199, LZ111, DGB151, LP252, TA420, AC176, CA353, JZ495, JR939, GM70, BAR71, MA110, CD138, CBG319, MP325, DA344, TF646, JH26, OMG54, RK64, FB100, EC114, SS178, DM217, JB228, JN230, CE236, RS275, LH314, RHA987, JO337, JM350, RCJ352, DR358, RA361, PSO370, TK407, RW423, MH501, GRS500, CBM499, LDS498, HM456, SM483, DS160, CA1066, WL1172, MVB368, RKM129, JKE295, LL269, 161, EK96, WMU225, RM254, MM410, DB412, TF411, WF413, BM415, JB509, BM511, RSW512, LB513, RM448, RA416, R409, RF490, PETITION E)

Comment: Current heating alternatives are much more expensive than wood. Natural gas costs three times the cost of wood per Btu, propane five times as much as wood, and electricity seven times as much. (WW952)

Comment: If you want to reduce the numbers of these outdoor wood boilers, alternative fuels must be available at a cheaper price. (IS173)

Comment: People need to have options for alternatives to the rising cost of heating with fossil fuels. (RM462, RB404, G5, PT447, JES49, WP112, RR146, SS178, C1092, WT809)

Comment: Outdoor wood boilers would not be an issue if utilities were properly regulated and alternative fuels had not become a financial necessity. (PCM179, DB17, MS51, SU163, G5, JW816)

Comment: Commentor will continue burning wood until government can pay any difference between current cost using outdoor wood boiler and the increased cost of an alternative heating source. (RRS359, DP392, BJF76, JW816)

Comment: Commentor will need assistance with paying heating bills and from lost economic activity from chainsaw sales, repair shops, hardware stores, and gas stations if wood burning is outlawed. (CR155, KB444, BC267)

Comment: If wood stoves are outlawed, can the state afford the additional burden of paying hundreds of additional heating bills in the winter? (DP392)

Comment: Is there a plan to help pay for the installation of government approved heating systems to replace affected wood burning devices? (KH449, MJA188, TBA480)

Comment: Many individuals have already invested a significant amount of money in the purchase and installation of outdoor wood boilers. How will they be affected by proposed regulations? (BY506, RR326, RM224, LH328, PDM406, TL460, MP432, GSH1029, RP506, JR506, JK506, RB506, JB506, JD506, RT506, RF506, MS506, BM506, KH506, NY506, TY506, JH506, S506)

Comment: Commentors express concern for new regulations' effect on people who sell, service, and manufacture outdoor wood boilers as well as people who sell wood. (RRS359, PH418, WW952, RAT192, CS38, BY506, S282, MEB464, CM53, LH328, KB444)

Comment: Cutting and selling firewood helps to supplement the income of many low-income Hoosiers. (RP506, JR506, JK506, RB506, JB506, JD506, RT506, RF506, MS506, BM506, KH506, NY506, TY506, JH506, S506)

Comment: What is the economic impact of a potential new rule on Indiana businesses that rely on the sale of outdoor wood boilers or lost tax revenue generated from the sale of these units? (DM427)

Comment: Economic opportunities exist for efficient harvesting, transportation and consumption of waste wood products. (DL476)

Comment: What about the economic impact of this rulemaking on the Indiana economy, as wood, corn, and coal are natural resources in Indiana and those industries would be adversely affected by new regulations?

(CW345, CR155, MH501, GRS500, CBM499, LDS498)

Comment: Savings from the reduced cost of heating with wood are available for economic growth in Indiana. (DL476, JH109, DK32)

Comment: An outdoor wood boiler allows the user to keep multiple buildings and difficult/expensive to heat spaces warm economically. (DM692)

Comment: Units are a very effective cost efficient means for heating multiple out-buildings while controlling energy costs by using available downed timber. (WW82)

Comment: With easy access to wood, it makes economic sense to use a renewable fuel source. (MH149, RM224)

Comment: In order to economically burn wood, one must have free access to wood, and very likely this will mean living in a rural area where neighbors will not be close enough to be offended by smoke. (CJ240, DPK458, VD166, WT1461, GP333)

Response: IDEM is not proposing a ban on new or existing outdoor hydronic heaters. The devices will still be allowed for seasonal heating. IDEM has found that new outdoor hydronic heaters are typically much more expensive to purchase and install than other home heating appliances. Typical units cost several thousand dollars after installation. These devices offer potential savings on heating costs, particularly when the user has access to free wood and/or the outdoor hydronic heater is used to heat a poorly insulated home. The use of dry seasoned firewood allows for a hotter, less smoky fire, and the manufacturers suggest that only dry seasoned firewood be burned in the units.

Comments about utility companies

Comment: Utility companies do not want people using wood as an alternative to their higher priced utilities. (GGJ425, SU163, JM21, GW48, RB203, PP206, S282, TC984, JNB390, MJ650, TGH336, LH328, LG330, BC267, MVB368, DB1505)

Comment: Power and utility companies are the ones pushing the idea that regulation of wood burning is necessary. (SL990, DS760, EJW1274, GT488, MM494, JG15, PS61, JH109, LZ111, MS119, RA123, DGB151, MJB258, KK263, GH280, LD307, AM329, JT452, LT453, DLS491, JM1527, DJW644, LH328, PSO370, BC267, TBA480)

Comment: The gas company should be forced to lower the price of natural gas. (RC334)

Response: IDEM has not been contacted by utility companies regarding this rulemaking. This rulemaking is the direct result of several complaints about the units from Indiana residents, combined with a growing national discussion and understanding of the health risks due to smoke from the units.

Comments regarding wood smoke from other sources

Comment: I like the smell of wood smoke. (RB108)

Comment: If outdoor wood boilers are banned, indoor wood furnaces or other types of wood burning activities will be banned next. (AM260, RSS366, MA80, JC34, WH92, JS101, JAG106, GCB117, SM131, WH162, TS200, AS262, TK428, RA123, DB983, RP506, JR506, JK506, RB506, JB506, JD506, RT506, RF506, MS506, BM506, KH506, NY506, TY506, JH506, S506)

Comment: If outdoor wood boilers are regulated, then indoor wood furnaces, fireplaces, and other types of wood burning activities should be or will be next. (TJR3, BS13, CV1278, DE84, CJ240, AY311, EK347, RTH283, TF646, ML229, DAB233, JM293, JB300, MEC321, SRM996, KTS363, AH395, KH449, SRM461, BY506, DS760, LH290, DP392, MM494, DW40, MS119, DJM197, RB203, NJ442, LM291, JB469, PM811, DDM320, CV1278)

Comment: I do not see how a rule could be made that would apply to just outside wood boilers and not to other wood burning devices. (BS13, WR1390, JR939, GA397, TH1016, PW766, TP1304)

Comment: Indoor wood stoves produce just as much smoke pollution as outdoor wood boilers. (RB635, PG219, RAT192, JG195, MLJP274, MS276)

Comment: Outdoor wood boilers have emissions similar to other wood burning fireplaces, and should not be held to a higher standard. (WC11)

Comment: My outdoor wood boiler was tested for emissions and is less likely to affect the air quality than fireplaces or indoor woodstoves. (DS246)

Comment: There is no difference in emissions between the outdoor or indoor wood furnaces, stoves, fireplaces, and campfires because they all burn wood. (DM427, DDH463, LG18, JP25, MH24, LR55, WSF62, SML73, SL124, SM131, SC309, RS408, ND645, GT488, PH380, KT265, LK265, MS276, JNB390, MSL792, JL1447, WT1461, ECB879, JL459, KB1131, OMG54, DDM320, WL1172, HH68, MVB368, DW299, KR474, MAC478, LH479, LL269, PH836)

Comment: The only difference between outdoor wood boilers and indoor wood inserts is the height of the chimney. (JB633, SH284, HH68)

Comment: Indoor fireplaces produce more smoke than outdoor wood boilers. (JM630, KCH696)

Comment: If outdoor wood boilers require regulation for the smoke they emit, then regulations for leaf burning or other outdoor wood burning is necessary. (PCM179, EK347, ML229)

Comment: Wood smoke is not a problem. (PJ35, JM293, A132, EM157, CS251, KS346, BW435, JM21, DJ301, KK371, CV1278)

Comment: If wood smoke was a problem, controlled burns would not be permitted. (DH153)

Comment: Will potential regulations include wood burning fireplaces, fire pits at state parks, rural trash burning and campfires? (HV238, BJF76)

Comment: Emissions from outdoor wood boilers are small compared to any forest fire. (DF285, SW90, DH153, BW435, DB140)

Comment: Environmentalists should look more closely at burning leaves, which creates pollution and has an offensive smell, unlike burning wood. (JS81)

Comment: If smoke is a problem, ban tobacco. (MJ650)

Comment: How does smoke from outdoor wood boilers rank as an emission source compared to other sources, and how is a rulemaking regarding outdoor wood boilers justified when other sources are not sufficiently regulated? (WW952, LH479)

Response: Studies comparing particulate matter emission sources consistently rank outdoor hydronic heaters much higher in terms of potential emissions than any other home heating appliance. IDEM believes this rulemaking is necessary to address this major potential contribution to ambient particulate matter emissions as well as to address nuisance issues complained of by neighbors. As compared to other sources of residential wood smoke, not only do outdoor hydronic heaters have the largest potential particulate matter emissions, but they are also unregulated for emissions, unlike most other home heating devices. New indoor wood stoves and fireplace inserts designed for home heating purposes must meet U.S. EPA certification requirements. Fireplaces, in contrast, are typically not used for primary home heating and are usually not used continuously during the winter heating season. New fireplaces are subject to standards imposed by the state building code. Unlike other sources of wood smoke, outdoor hydronic heaters have not been subject to any emissions standards prior to this rulemaking, are designed for continuous use during the winter heating season, and are sometimes operated year round for hot water and to heat swimming pools or hot tubs.

Comments on wood as a sustainable source of fuel

Comment: By burning wood, I am allowing more heat sources from the finite supply of fossil fuels such as natural gas for people who don't have access to wood. (JA327)

Comment: Burning wood provides heat and eliminates need to otherwise dispose of wood waste and downed limbs, such as in landfills or through bonfires. (WS113, WW952, RP22, TB181, VF1012, AY311, RGC1239, LG18, PH380, DGB151, JR939, GRF139, GE172, GS451, CR155, WP386, RM634, WT809, WM1414)

Comment: Burning wood eliminates the need to get rid of brush and rotting limbs that would otherwise litter the ground or go to waste. (RM628, PC625, JB78, RR126, AY311, RGC1239, TS200, AS262, RS408, NT342, VCPRD637, MJB258, NDB1305, DJW644, DH377, WT1461, PW426, ES47, KK50, CD138, KA310, JC489, DB1387, GB1475, DCP27, MMD30, JM980, RSP400, JH429, MP432, MAC478, TM1391, BH231, LM42, MM1132)

Comment: Very little wood is cut for firewood that could or would be used in another way. (VD166, WT1461, RB108, EG209)

Comment: If wood burning is banned, there will be more downed timber left on the forest floor, increasing the risk of forest fires. (TS200, BY506, RP506, JR506, JK506, RB506, JB506, JD506, RT506, RF506, MS506, BM506, KH506, NY506, TY506, JH506, S506)

Comment: Wood is a renewable, sustainable, and affordable fuel. (WW952, DF285, HV238, JM293, DF2, A241, PH380, MP993, WA985, DGB151, VD166, H247, TM297, JR939, ZS147, HS322, MP325, RG934, BW212, JCS213, RBW215, RM224, VB144, JCF245, DC1228, JW1347, HH68, DB983, DY393, MB391, KK371, DL1196, RW1120, TBT831, RF405, TA181, L281, DH377, ES47, KK50, RR146, JM350, WT809, CV1278, RS515, GJE602, DS603, CM604, KS605, DS606, ML607, CV608, AL609, RS610, JS611, CB612, JM613, JN614, SS615, BL616, S617, S618, JH619, BR620, RP621, DB622, JB623, DM624, V624, JCS624, TN624, JH624, LM624, PH624, JH624, DW624, S624, TM624, JM624, DF624, DM624, SM624, CK624, MK624, S654, TR655, WB656, AW657, PS658, JS658, MB659, KN660, JD661, SM662, CM663, DCP664, WC665, VW666, JW518, JC532, RM533, TG534, KBJ535, SG536, DA537, DG538, MKW539, KH540, DJV541, SH542, AH543, GF544, LL545, MS546, DJL547, VS548, WMH549, MD550, CL537, NH552, OD553, HD534, AD555, GLL556, BS557, RF558, JF559, GM560, SS561, JS562, KM563, CY564, DS565, BF566, SL567, DB568, RA569, EB570, DVH571, CA572, MH573, JK574, FL575, MTF576, CAH577, RJ578, JKW579, MC580, DC581, LK582, KB583, AR584, LC585, JL586, RC587, NL588, EF589, DC591, KCH592, LS593, SS594, MB595, AS596, FS597, MVW598, PW599, JM600, JW601, LW1465, JN1443, WF1444, KN1445, TN1446, JLC1596, WLS1442, DB1441, JCT1474, NP1473, SB1472, GM1471, MJA1469 BB1468, BR1467, JW1466, JG1439, TLG1463, DW1440, MW1438, NW1473, W1436,TO1435, MN1434, JY1433, CM1432, LV1431, NH1430, O1429, B1428, C1427,W1426, JM1425, RF1424, SO1423, AG1422, JE1421, YM1420, RLG1419, GP1418, RB1417, RW1416, DP1415, WM1414, MW1413, RL1412, SR1411, KRR1410, DR1409, WV1408, TS1407, SL1406, JM1405, S1368, JT1404, DDW1403, BT1402, FN1401, ML1400, CNP1399, RF1398, PF1397, EL1396, KT 1395, LAR1394, HH1393, KC1392, EY1389, RZ1388, LN1386, CR1385, SE1384, LZ1383, CJK1382, BC1381, SS1372, MM1371, MB1370, LG169, LR1379, JH1378, JW1377, MM1376, JL1375, LH1356, DH1355, JW1354, JS1353, KM1352, JT1351, LL1349, S1348, NW1346, SG1345, DW1325, HB1303, SE1335, DN1344, SH1343, GN1342, SG1341, LH1340,

JE1339, RJV1338, AL1337, GM1336, KM1334, LB1333, DW1332, JM1331, BP1330, GG1329, GR1328, JN1327, JR1326, FS1366, RH1324, EJB1322, WP1321, KN1320, WL1319, S1318, RLS1317, E1316, MJT1315, MBP1314, ET1313, JW1312, DH1311, MS1310, GG1309, S1308, KR1307, JH1306, TP1304, EB1301, BC1302, DB1300, TE1268, S1299, MS1298, CV1293, BM1297, DC1296, GF1295, DM1294, JSP1294, CB1294, JR1294, SP1294, EB1294, LCO1294, BR1294, DVG1294, S1294,HH1294, HH1294, KVG1294, MB1294, AS1292, VG1291, TC1290, DS1289, DR1287, GS1286, WV1285, P1284, LS1283, JVW1282, MW1281, JS1280, DF1279, JS1277, CS1276, EB1275, BP1273, S1272, AJG1271, SS1270, KW1267, JW1269, RC1266, TP1265, MK1264, DK1263, CM1262, BB1261, PIY1260, CF1259, GB1258, RC1257, TB1256, JL1255, STL1254, BW1253, RF1252, JR1251, GF1250, DB1249, JWS1248, DD1247, APW1246, CK1245, TK1243, DB1242, MA1241, JS1240, MW1238, MLC1237, JL1236, JKG1235, JMB1233, DCW1232, KLT1186, JJH1231, BH1230, RA1229, NR1227, RJ1224, RR1223, BB1222, CC1221, LK1220, DSR1219, MP1218, SL1217, FS1216, RKS1214, DBB1213, CJA1212, WBB1211, DM1210, RC1209, KS1208, RS1206, MD1205, JS1204, JS1203, BC1202, JA1188, JS1187, TW1185, MA1184, MC1183, RS1182, PP1181, GN1180, H1179, AD1178, KH1177, WK1176, SY1175, VH1174, HH1173, DS1170, RB1169, STH1168, AW1189, DC1201, HRL1200, FH1199, AT1198, JS1197, SS1195, DZ1194, WM1193, MY1192, JC1191, MV1190, DK1166, DMC1165, DS1164, S1163, CM1162, AG1161, HY1160, DS1159, CH1158, TT1157, JS1156, DR1155, NH1152, MW1150, KF1149, CJC1148, CC1147, TR1146, DO1145, JH1144, ERW1143, EL1142, JM1141, CS1140, DR1138, DPH1139, JR1137, EP1136, BP1135, MC1134, JCS1133, AM1006, CC1130, RDK1128, WLF1127, JA1126, HPJ1125, TB1124, CS1123, DS1122, DW1121, WM1118, NC1117, DSCM1116, GLR1115, BD1112, GS1113, TTH1110, AC1109, JB1108, KK1107, TP1106, ET1105, PW1104, MG1103, RS1102, DB1101, DB1100, FL1099, CE1098, RA1097, GG1096, MS1095, MW1094, CP1093, JJG1090, DP1091, KR1089, CS1088, B1087, RT1086, BVC1085, LG1084, WB1083, WK1082, LL1081, 0W1080, ME1079, RJD1078, RPM1077, JS1076, LKG1075, CDB1074, JB1073, RG1072, PB1071, AK1070, DR1069, MH1068, DG1067, GF1065, FM1064, MW1063, SE1062, IH1061, MCR1060, ST1059, SS1058, LP1057, RK1056, HS1055, CK1054, MH1053, MH1052, KR1051, RRS1050, KBJ1049, BS1048, RG1047, DJW1046, ND1045, KTY1044, BE1043, HB1042, TKD1041, MK1040, EB1039, TG1038, MP1034, TCR1037, B1036, RR1035, KC1033, DH1032, FS1031, JH1225, PR1350, BB647, JJ648, KW649, TG14, GP29, MA242, DE243, RMD244, BB249, JC253, BM255, BM256, WL257, BM953, TSK967, DK966, TM982, SG981, MJ979, KRB978, MM977, MH976, LP975, MH974, DH973, LS972, KS971, KM970, RY969, RB965, RTM964, MD963, RS962, MD961, G960, MS959, RA958, C957, RS956, BV493, STG927, SC929, BP928, FG926, S932, S931, CH930, JW1001, JS1001, SC1001, S1001, CA1001, SN1001, LMA1001, MJ1001, STN1001, LG1001, KG1001, CS1595, NNF1594, LM1593, ERK1592, RW1591, LS1590, WL1589, CS1588, LS1587, BH1586, SB1585, MH1584, DM1583, MG1582, MR1581, CG1580, JB1579, PH1578, DK1577, MH1576, MF1575, TD1574, LA1573, JF157, CN1570, BBD1569, JDG1568, CJW1567, BRK1567, JKC1566, AB1556, ELW1564, WD1563, TK1562, DG1561, DS1560, AF1559, MB1557, MAH1556, SE1555, MPS1554, RNA1553, DM1552, RC1554, K1545, JG1546, MM1547, DI1548, ES1549, DB1542, KJ1541, TD1540, DN1539, B1538, KS1537, SK1536, MGT1535, M1534, DH1533, TH1532, TG1531, DE1530, SE1529, CM1528, DP1526, HS1525, GA1524, KM1523, KM1522, CJ1521, LH1520, JE1519, S1519, WS1519, SD1519, EM1519, JO1519, JC1519, ML1519, ES1518, DC1517, RH1516, RJ1515, DB1514, BK1513, JKS1512, JK1511, RC1510, BW1509, K1507, GM1506, DB1505, SP1504, DL1503, AB1502, H1501, J1500, RY1499, W1497, JS1498, FCC1496, HG1456, DB1492, RR1494, MW1495, BDG1493, DMM1490, MM1489, RB1488, CS1487, DH1486, DB1484, KJK1483, SB1482, JS1481, RRG1480, DTS1460, TC1459, RW1458, LM1457, AG1455, JNK1454, SH1453, SS1452, DB1451, GB1450, RH1449, RP1448, DM1478, DR1477, S948, MH949, WK947, JH943, RTS817, TM818, FC819, KCS820, WS821, HMS822, DK823, DK824, DVH825, GT826, VW827, ML828, BMD829, CM830, BTT831, RJ832, TLG833, KTH834, DLA835, PH836, SG837, DC838, CC839, JGG840, DM841, SC842, WB843, GEH844, AK845, TK846, DH847, LPC848, CB849, LC850, JM851, RV852, GM853, SM854, KI855, KK856, RDY857, BS858, MS859, MMD860, MN861, AG862, KH863, HV864, GM865, MS866, KCH867, EM868, CC869, EW870, JG871, KSB872, AS874, JT875, DCS876, MM877, JE878, DS880, DB881, SW883, WB884, MP885, RD 886, CW887, WF888, AB889, HPR890, PB891, DD892, NG893, WH894, TF895, AZ896, LG897, CC898, DM899, RF900, GW901, MD902, DMB903, PR904, AP905, EB906, AM907, FDF908, DS909, BG910, RH911, ICL912, RK913, B914, SL915, AL916, TDR917, EGB920, TW922, KP923, JM924, LC667, SG668, DK669, EE670, SB671, WC672, NM673, CS674, EE675, JS676, RT677, DE678, RC679, RH680, CJ681, CM682, GT685, NN686, AM687, LG688, RM689, NS690, NS691, SAW694, HS695, JSP695, SG697, MNF699, JM701, P702, NT703, MW704, DT705, CW706, BAR707, AB708, JR709, WMS710, CP711, DE712, RM713, JR714, JP715, TS716, RH717, CVTS718, DY719, DW720, TK721, CC722, DB723, DB724, CH725, DSW726, ATCL727, WY729, GH730, CPS731, NPHS732, TT733, WB734, PBA735, MK736, DM437, GB438, CB439, JS740, RM742, EC743, WJF744, KSM745, LTF746, LGC747, TG747, JL747, RJC748, JM749, JM750, DH751, SB752, CSP753, RMS754, DLR755, RK756, JM757, CM758, LRC761, LP762, DM763, LK764, DH765, LM766, KP767, HDB768, FLC769, JP771, JC772, EM774, GS774, SLG775, PW776, CD777, JE778, JM779, SS780, DM781, DJ782, RS783, SD784, GY785, HF786, JH791, NS793, S794, S795, LW796, RCG797, MB798, KD799, S800, S801, S802, RM803, LS804, JR805, EPM806, DTB807, S808, WT809, JM1030, GSH1029, HC1028,, JM1027, DM1026, KH1025, FCVC1024, VCS1023, RGF1021, RD1002, PM1019, RR1018, RJ1017, HA1015, KM1014,

CD1013, AB1011, RC1010, RH1009, YL1008, KC1007, AR1005, SC1004, S1003, S189, S787, SE787, EL787, LQ787, EP787, CG787, JL787, MW787, VB787, TR787, UN787, JZ787, JJ787, BW787, VR787, JC787, BK787, JW787, KS787, HH787, NL787, DC787, KK787, AF787, MZ787, TL787, EH787, DG787, CG787, ZP787, S1551, RD1551, MG1551, GW1551, GB1551, SB1551, SJ1551, PH1551, DC1551, DS1380, RGC1239, DS760, CH1129, CH1129C, ML1367, MM1132, CV1278, JL1447, WT1461, KB1131, 161)

Comment: Burning wood reduces dependence on foreign / fossil fuels. (SJ652, TB181, JS684, LG18, MH24, WH162, JB300, SC309, EJW1274, DL272, CDC365, DS424, SE1362, PH380, WA985, GH280, NDB1305, LG19, VD166, AC176, CA353, DH377, PW426, DDJ471, EM626, MT367, MW933, RG934, DB1387, BW212, JCS213, RBW215, RM224, DI216, DC1228, GM1171, RIB332, MB391, KW234, MP432, TM1391, EG209, DL1196, JBH355, BH91, L281, LM291, EO998, CM470, ECB879, WT809)

Comment: One government agency is talking about conserving energy while the other is discussing regulations and potential ban of an alternative, sustainable heating fuel. (LH85, KLF944, SB693, OMG54, CA1066, EM1153)

Comment: IDEM should be encouraging the use of wood as an alternative renewable resource. (CS251, PH380, LJS317, LG19, KA310, FR259, JM350, DS160, WL1172, JB954, MB391, KCH696, EK96, WMU225, RM254, MM410, DB412, TF411, WF413, BM415, JB509, BM511, RSW512, LB513, RM448, RA416, R409, RF490, PETITION E)

Comment: We should get a refundable tax credit for setting up and using outdoor wood boilers. (GY785)

Response: IDEM agrees that wood is a renewable and sustainable fuel, and that those qualities are desirable from an environmental standpoint. Additionally, IDEM is not proposing a ban on outdoor hydronic heaters. However, there remains concern about the impacts of particulate matter emissions on the health of those exposed to it. Particulate matter is one of six criteria pollutants for which the U.S. EPA has established health based air quality standards. The emission limits proposed for outdoor hydronic heaters are designed to allow the use of these devices while protecting air quality standards and minimizing particulate matter emissions to the ambient air.

Comment: People have been burning wood for heat for many years; why is regulation necessary now? (DH66, MJ103, RR126, JGG130, DS150, DGH158, MS204, RRD239, DF285, DL289, MS294, AY311, KW315, PS989, GG384, RTM417, GGJ425, JKB436, TC446, DPK458, DDH463, JS684, RGC1239, MS51, TS200, AHW422, DS760, RT1167, BW435, FLE456, FLE456, JB994, TK428, DW40, MS119, L281, ZS147, MS305, A16, DW104, JR643, GH69, DB983, GR135, JKE295, A629, 161)

Response: IDEM recognizes that wood has long been used as a home heating fuel. However, there now exists a much greater understanding of and resulting concern for the negative health effects associated with the exposure to fine particulate matter in wood smoke. Combined with the readily available technology to reduce the amount of wood smoke generated, it is in the best interest for the air quality and the health of the citizens in the state of Indiana to establish appropriate regulations for the burning of wood in outdoor hydronic heaters.

Comment: Wood burning is an important option that allows us to stay warm when the power is out. (MP993, JR118, DL289, DB17, RM224, EKG41)

Response: Outdoor hydronic heaters depend on a power supply to circulate water, to regulate temperature, and to control dampers during normal operation of the units. This makes the unit impractical for use as an alternative heat source in the absence of electricity, unless a separately fueled power generator is also used. The use of indoor wood stoves, fireplace inserts, and fireplaces, all of which may operate without the use of electricity, are not affected by this rulemaking.

Comments regarding greenhouse gases

Comment: Wood burning, unlike burning of fossil fuels, introduces no net gain of carbon into the atmosphere, because the same amount of carbon will be released if the wood was to naturally decompose. (WW952, EJB1020, PH380, LG19, L281, ML1367, MB391, CRF477, KK856)

Response: IDEM agrees that wood burning is a carbon neutral activity, and contributes no additional greenhouse gases to the atmosphere. Accordingly, IDEM supports the responsible use of wood as a renewable, sustainable, carbon neutral fuel source. Due to the excessive particulate matter emissions from current units, and the well documented health risks associated with exposure to wood smoke, this draft rule is necessary to ensure that Indiana residents are able to use outdoor hydronic heaters that are protective of outdoor air quality and that pose the least threat to human health.

Comments regarding other sources of pollution

Comment: Other fuel sources for home heating, such as engine oil furnaces, coal at electric power plants, also contribute to pollution. (DS115, CM179, JB78, DPK458, RB86, SL990, DCP27, WP112, RC334, MS364, KR474, BA475)

Comment: Wood burning is a necessary supplement to our other primary heating sources such as a gas furnace or electric heat. (JB994)

Comment: Emissions from burning wood is as clean as from other home heating sources. (EK347, CS38, PS271, LJS317, LD307, CC60, CA1066, RP506, JR506, JK506, RB506, JB506, JD506, RT506, RF506, MS506,

BM506, KH506, NY506, TY506, JH506, S506, EK96, WMU225, RM254, MM410, DB412, TF411, WF413, BM415, JB509, BM511, RSW512, LB513, RM448, RA416, R409, RF490, PETITION E)

Comment: Emissions from burning fossil fuels such as coal, oil, and gas are more harmful than emissions from burning wood. (WW952, RAT192, AY311, WR1390, PT207, KK263, CA353, MJH516, MSJ516, HJ516, RC516, NC516, ZS147, JG208, LG330, MH501, GRS500, CBM499, LDS498, DB983, JJ125, A629, 161)

Comment: The amount of sulphur in wood smoke is far less than the amount produced from burning fossil fuels. (JW921)

Comment: My gas furnace sometimes smokes more than my neighbor's outdoor wood boiler. (CV1278)

Comment: Emissions from vehicles are a concern. (BA995, JBH355, AY311, TC446, RT1167, DG127, RR326, RWT351, CDC365, LM375, HH440, TC984, LT453, DJ301, DY393, BA475, MAC478)

Comment: Smoke from diesel trucks is more of a health and environmental concern than wood smoke from outdoor furnaces. (SH284, GGJ425, JS684, RB86, AH395, JB306, RGF1021, O1429)

Comment: Outdoor wood boilers hurt the environment no more than airplanes flying across the sky. (GG128, TC446, RB86, WH92, RT1167, ND986, RWT351, SE1362)

Comment: Pollution from meth labs is more of a concern than pollution from outdoor wood boilers. (GDH399)

Comment: Outdoor wood boilers are no more damaging to the environment than space debris. (EG209)

Comment: Outdoor wood boilers hurt the environment no more than rockets launching into space. (GG128, ND986)

Comment: Chemical pollution of land and water are a concern. (JBH355, GGJ425, A629)

Comment: Wood stoves are more efficient than burning oil for heat. (MS364)

Comment: The contribution to pollution from outdoor wood boilers is microscopic compared to the major air pollution sources of factories, cars, coal fired plants, and solvent using operations. IDEM should focus on major pollution sources. (PT482)

Comment: Emissions from my wood stove are nowhere near as bad as from the local power plant. (BS13, DG127)

Comment: Coal is burned to produce electricity for much of Indiana, and it is not cleaner than wood. (PC625)

Comment: Emissions from wood stoves are not as bad as those from chemical plants, power plants, and oil and gas wells. (MB, KW315, MS51, DL272)

Comment: Pollution from factories and other sources are much worse than from outdoor wood boilers. (DG127, A132, EM157, NT342, DP392, GDH399, TK428, DGB151, NJ442, PT482, BB279, TT220, MMD30, DY393, MW97)

Comment: Pollution from factories is emitted year round, whereas outdoor wood boilers are usually only operated a few months out of the year. (NT342)

Comment: Pollution from garbage burning is more of a concern than pollution from outdoor wood boilers. (GDH399)

Comment: Smoke from trash burning barrels and leaf burning is much worse than smoke from outdoor wood boilers. (DAB233, TM1391)

Comment: IDEM should regulate pollution caused by big hog farms and turkey houses instead of people burning outdoor wood boilers. (JGG130, RH433, SU163, FLE456)

Comment: IDEM should focus on industrial and agricultural sources of pollution and not residential sources. (DG65)

Comment: The smell of liquid manure spread by hog farmers is much worse than the smell of wood smoke. (RGF1021)

Comment: It should be determined what the net effect of pollution would be from a switch from wood heat to another fuel source, such as natural gas or electric heat from coal. (RW28, PT207, DF2)

Comment: Outdoor wood boilers are environmentally friendly and cut down on pollution by enabling individuals to heat multiple structures with the same unit. (RM628)

Comment: Wood is the cleanest, least expensive, and most environmentally friendly heat source available. (EB492)

Comment: I do not believe that my outdoor wood boiler does any more harm than an inside wood stove, an oil furnace or a gas furnace. (RP22, MJ103, DL289, AY311, GG384, RTM417, BY506)

Comment: Air pollution at railroad crossings is much more of a concern than outdoor wood boilers. (JJ1491)

Comment: IDEM should pursue corporate giants who emit pollutants on a major scale instead of focusing on outdoor wood boilers. (PW1022, AY311, DB17, MH24, JC34, BE199, PT207, CS251, KS346, MM494, DGB151, LLP466, FB100, CR155, JCF245, LC349, DN437)

Comment: IDEM chooses to not to go after the Speed concrete plant for burning tires and trash because they are financially able to fight rules. (DH153)

Comment: If concerned about the environment, IDEM should be focusing on issues like Indianapolis' sewer treatment plant. (WP386)

Comment: Instead of banning outdoor wood boilers, IDEM should ban boats on Patoka Lake so they stop polluting the drinking water with mercury. (DL272)

Comment: If IDEM is concerned about air quality, then something should be done to prevent whole hill sides from being stripped of trees, which clean the air. (LH290)

Comment: Instead of this rulemaking, IDEM should be encouraging the growing of more corn and the planting of more trees. (PT447)

Comment: More particulate matter was emitted into the air from the Mt. St. Helens eruption than will be emitted by wood and corn burners over the next several centuries. (DLS491)

Response: IDEM and U.S. EPA have other regulations to address many of the air quality concerns expressed in these comments. This rulemaking recognizes that the emissions from outdoor hydronic heaters, together with the increasing popularity of the units and increased prevalence in less rural areas, is a potential health concern from an air quality standpoint. Typically, the scope of individual environmental rulemakings are limited to one form of environmental concern, such as air quality, and are further limited to one source or type of pollution. This rulemaking seeks to address particulate matter emissions from outdoor hydronic heaters, and does not preclude concurrent or future rulemakings to address other air quality concerns.

Comment: How will this rulemaking affect outdoor corn burning heaters? (DAB233, KA310)

Response: Outdoor corn burning units that can be verified to have met the proposed particulate matter emissions standards can be certified for sale in Indiana just as a wood burning outdoor hydronic heater. The manufacturer wishing to sell an outdoor hydronic heater in Indiana must provide certified test results depicting the unit's emissions and verifying compliance with the particulate matter emission limitations set forth in the draft rule. The commissioner has the discretion to approve alternative fuels if the model proposed to burn them can be demonstrated to meet the appropriate particulate matter emission limit and the use of the alternative fuel emits no other pollutant in a quantity that causes a health concern.

Comment: Better enforcement of existing open burning regulations will have a much greater positive effect on air quality than regulations on outdoor wood boilers. (DC31)

Comment: IDEM should focus on better enforcement of existing air quality regulations, including opacity and fugitive dust limits. (MCH434, RG934, CH502)

Comment: The State of Indiana cannot afford to enforce these new regulations. (AH395)

Comment: How will IDEM enforce new rules on outdoor wood boilers? (JG15)

Response: IDEM hopes to lessen the need for any type of enforcement action through outreach efforts designed to increase the public's awareness of the rule requirements and the availability of units which meet the draft rules Phase 2 emission standards. Continued efforts to increase public awareness of the health risks of exposure to wood smoke and fine particulate matter will also help to improve compliance. The draft rule furthers these outreach efforts by requiring manufacturers and dealers selling outdoor hydronic heaters to provide customers with a copy of the state's requirements.

Comments regarding the design of outdoor hydronic heaters

Comment: I disagree with the statement in the First Notice that the basic design of outdoor wood boilers causes fuel to burn incompletely, or smolder. (DM427)

Comment: Among the design characteristics of outdoor wood boilers is the ability of an operator to load large amounts of wood and then ignore the boiler for 12 hours, leading to inefficient combustion. (A241)

Comment: Manufacturers could incorporate design elements such as brick liners, baffled air flow, and catalytic devices, but they won't without regulatory guidance. (A241)

Comment: IDEM should implement a program to ensure proper construction and installation of outdoor wood boilers. (SM382)

Response: IDEM has found that the design of outdoor hydronic heaters can be improved upon in a number of ways to reduce the volume of particulate matter emissions from the units. Modifications that reduce the time the unit spends operating in an air-starved mode and increase the combustion temperature inside the unit can significantly reduce the amount of emissions produced. Another design change might lead to the incorporation of greater water storage, so that the unit is fired continuously to heat a larger reservoir of water, rather than cycling between air starved and open damper combustion to mimic heat demand. IDEM believes that establishing health based emission standards and allowing manufacturers to design products to meet those requirements is the appropriate way to reduce emissions.

Comments regarding safety concerns

Comment: If IDEM imposes regulations on outdoor wood boilers, more people will install wood and pellet stoves in the house, increasing risk of house fire. (BFF278)

Comment: A total ban of outdoor wood boilers will indirectly result in more house fires, deaths and people being unable to get insurance. (DR946, JZ495)

Comment: Outdoor wood boilers are the safest way to heat your home using wood. (VJR968)

Comment: Outdoor wood boilers are safer than indoor wood burning devices because they eliminate the risk of fire hazard. (PH418, PG219. HW152, JF700, MH24, SRM996, S282, KB1154, JR636, VF1012, MH1114, GG384, TS200, MLJP274, SL990, RS408, SRM461, RR326, PH380, PS61, DLS491, JM1527, DJW644, WT1461, ECB879, SC72, EA292, DM692, DB1387, WS194, RM224, VB144, JB306, RB357, WL1172, JW1347, LPN193, JM980, PG385, DW299, MB391, JH429, BA475, JTW728, TH1016, EM1153, MH362, TBT831,

RGF1021, GY785, CV1278, RS515, GJE602, DS603, CM604, KS605, DS606, ML607, CV608, AL609, RS610, JS611, CB612, JM613, JN614, SS615, BL616, S617, S618, JH619, BR620, RP621, DB622, JB623, DM624, V624, JCS624, TN624, JH624, LM624, PH624, JH624, DW624, S624, TM624, JM624, DF624, DM624, SM624, CK624, MK624, S654, TR655, WB656, AW657, PS658, JS658, MB659, KN660, JD661, SM662, CM663, DCP664, WC665, VW666, JW518, JC532, RM533, TG534, KBJ535, SG536, DA537, DG538, MKW539, KH540, DJV541, SH542, AH543, GF544, LL545, MS546, DJL547, VS548, WMH549, MD550, CL537, NH552, OD553, HD534, AD555, GLL556, BS557, RF558, JF559, GM560, SS561, JS562, KM563, CY564, DS565, BF566, SL567, DB568, RA569, EB570, DVH571, CA572, MH573, JK574, FL575, MTF576, CAH577, RJ578, JKW579, MC580, DC581, LK582, KB583, AR584, LC585, JL586, RC587, NL588, EF589, DC591, KCH592, LS593, SS594, MB595, AS596, FS597, MVW598, PW599, JM600, JW601, LW1465, JN1443, WF1444, KN1445, TN1446, JLC1596, WLS1442, DB1441, JCT1474, NP1473, SB1472, GM1471, MJA1469 BB1468, BR1467, JW1466, JG1439, TLG1463, DW1440, MW1438, NW1473, W1436,TO1435, MN1434, JY1433, CM1432, LV1431, NH1430, O1429, B1428, C1427,W1426, JM1425, RF1424, SO1423, AG1422, JE1421, YM1420, RLG1419, GP1418, RB1417, RW1416, DP1415, WM1414, MW1413, RL1412, SR1411, KRR1410, DR1409, WV1408, TS1407, SL1406, JM1405, S1368, JT1404, DDW1403, BT1402, FN1401, ML1400, CNP1399, RF1398, PF1397, EL1396, KT 1395, LAR1394, HH1393, KC1392, EY1389, RZ1388, LN1386, CR1385, SE1384, LZ1383, CJK1382, BC1381, SS1372, MM1371, MB1370, LG169, LR1379, JH1378, JW1377, MM1376, JL1375, LH1356, DH1355, JW1354, JS1353, KM1352, JT1351, LL1349, S1348, NW1346, SG1345, DW1325, HB1303, SE1335, DN1344, SH1343, GN1342, SG1341, LH1340, JE1339, RJV1338, AL1337, GM1336, KM1334, LB1333, DW1332, JM1331, BP1330, GG1329, GR1328, JN1327, JR1326, FS1366, RH1324, EJB1322, WP1321, KN1320, WL1319, S1318, RLS1317, E1316, MJT1315, MBP1314, ET1313, JW1312, DH1311, MS1310, GG1309, S1308, KR1307, JH1306, TP1304, EB1301, BC1302, DB1300, TE1268, S1299, MS1298, CV1293, BM1297, DC1296, GF1295, DM1294, JSP1294, CB1294, JR1294, SP1294, EB1294, LCO1294, BR1294, DVG1294, S1294,HH1294, HH1294, KVG1294, MB1294, AS1292, VG1291, TC1290, DS1289, DR1287, GS1286, WV1285, P1284, LS1283, JVW1282, MW1281, JS1280, DF1279, JS1277, CS1276, EB1275, BP1273, S1272, AJG1271, SS1270, KW1267, JW1269, RC1266, TP1265, MK1264, DK1263, CM1262, BB1261, PIY1260, CF1259, GB1258, RC1257, TB1256, JL1255, STL1254, BW1253, RF1252, JR1251, GF1250, DB1249, JWS1248, DD1247, APW1246, CK1245, TK1243, DB1242, MA1241, JS1240, MW1238, MLC1237, JL1236, JKG1235, JMB1233, DCW1232, KLT1186, JJH1231, BH1230, RA1229, NR1227, RJ1224, RR1223, BB1222, CC1221, LK1220, DSR1219, MP1218, SL1217, FS1216, RKS1214, DBB1213, CJA1212, WBB1211, DM1210, RC1209, KS1208, RS1206, MD1205, JS1204, JS1203, BC1202, JA1188, JS1187, TW1185, MA1184, MC1183, RS1182, PP1181, GN1180, H1179, AD1178, KH1177, WK1176, SY1175, VH1174, HH1173, DS1170, RB1169, STH1168, AW1189, DC1201, HRL1200, FH1199, AT1198, JS1197, SS1195, DZ1194, WM1193, MY1192, JC1191, MV1190, DK1166, DMC1165, DS1164, S1163, CM1162, AG1161, HY1160, DS1159, CH1158, TT1157, JS1156, DR1155, NH1152, MW1150, KF1149, CJC1148, CC1147, TR1146, DO1145, JH1144, ERW1143, EL1142, JM1141, CS1140, DR1138, DPH1139, JR1137, EP1136, BP1135, MC1134, JCS1133, AM1006, CC1130, RDK1128, WLF1127, JA1126, HPJ1125, TB1124, CS1123, DS1122, DW1121, WM1118, NC1117, DSCM1116, GLR1115, BD1112, GS1113, TTH1110, AC1109, JB1108, KK1107, TP1106, ET1105, PW1104, MG1103, RS1102, DB1101, DB1100, FL1099, CE1098, RA1097, GG1096, MS1095, MW1094, CP1093, JJG1090, DP1091, KR1089, CS1088, B1087, RT1086, BVC1085, LG1084, WB1083, WK1082, LL1081, 0W1080, ME1079, RJD1078, RPM1077, JS1076, LKG1075, CDB1074, JB1073, RG1072, PB1071, AK1070, DR1069, MH1068, DG1067, GF1065, FM1064, MW1063, SE1062, IH1061, MCR1060, ST1059, SS1058, LP1057, RK1056, HS1055, CK1054, MH1053, MH1052, KR1051, RRS1050, KBJ1049, BS1048, RG1047, DJW1046, ND1045, KTY1044, BE1043, HB1042, TKD1041, MK1040, EB1039, TG1038, MP1034, TCR1037, B1036, RR1035, KC1033, DH1032, FS1031, JH1225, PR1350, BB647, JJ648, KW649, TG14, GP29, MA242, DE243, RMD244, BB249, JC253, BM255, BM256, WL257, BM953, TSK967, DK966, TM982, SG981, MJ979, KRB978, MM977, MH976, LP975, MH974, DH973, LS972, KS971, KM970, RY969, RB965, RTM964, MD963, RS962, MD961, G960, MS959, RA958, C957, RS956, BV493, STG927, SC929, BP928, FG926, S932, S931, CH930, JW1001, JS1001, SC1001, S1001, CA1001, SN1001, LMA1001, MJ1001, STN1001, LG1001, KG1001, CS1595, NNF1594, LM1593, ERK1592, RW1591, LS1590, WL1589, CS1588, LS1587, BH1586, SB1585, MH1584, DM1583, MG1582, MR1581, CG1580, JB1579, PH1578, DK1577, MH1576, MF1575, TD1574, LA1573, JF157, CN1570, BBD1569, JDG1568, CJW1567, BRK1567, JKC1566, AB1556, ELW1564, WD1563, TK1562, DG1561, DS1560, AF1559, MB1557, MAH1556, SE1555, MPS1554, RNA1553, DM1552, RC1554, K1545, JG1546, MM1547, DI1548, ES1549, DB1542, KJ1541, TD1540, DN1539, B1538, KS1537, SK1536, MGT1535, 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BMD829, CM830, BTT831, RJ832, TLG833, KTH834, DLA835, PH836, SG837, DC838, CC839, JGG840, DM841, SC842, WB843, GEH844, AK845, TK846, DH847, LPC848, CB849, LC850, JM851, RV852, GM853, SM854, KI855, KK856, RDY857, BS858, MS859, MMD860, MN861, AG862, KH863, HV864, GM865, MS866, KCH867, EM868, CC869, EW870, JG871, KSB872, AS874, JT875, DCS876, MM877, JE878, DS880, DB881, SW883, WB884, MP885, RD 886, CW887, WF888, AB889, HPR890, PB891, DD892, NG893, WH894, TF895, AZ896, LG897, CC898, DM899, RF900, GW901, MD902, DMB903, PR904, AP905, EB906, AM907, FDF908, DS909, BG910, RH911, ICL912, RK913, B914, SL915, AL916, TDR917, EGB920, TW922, KP923, JM924, LC667, SG668, DK669, EE670, SB671, WC672, NM673, CS674, EE675, JS676, RT677, DE678, RC679, RH680, CJ681, CM682, GT685, NN686, AM687, LG688, RM689, NS690, NS691, SAW694, HS695, JSP695, SG697, MNF699, JM701, P702, NT703, MW704, DT705, CW706, BAR707, AB708, JR709, WMS710, CP711, DE712, RM713, JR714, JP715, TS716, RH717, CVTS718, DY719, DW720, TK721, CC722, DB723, DB724, CH725, DSW726, ATCL727, WY729, GH730, CPS731, NPHS732, TT733, WB734, PBA735, MK736, DM437, GB438, CB439, JS740, RM742, EC743, WJF744, KSM745, LTF746, LGC747, TG747, JL747, RJC748, JM749, JM750, DH751, SB752, CSP753, RMS754, DLR755, RK756, JM757, CM758, LRC761, LP762, DM763, LK764, DH765, LM766, KP767, HDB768, FLC769, JP771, JC772, EM774, GS774, SLG775, PW776, CD777, JE778, JM779, SS780, DM781, DJ782, RS783, SD784, GY785, HF786, JH791, NS793, S794, S795, LW796, RCG797, MB798, KD799, S800, S801, S802, RM803, LS804, JR805, EPM806, DTB807, S808, WT809, JM1030, GSH1029, HC1028,, JM1027, DM1026, KH1025, FCVC1024, VCS1023, RGF1021, RD1002, PM1019, RR1018, RJ1017, HA1015, KM1014, CD1013, AB1011, RC1010, RH1009, YL1008, KC1007, AR1005, SC1004, S1003, S189, S787, SE787, EL787, LQ787, EP787, CG787, JL787, MW787, VB787, TR787, UN787, JZ787, JJ787, BW787, VR787, JC787, BK787, JW787, KS787, HH787, NL787, DC787, KK787, AF787, MZ787, TL787, EH787, DG787, CG787, ZP787, S1551, RD1551, MG1551, GW1551, GB1551, SB1551, SJ1551, PH1551, DC1551, DS1380)

Comment: The insurance industry recognizes the safety of outdoor wood boilers as compared to indoor wood burning devices. (HW152, RAT192, MH24, GDH399, DJW644, JZ495, RM224, MJP46, OMG54, ML1367, LPN193)

Comment: Outdoor wood boilers eliminate the risk of carbon monoxide poisoning from operating an indoor wood stove. (EB1470, TH1016, RGF1021, CV1278, RS515, GJE602, DS603, CM604, KS605, DS606, ML607, CV608, AL609, RS610, JS611, CB612, JM613, JN614, SS615, BL616, S617, S618, JH619, BR620, RP621, DB622, JB623, DM624, V624, JCS624, TN624, JH624, LM624, PH624, JH624, DW624, S624, TM624, JM624, DF624, DM624, SM624, CK624, MK624, S654, TR655, WB656, AW657, PS658, JS658, MB659, KN660, JD661, SM662, CM663, DCP664, WC665, VW666, JW518, JC532, RM533, TG534, KBJ535, SG536, DA537, DG538, MKW539, KH540, DJV541, SH542, AH543, GF544, LL545, MS546, DJL547, VS548, WMH549, MD550, CL537, NH552, OD553, HD534, AD555, GLL556, BS557, RF558, JF559, GM560, SS561, JS562, KM563, CY564, DS565, BF566, SL567, DB568, RA569, EB570, DVH571, CA572, MH573, JK574, FL575, MTF576, CAH577, RJ578, JKW579, MC580, DC581, LK582, KB583, AR584, LC585, JL586, RC587, NL588, EF589, DC591, KCH592, LS593, SS594, MB595, AS596, FS597, MVW598, PW599, JM600, JW601, LW1465, JN1443, WF1444, KN1445, TN1446, JLC1596, WLS1442, DB1441, JCT1474, NP1473, SB1472, GM1471, MJA1469 BB1468, BR1467, JW1466, JG1439, TLG1463, DW1440, MW1438, NW1473, W1436,TO1435, MN1434, JY1433, CM1432, LV1431, NH1430, O1429, B1428, C1427,W1426, JM1425, RF1424, SO1423, AG1422, JE1421, YM1420, RLG1419, GP1418, RB1417, RW1416, DP1415, WM1414, MW1413, RL1412, SR1411, KRR1410, DR1409, WV1408, TS1407, SL1406, JM1405, S1368, JT1404, DDW1403, BT1402, FN1401, ML1400, CNP1399, RF1398, PF1397, EL1396, KT 1395, LAR1394, HH1393, KC1392, EY1389, RZ1388, LN1386, CR1385, SE1384, LZ1383, CJK1382, BC1381, SS1372, MM1371, MB1370, LG169, LR1379, JH1378, JW1377, MM1376, JL1375, LH1356, DH1355, JW1354, JS1353, KM1352, JT1351, LL1349, S1348, NW1346, SG1345, DW1325, HB1303, SE1335, DN1344, SH1343, GN1342, SG1341, LH1340, JE1339, RJV1338, AL1337, GM1336, KM1334, LB1333, DW1332, JM1331, BP1330, GG1329, GR1328, JN1327, JR1326, FS1366, RH1324, EJB1322, WP1321, KN1320, WL1319, S1318, RLS1317, E1316, MJT1315, MBP1314, ET1313, JW1312, DH1311, MS1310, GG1309, S1308, KR1307, JH1306, TP1304, EB1301, BC1302, DB1300, TE1268, S1299, MS1298, CV1293, BM1297, DC1296, GF1295, DM1294, JSP1294, CB1294, JR1294, SP1294, EB1294, LCO1294, BR1294, DVG1294, S1294,HH1294, HH1294, KVG1294, MB1294, AS1292, VG1291, TC1290, DS1289, DR1287, GS1286, WV1285, P1284, LS1283, JVW1282, MW1281, JS1280, DF1279, JS1277, CS1276, EB1275, BP1273, S1272, AJG1271, SS1270, KW1267, JW1269, RC1266, TP1265, MK1264, DK1263, CM1262, BB1261, PIY1260, CF1259, GB1258, RC1257, TB1256, JL1255, STL1254, BW1253, RF1252, JR1251, GF1250, DB1249, JWS1248, DD1247, APW1246, CK1245, TK1243, DB1242, MA1241, JS1240, MW1238, MLC1237, JL1236, JKG1235, JMB1233, DCW1232, KLT1186, JJH1231, BH1230, RA1229, NR1227, RJ1224, RR1223, BB1222, CC1221, LK1220, DSR1219, MP1218, SL1217, FS1216, RKS1214, DBB1213, CJA1212, WBB1211, DM1210, RC1209, KS1208, RS1206, MD1205, JS1204, JS1203, BC1202, JA1188, JS1187, TW1185, MA1184, MC1183, RS1182, PP1181, GN1180, H1179, AD1178, KH1177, WK1176, SY1175, VH1174, HH1173, DS1170, RB1169, STH1168, AW1189, DC1201, HRL1200, FH1199, AT1198, JS1197, SS1195, DZ1194, WM1193, MY1192, JC1191, MV1190, DK1166, DMC1165, DS1164, S1163, CM1162, AG1161, HY1160, DS1159, CH1158, TT1157, JS1156, DR1155, NH1152, MW1150, KF1149, CJC1148, CC1147, TR1146, DO1145, JH1144, ERW1143,

EL1142, JM1141, CS1140, DR1138, DPH1139, JR1137, EP1136, BP1135, MC1134, JCS1133, AM1006, CC1130, RDK1128, WLF1127, JA1126, HPJ1125, TB1124, CS1123, DS1122, DW1121, WM1118, NC1117, DSCM1116, GLR1115, BD1112, GS1113, TTH1110, AC1109, JB1108, KK1107, TP1106, ET1105, PW1104, MG1103, RS1102, DB1101, DB1100, FL1099, CE1098, RA1097, GG1096, MS1095, MW1094, CP1093, JJG1090, DP1091, KR1089, CS1088, B1087, RT1086, BVC1085, LG1084, WB1083, WK1082, LL1081, 0W1080, ME1079, RJD1078, RPM1077, JS1076, LKG1075, CDB1074, JB1073, RG1072, PB1071, AK1070, DR1069, MH1068, DG1067, GF1065, FM1064, MW1063, SE1062, IH1061, MCR1060, ST1059, SS1058, LP1057, RK1056, HS1055, CK1054, MH1053, MH1052, KR1051, RRS1050, KBJ1049, BS1048, RG1047, DJW1046, ND1045, KTY1044, BE1043, HB1042, TKD1041, MK1040, EB1039, TG1038, MP1034, TCR1037, B1036, RR1035, KC1033, DH1032, FS1031, JH1225, PR1350, BB647, JJ648, KW649, TG14, GP29, MA242, DE243, RMD244, BB249, JC253, BM255, BM256, WL257, BM953, TSK967, DK966, TM982, SG981, MJ979, KRB978, MM977, MH976, LP975, MH974, DH973, LS972, KS971, KM970, RY969, RB965, RTM964, MD963, RS962, MD961, G960, MS959, RA958, C957, RS956, BV493, STG927, SC929, BP928, FG926, S932, S931, CH930, JW1001, JS1001, SC1001, S1001, CA1001, SN1001, LMA1001, MJ1001, STN1001, LG1001, KG1001, CS1595, NNF1594, LM1593, ERK1592, RW1591, LS1590, WL1589, CS1588, LS1587, BH1586, SB1585, MH1584, DM1583, MG1582, MR1581, CG1580, JB1579, PH1578, DK1577, MH1576, MF1575, TD1574, LA1573, JF157, CN1570, BBD1569, JDG1568, CJW1567, BRK1567, JKC1566, AB1556, ELW1564, WD1563, TK1562, DG1561, DS1560, AF1559, MB1557, MAH1556, SE1555, MPS1554, RNA1553, DM1552, RC1554, K1545, JG1546, MM1547, DI1548, ES1549, DB1542, KJ1541, TD1540, DN1539, B1538, KS1537, SK1536, MGT1535, M1534, DH1533, TH1532, TG1531, DE1530, SE1529, CM1528, DP1526, HS1525, GA1524, KM1523, KM1522, CJ1521, LH1520, JE1519, S1519, WS1519, SD1519, EM1519, JO1519, JC1519, ML1519, ES1518, DC1517, RH1516, RJ1515, DB1514, BK1513, JKS1512, JK1511, RC1510, BW1509, K1507, GM1506, DB1505, SP1504, DL1503, AB1502, H1501, J1500, RY1499, W1497, JS1498, FCC1496, HG1456, DB1492, RR1494, MW1495, BDG1493, DMM1490, MM1489, RB1488, CS1487, DH1486, DB1484, KJK1483, SB1482, JS1481, RRG1480, DTS1460, TC1459, RW1458, LM1457, AG1455, JNK1454, SH1453, SS1452, DB1451, GB1450, RH1449, RP1448, DM1478, DR1477, S948, MH949, WK947, JH943, RTS817, TM818, FC819, KCS820, WS821, HMS822, DK823, DK824, DVH825, GT826, VW827, ML828, BMD829, CM830, BTT831, RJ832, TLG833, KTH834, DLA835, PH836, SG837, DC838, CC839, JGG840, DM841, SC842, WB843, GEH844, AK845, TK846, DH847, LPC848, CB849, LC850, JM851, RV852, GM853, SM854, KI855, KK856, RDY857, BS858, MS859, MMD860, MN861, AG862, KH863, HV864, GM865, MS866, KCH867, EM868, CC869, EW870, JG871, KSB872, AS874, JT875, DCS876, MM877, JE878, DS880, DB881, SW883, WB884, MP885, RD 886, CW887, WF888, AB889, HPR890, PB891, DD892, NG893, WH894, TF895, AZ896, LG897, CC898, DM899, RF900, GW901, MD902, DMB903, PR904, AP905, EB906, AM907, FDF908, DS909, BG910, RH911, ICL912, RK913, B914, SL915, AL916, TDR917, EGB920, TW922, KP923, JM924, LC667, SG668, DK669, EE670, SB671, WC672, NM673, CS674, EE675, JS676, RT677, DE678, RC679, RH680, CJ681, CM682, GT685, NN686, AM687, LG688, RM689, NS690, NS691, SAW694, HS695, JSP695, SG697, MNF699, JM701, P702, NT703, MW704, DT705, CW706, BAR707, AB708, JR709, WMS710, CP711, DE712, RM713, JR714, JP715, TS716, RH717, CVTS718, DY719, DW720, TK721, CC722, DB723, DB724, CH725, DSW726, ATCL727, WY729, GH730, CPS731, NPHS732, TT733, WB734, PBA735, MK736, DM437, GB438, CB439, JS740, RM742, EC743, WJF744, KSM745, LTF746, LGC747, TG747, JL747, RJC748, JM749, JM750, DH751, SB752, CSP753, RMS754, DLR755, RK756, JM757, CM758, LRC761, LP762, DM763, LK764, DH765, LM766, KP767, HDB768, FLC769, JP771, JC772, EM774, GS774, SLG775, PW776, CD777, JE778, JM779, SS780, DM781, DJ782, RS783, SD784, GY785, HF786, JH791, NS793, S794, S795, LW796, RCG797, MB798, KD799, S800, S801, S802, RM803, LS804, JR805, EPM806, DTB807, S808, WT809, JM1030, GSH1029, HC1028,, JM1027, DM1026, KH1025, FCVC1024, VCS1023, RGF1021, RD1002, PM1019, RR1018, RJ1017, HA1015, KM1014, CD1013, AB1011, RC1010, RH1009, YL1008, KC1007, AR1005, SC1004, S1003, S189, S787, SE787, EL787, LQ787, EP787, CG787, JL787, MW787, VB787, TR787, UN787, JZ787, JJ787, BW787, VR787, JC787, BK787, JW787, KS787, HH787, NL787, DC787, KK787, AF787, MZ787, TL787, EH787, DG787, CG787, ZP787, S1551, RD1551, MG1551, GW1551, GB1551, SB1551, SJ1551, PH1551, DC1551, DS1380)

Response: IDEM agrees that outdoor hydronic heaters have inherent safety advantages. IDEM believes that properly installed, operated, and maintained indoor home heating devices are also safe. Outdoor hydronic heaters will continue to be a home heating option for Indiana residents after the effective date of this rule, as long as units are certified to meet applicable emission standards.

Comments regarding the potential fairness of this rulemaking

Comment: How will regulations on wood burning affect the Amish (SL124, DAB233) or the Quakers? (AY311)

Response: IDEM is unaware of any disproportionate impact that this rulemaking may have on any particular groups.

Comment: We believe that the including definitions for "boiler" and "outdoor wood-fired furnace or boiler" may adequately ensure that well-designed boilers, installed to provide steam on a temporary basis during routine maintenance or emergency operations, are not inadvertently captured in this rulemaking: A proposed definition for "boiler" is a closed vessel in which water is heated, steam is generated, steam is superheated, or any combination

thereof, under pressure or vacuum by the direct application of heat. The term boiler shall include units for heating or vaporizing liquids other than water where these systems are complete within themselves. A proposed definition for "outdoor wood-fired furnace or boiler" is a furnace or boiler designed to: (1) Burn primarily wood or other solid fuel by hand firing; (2) Not be located inside structures ordinarily occupied by humans; and (3) To heat spaces or water by the distribution through pipes of the fluid heated in the device. Examples of common uses are space heating, heating of domestic water, and the heating of water for swimming pools, hot tubs or whirlpool baths. (CTE222)

Comment: Any new regulation should not apply to boilers fired by gas or oil, which are temporarily located, where the purpose of which is to provide steam and/or heat on a temporary basis during repair or replacement of the primary source of steam and/or heat. (CTE222)

Response: IDEM believes that the definitions set forth in the draft rule, which were taken from the NESCAUM Model Regulation for Outdoor Hydronic Heaters, are appropriate in scope and will adequately address the issue of excessive smoke and particulate matter emissions from the units. The draft rule limits the regulation of outdoor hydronic heaters to those outdoor units designed to burn wood or other approved solid fuels.

Comments regarding the efficiency of outdoor hydronic heaters

Comment: My outdoor wood boiler has decreased my wood consumption for home heating as compared to an indoor woodstove. (BA995, HY43, WSF62, PP206, BA475)

Comment: My outdoor wood boiler uses the same amount of wood as my indoor wood stove, but we also get unlimited hot water. (BI389)

Comment: Outdoor wood boilers are the most efficient and effective way to heat your home using wood. (VJR968, PS61, DB983)

Comment: Outdoor wood boilers are a safe and efficient way to heat if used according to manufacturers' recommendations. (BW212, JCS213, RBW215)

Comment: Outdoor wood boilers are extremely efficient; they offer a controlled burn with almost 100% combustion of the fuel source. (PH380, GB387)

Comment: Outdoor wood boilers cause less dust, bark, insects, and dirt in the house as compared to an indoor wood stove. (VF1012, JF700, MH1114, RGC1239, WR1390, JM1527, EA292, VB144, RB357, JM980, BB360, DW299, JTW728, RGF1021)

Comment: Outdoor wood boilers are easier to use as compared to an indoor wood stove because of the larger firebox, which reduces the need to cut firewood. (VF1012, MH1114, EB1470)

Response: Currently available outdoor hydronic heaters are demonstrably less efficient than currently available indoor wood stoves and fireplace inserts. It may be the case that where a new outdoor hydronic heater is installed to replace an existing, non-certified indoor wood stove, there may not be a noticeable difference in wood fuel consumption due to the inefficiency of the older indoor wood stove. However, testing has shown that outdoor hydronic heaters are much less efficient than new U.S. EPA certified indoor wood stoves.

REQUEST FOR PUBLIC COMMENTS

This notice requests the submission of comments on the draft rule language, including suggestions for specific revisions to language to be contained in the draft rule. Mailed comments should be addressed to:

#05-332 (APCB) Outdoor Hydronic Heaters
Susan Bem Mail Code 61-50
Rule and SIP Development Section
Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue
Indianapolis, Indiana 46204

Hand delivered comments will be accepted by the receptionist on duty at the tenth floor east reception desk, Indiana Department of Environmental Management, 100 North Senate Avenue, Indianapolis, Indiana.

Comments may be submitted by facsimile at the IDEM fax number: (317) 233-5967, Monday through Friday, between 8:15 a.m. and 4:45 p.m. Please confirm the timely receipt of faxed comments by calling the Office of Air Quality at (317) 234-6530.

COMMENT PERIOD DEADLINE

Comments must be postmarked, faxed, or hand delivered by February 22, 2010.

Additional information regarding this action may be obtained from Susan Bem, Rule and State Implementation Plan (SIP) Development Section, Office of Air Quality, (317) 233-5697 or (800) 451-6027 (in Indiana).

DRAFT RULE

SECTION 1. 326 IAC 4-3 IS ADDED TO READ AS FOLLOWS:

Rule 3. Outdoor Hydronic Heaters

326 IAC 4-3-1 Applicability

Authority: IC 13-14-8-7; IC 13-17-1-1; IC 13-17-3-4
Affected: IC 13-17-1-3; IC 13-17-3

Sec. 1. (a) This rule applies to any manufacturer, supplier, distributor, or person that:
(1) sells;
(2) leases;
(3) distributes;
(4) markets;
(5) installs;
(6) operates; or
(7) owns;
an outdoor hydronic heater in Indiana.

(b) Sections 3 and 6 of this rule do not apply to homemade units.

(Air Pollution Control Board; 326 IAC 4-3-1)

326 IAC 4-3-2 Definitions

Authority: IC 13-14-8-7; IC 13-17-1-1; IC 13-17-3-4
Affected: IC 13-17-1-3; IC 13-17-3

Sec. 2. The following definitions apply throughout this rule:
(1) "Clean wood" means untreated wood that has no paint, stains, coatings, glues, or any chemical treatment.
(2) "Distribute or sell" means to:
(A) distribute;
(B) sell;
(C) advertise for sale;
(D) offer for sale;
(E) lease;
(F) ship;
(G) deliver for shipment;
(H) release for shipment; or
(I) receive and deliver or offer to deliver.
The term does not include the distribution or sale by a manufacturer of an outdoor hydronic heater that is installed outside of Indiana.
(3) "Existing" means an outdoor hydronic heater:
(A) available for sale; or
(B) installed or operational, or both, at the intended location of use;
as of the effective date of this rule.
(4) "Homemade unit" means an outdoor hydronic heater built by a person for the builder's personal use. The term does not include kits bought from a manufacturer to be installed by a person for their own personal use.
(5) "Manufacturer" means any person who constructs or imports into the United States an outdoor hydronic heater.
(6) "Outdoor hydronic heater" means a fuel burning device:
(A) designed to burn wood or other approved renewable solid fuels;
(B) that is intended for outdoor installation or installation in structures not normally occupied by humans;
(C) that heats building space or water, or both, by the distribution, typically through pipes, of a fluid heated in the device, typically water or a water and antifreeze mixture; and
(D) designed for a thermal output of less than three hundred fifty thousand (350,000) British thermal

units per hour (Btu/hr).

(7) "Start-up period" means the time period beginning with flame stability after first charge of wood fuel, where no previous coal bed exists, and is no longer than a two (2) hour duration.

(Air Pollution Control Board; 326 IAC 4-3-2)

326 IAC 4-3-3 General requirements for outdoor hydronic heaters

Authority: IC 13-14-8-7; IC 13-17-1-1; IC 13-17-3-4
Affected: IC 13-17-1-3; IC 13-17-3

Sec. 3. After the effective date of this rule, no person shall distribute or sell or install an outdoor hydronic heater unless it has been certified in accordance with section 6 of this rule to meet the Phase 2 particulate matter emission limit of thirty-two hundredths (0.32) pounds per million British thermal units (lb/MMBtu) heat output.

(Air Pollution Control Board; 326 IAC 4-3-3)

326 IAC 4-3-4 General requirements for existing outdoor hydronic heaters

Authority: IC 13-14-8-7; IC 13-17-1-1; IC 13-17-3-4
Affected: IC 13-17-1-3; IC 13-17-3

Sec. 4. After September 30, 2011, all outdoor hydronic heaters that do not meet the Phase 2 requirements as established in section 3 of this rule must have a permanent stack extending five (5) feet higher than the peak of any roof structure:

(1) located within one hundred fifty (150) feet of the unit; and

(2) not located on the same property on which the heater is installed.

(Air Pollution Control Board; 326 IAC 4-3-4)

326 IAC 4-3-5 Operating standards

Authority: IC 13-14-8-7; IC 13-17-1-1; IC 13-17-3-4
Affected: IC 13-17-1-3; IC 13-17-3

Sec. 5. (a) No person shall operate an outdoor hydronic heater from May 1 to September 30 unless the outdoor hydronic heater has been certified, as set forth in section 6 of this rule, to meet the Phase 2 emission limit established in section 3 of this rule.

(b) No person shall burn any of the following items in an outdoor hydronic heater:
(1) Any wood that does not meet the definition of clean wood.
(2) Garbage.
(3) Tires.
(4) Lawn clippings or yard waste.
(5) Materials containing plastic.
(6) Materials containing rubber.
(7) Waste petroleum products.
(8) Paints and paint thinners.
(9) Chemicals.
(10) Coal.
(11) Glossy or colored papers.
(12) Construction and demolition debris.
(13) Plywood.
(14) Particleboard.
(15) Manure.
(16) Animal remains.

(17) Asphalt products.

(c) Home heating oil, natural gas, or other fuels recommended by the manufacturer may be used as a starter fuel for dual-fired outdoor hydronic heaters.

(d) No person shall cause or allow the emission of a smoke plume from an outdoor hydronic heater to exceed an average of twenty percent (20%) opacity, a measure of the amount of light obscured by particulate pollution, for six (6) consecutive minutes in any one (1) hour period. Upon initial firing of the unit where no coal bed exists, visible emissions may not exceed forty percent (40%) opacity for twenty (20) consecutive minutes during the start-up period.

(e) Outdoor hydronic heaters must comply with all applicable:
(1) state and federal laws; and
(2) local ordinances.

(Air Pollution Control Board; 326 IAC 4-3-5)

326 IAC 4-3-6 Certification and labeling of outdoor hydronic heaters

Authority: IC 13-14-8-7; IC 13-17-1-1; IC 13-17-3-4
Affected: IC 13-17-1-3; IC 13-17-3

Sec. 6. (a) After the effective date of this rule, no person shall supply, distribute or sell, or allow the installation of an outdoor hydronic heater in Indiana unless the unit has:
(1) been certified through U.S. EPA's voluntary outdoor hydronic heater program to meet the emission standard in section 3 of this rule; and
(2) a U.S. EPA white tag that signifies that the unit meets U.S. EPA's Phase 2 emission limit for the voluntary program.

(b) The tag shall be in a readily visible or accessible location.

(Air Pollution Control Board; 326 IAC 4-3-6)

326 IAC 4-3-7 Notice to buyers

Authority: IC 13-14-8-7; IC 13-17-1-1; IC 13-17-3-4
Affected: IC 13-17-1-3; IC 13-17-3

Sec. 7. (a) After the effective date of this rule, no person shall supply, distribute or sell, install, or allow the installation of any outdoor hydronic heater unless the seller or dealer provides the buyer or lessee with a copy of this rule.

(b) The buyer or lessee shall sign a notice at the time of purchase or lease that includes the following:
(1) A statement acknowledging receipt of the rule, as follows: "I, (buyer or lessee's name), have been provided a copy of 326 IAC 4-3 (Outdoor Hydronic Heater Air Pollution Control Board rule) from (seller or dealer's name) at the time of my purchase or lease.".
(2) The name, address, and telephone number of both the seller or dealer and the buyer or lessee.
(3) The address of the location where the outdoor hydronic heater will be installed.
(4) The make and model of the outdoor hydronic heater.

(c) Within seven (7) days of making delivery of the outdoor hydronic heater into the possession of the buyer or lessee, the seller or dealer shall mail or otherwise provide a copy of the signed notice to the department.

(Air Pollution Control Board; 326 IAC 4-3-7)

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