

# CAHI MONTHLY NEWS



## Presidents Corner

CAHI had another well attended Law seminar. This time it was a cozy pub atmosphere with good food and some dinner time entrainment provided by a magician who visited tables and performed some really good magic tricks. The guy actually took my watch right off my wrist without me knowing it. Scott returned it to me about twenty minutes later. I immediately check my pocket for my wallet.

Kent again went through the parts of a good contract and the do's and don'ts, mostly don'ts of co mingling personal and business purchases. I would like to thank Kent and Scott Monforte for their efforts in presenting the seminar.

I have always maintained that we as home inspectors are a crazy bunch for taking on the liability that we take on. Several issues have arisen this month that is law and liability related. The licensing board is again attempting to have a technical correction made to the long incorrect statement in the standards of practice regarding environmental testing and the amendment letter that was supposed to correct the mistake. This time it is driven by a law suit that held to the standards as they were written, and disregarded the letter written to clarify the miswritten statement regarding environmental issues. We need to push hard for this correction to take place. If the current approach does not work, the standards will have to be formally amended. At that time, the door will be open to make other changes to the standards. This is an old set of standards that I feel must be improved.

Another topic that is addressed in this edition of our news letter in an article written by Dwight Uffer is the deteriorating concrete issue that has reared its ugly head here in CT. Through Bill Stanley I have made my concerns regarding the lack of knowledge by our profession on this matter known to the Department of Consumer Protection. I feel that a condensed version of Dwight's presentations should be made mandatory so that all CT inspectors are aware of the characteristic of AAR, for their own benefit and for the benefit of their customers. Recently, there has been an increased national awareness and growing concern for formaldehyde gas being released from manufactured laminated flooring and other composite wood products. The adhesives and sealants used in many of these products may contain formaldehyde and this formaldehyde vapor can off-gas from the finished product even after it has been installed in a home. Many of these products are safety-rated to European and/or California standards for formaldehyde off-gassing levels. However, recent investigations have shown that formaldehyde off-gassing can still be of a concern from some of these products. They can even be elevated above acceptable levels that they are listed as meeting. Formaldehyde gas is highly toxic and a confirmed human carcinogen. Even at lower exposure levels, formaldehyde gas can cause eye and nasal irritation, headaches and aggravate asthma conditions.

So, put these concerns on your ever growing lists of items that we must deal with as professional Home Inspectors in the state of Connecticut. Check with your insurance carriers and determine if these new "threats" are covered. As the gauntlet gets tougher, our knowledge and expertise becomes more valuable. The return is greater. Keep that in mind when pricing.

Be alert!

Stan

## MONTHLY MEETINGS – Details & Info

CAHI's regular monthly meetings are held at the Best Western located at 201 Washington Ave (RT 5), North Haven. Meetings are free to members.

Most meetings are on the fourth Wednesday of the month from 7-9pm. Guests are always welcome! Guests may attend 2 free monthly meetings to experience our presentations, meet our members, and receive a CE attendance certificate.

Joining CAHI may be done at anytime of the year through our Membership Page

March 2016 Volume 9, Issue 3

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## Meeting Dates!

### March 23rd Meeting

Presenter:

**Jeremiah Weid**

from

**J.H. Barlow Pump & Supply  
398 Wolcott Rd  
Wolcott, CT 06716**

will discuss:

- Well Inspection
- Well Tanks
- Well Pump
- Water Treatment Systems
- Water Quality Testing



# “Deteriorating Foundations”

By  
Dwight Uffer

I am writing this article for this newsletter because I personally feel that we as professional Home Inspectors need to have all of the information presently available concerning “Deteriorating” concrete foundations. I have held two seminars for the membership of the Connecticut Association of Home Inspectors (CAHI), one in November and at our recent meeting in February. Both seminars were well attended, however it was noted that only approximately 50% of the membership was in attendance. This attendance figure is abysmal for the subject matter at hand where every home inspection that you perform could contain a potentially defective concrete foundation. The word should get out to all licensed inspectors that you are expected to perform a quality inspection for your client, which includes the foundation. The foundation inspection under the prevailing circumstances will need to entail looking for minute cracks that form below the exterior soil lines on the interior portion of the foundation. This will entail using a high intensity flashlight with a 10 x magnifier to actually visualize some of the cracks. You will have to remember that these cracks are minimal at the time of your inspection; however they can grow a hundred fold over a short period of time and cause extreme damage to the foundation. Look for “Pattern or Map” cracking on either the exterior or interior face of the foundation and report this as concern that will require further analysis. At the present time you have a fiduciary responsibility by accepting payment for your services and adhering to the wording of the present Connecticut Home Inspection Standards of Practice to protect your client. Section 20-491-3 states “The inspector shall INSPECT (scrutinize) the structural components including FOUNDATIONS and framing.” Under this wording “Inspect” means to “scrutinize” and scrutinize means to “analyze or examine”.

I have personally performed inspections within every village and town in Connecticut over the past 30 plus years that I have been in business and if you don’t think that there are foundations and other concrete products that are failing due to what is commonly known as Alkaline Aggregate Reactivity, (AAR), then you are not facing reality. It is everywhere and waiting to show its ugly head, and you may be the inspector which will be facing the judge when your client’s attorney asks; “what are your qualifications for determining the condition and reliability of the concrete foundation you have inspected”? “Do you have a background in concrete construction”? “Are you certified or licensed to

inspect concrete structures and what are the parameters used to inspect a foundation or other concrete product”? If you can’t answer these questions, then questions will arise as to your other inspection qualifications and reporting.

The present CT Standards of Practice were taken from the American Society of Home Inspectors (ASHI) standards in effect back in 1997 in order to expedite licensing of Home Inspectors in CT. I am aware of this because I was a member of the Task Force at that time which endorsed the present legislation for licensing. At that time very few if any of the Home inspectors or Professional Engineers in Connecticut were aware of the problems that were waiting on the horizon concerning failing foundations or other concrete products. Many of our members as well as those of other trade organizations involved in the inspection or construction fields made no mention of failing concrete, even though it was occurring throughout the region and across the country. Failing concrete has become an International problem within infrastructure, as well as affecting residential markets across the world.

The majority of the Home Inspection licensees within Connecticut are not equipped to deal with failing foundations, as they have never been exposed to the education and field experience required to deal with the inspection of these foundations. This I might say, is also true of the majority of Professional Engineers who are well educated in their specific principles, however they have not been exposed to field operations within the concrete industry and actually witnessed the phenomenon that is “Alkaline Aggregate Reactivity”.

With our friends, neighbors, clients and fellow residents of Connecticut being faced with a potential financial calamity, it only makes sense that sections of the Connecticut Standards of Practice for Home Inspectors be modernized or updated to reflect the changes in building products and processes that have taken place since these standards were formulated. With complex concerns, such as “Failing Concrete Foundations” The requirement that Home Inspectors accumulate 20 Credit hours over a two year cycle is outdated and completely in need of revision in order to maintain some sense of professionalism.

I have been in the commercial and residential building inspection business for well over 30 years and have been involved in the placement of both raw and finished concretes my entire working life. During that time period, I have come across many structures, including infrastructure, commercial and residential buildings, as well as pre-cast components which have been compromised by what was once known in the industry as “Concrete Cancer”. We have now come –up with other names and terminology which describes what has been known by the old timers in the concrete industry for over 80 years. Bad concrete comes from three sources, (1) it is either a problem with the initial products used by the batch plant, (2) the batch plant improperly mixed the amounts of the raw materials per specifications, or the installing contractor altered the mix on-site or didn’t perform proper slump, high alkaline, and air entrainment tests at the site. All of these tests are normal for both infrastructure and commercial building projects, however rarely performed in residential projects or small batch loads and that becomes the concern for which we are presently dealing with.

In closing I feel that all Home Inspectors and those holding a PE license in Connecticut need additional education and field experience in dealing with the foundation problems as they presently exist. I also feel that our organization will need to step up to the plate and promote our objectives to the politicians and government officials across CT to deal with these concerns.

# Calamity at Home

I am writing this piece not to bring pity on my family, but to clarify what it is to go through the saga of having your home destroyed and the ruination of a family's financial wellbeing.

Our story begins in the fall of 2012 when we put a deposit on colonial style home in Coventry. The home was typical of the neighborhood and constructed in 1999 by a local builder, whom we were told by our Realtor, had a very good reputation. At the advice of our Realtor, we hired a Home inspector which was selected by the Realtor, as we came from out of state and did not have a feel for area or services offered. The Inspector met with us and the Realtor approximately a week after we signed a contract to purchase the home and walked us through the home discussing the pertinent information about the general condition of the home. My husband asked the inspector about some visible cracks that he had noticed during our initial preview of the home with our Realtor and he explained that they were "shrinkage Cracks" which were common in poured concrete foundations. I even remember the Realtor saying that she sees these all of the time and they only need to be filled to keep the moisture from entering them. After the inspection and the appraisal, we finally arrived at our walk through in which we toured the basement of the home in which all of the personal items of the sellers was removed. My husband noticed some extremely fine cracks in the concrete wall in the vicinity of the cracks that were noticed at the exterior of the home. We asked the Realtor if we should get the Home Inspector back to look at these, but she told us that in her experience they show up all the time and are of no consequence. As our furniture and belongings were on the way to our new home, we decided to forgo having the inspector back to the home and closed on the home.

It has now been 3 years since we have been in Connecticut and our life has been a living hell. The cracks in the basement expanded and sections of our home have shifted. Cracks have formed in our first and second floor walls, hardwood floors have wide gaps, crown moldings in our dining room have open joints and our kitchen cabinets have basically pulled apart. We have contacted the Home Inspector, realtor, our congressional representatives, Insurance Company and everyone else that we could think of to no avail. We have been told by two engineers that we will have to relocate and the foundation under our home will need to be removed and replaced. My husband contacted three reputable foundations companies and the costs will range from \$138,000 to \$174,000 to replace the foundation. It will be another \$12-18,000.00 to move our belongings and find temporary housing while the work is performed. We owe \$245,000.00 to our mortgage company and our home has a market value of \$290,000.00.

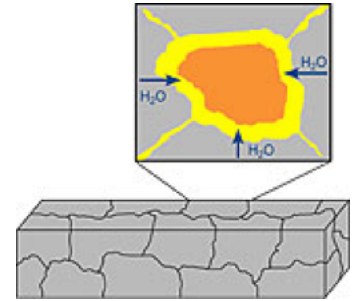
We are a young couple with two small children with limited means to cope with a disaster of this nature. In speaking with our attorney it appears that we will be seeking financial restitution from the parties involved in the purchase of this home, however in the meantime, we will have no choice but to file for bankruptcy and walk away from our first home.

Tired and Crying in Coventry



# Alkali-Aggregate Reaction

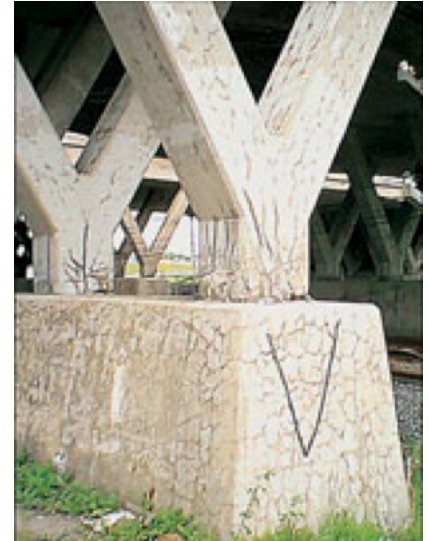
In most concrete, aggregates are more or less chemically inert. However, some aggregates react with the alkali hydroxides in concrete, causing expansion and cracking over a period of many years. This alkali-aggregate reaction has two forms: **alkali-silica reaction (ASR)** and **alkali-carbonate reaction (ACR)**.



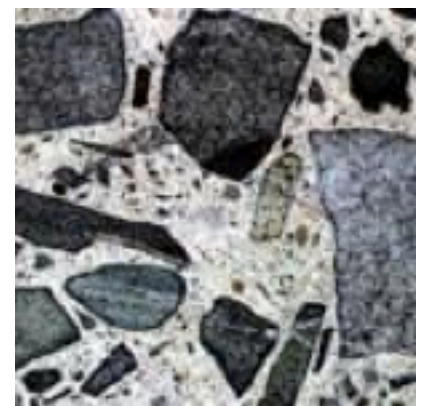
**Alkali-silica reaction (ASR)** is of more concern because aggregates containing reactive silica materials are more common. In ASR, aggregates containing certain forms of silica will react with alkali hydroxide in concrete to form a gel that swells as it adsorbs water from the surrounding cement paste or the environment. These gels can induce enough expansive pressure to damage concrete.

Typical indicators of ASR are random map cracking and, in advanced cases, closed joints and attendant spalled concrete. Cracking usually appears in areas with a frequent supply of moisture, such as close to the waterline in piers, near the ground behind retaining walls, near joints and free edges in pavements, or in piers or columns subject to wicking action. Petrographic examination can conclusively identify ASR.

Alkali-silica reaction can be controlled using certain supplementary cementitious materials. In proper proportions, silica fume, fly ash, and ground granulated blast-furnace slag have significantly reduced or eliminated expansion due to alkali-silica reactivity. In addition, lithium compounds have been used to reduce ASR. Although potentially reactive aggregates exist throughout North America, alkali-silica reaction distress in concrete is not that common because of the measures taken to control it. It is also important to note that not all ASR gel reactions produce destructive swelling.

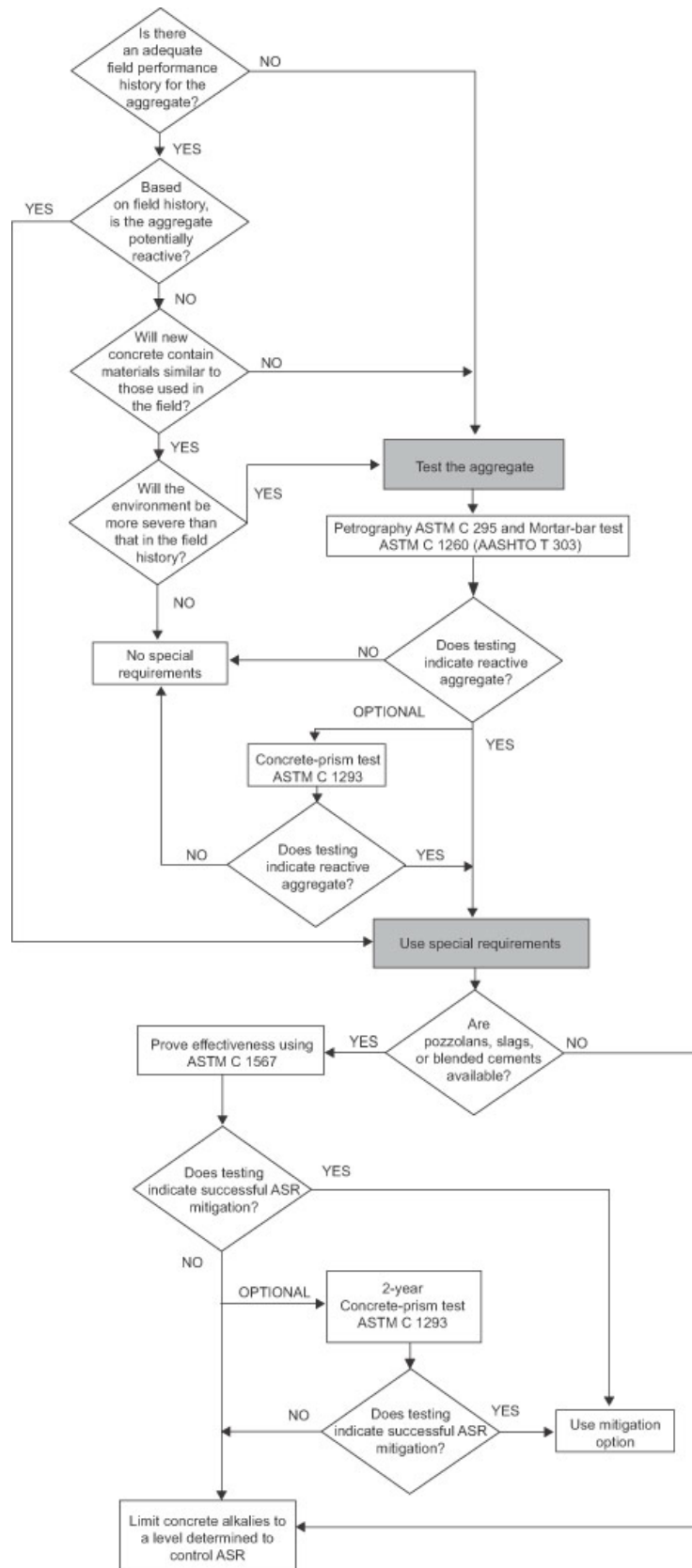


**Alkali-carbonate reaction (ACR)** is observed with certain dolomitic rocks. Dedolomitization, the breaking down of dolomite, is normally associated with expansion. This reaction and subsequent crystallization of brucite may cause considerable expansion. The deterioration caused by alkali-carbonate reactions is similar to that caused by ASR; however, ACR is relatively rare because aggregates susceptible to this phenomenon are less common and are usually unsuitable for use in concrete for other reasons. Aggregates susceptible to ACR tend to have a characteristic texture that can be identified by petrographers. Unlike alkali carbonate reaction, the use of supplementary cementing materials does not prevent deleterious expansion due to ACR. It is recommended that ACR susceptible aggregates not be used in concrete.



## Prevention of Alkali-Silica Reaction in New Concrete

Follow the steps in the flowchart below to determine if potential for ASR exists and to select materials to control it. For more information move your mouse over the individual flowchart boxes





# AAR Damage Photos

Here are some AAR photos taken in the last month by Scott Monforte. Some cracks are easily seen but could have been misdiagnosed in the past. Other cracks are not visible in the fairly good quality picture. They are marked with a “pencil X”. Other pictures are being posted to the CAHI website.



# PCA Educational Links

Previous articles in the CAHI Newsletters have brought to light some issues associated with **alkali-silica reaction** (ASR) and **alkali-carbonate reaction** (ACR) in the production and installation of concrete products and the importance of CAHI members to be aware of and to be able to identify these issues in their inspection processes.

Below are a series of educational links provided on the Portland Cement Association (PCA) site. These have been included in this newsletter for those members who would like to better understand various procedures and processes used in the normal production of concrete products.

Feel free to CLICK and Learn.

## [• Concrete Technology](#)

### [Concrete Construction](#)

- Bugholes
- Building Tips for Trouble-Free Slabs
- Cold Weather Concreting
- Conductive Concrete
- Contraction/Control Joints in Concrete Flatwork
- Curing in Construction
- Drying Concrete vs. Curing Concrete
- Engineered Cementitious Composite Link Slabs
- Finishing Air-Entrained Concrete
- Hot Weather Concreting
- Safety Measures
- Vapor Retarders in Concrete

### [Concrete Design & Production](#)

- Design and Control of Concrete Mixtures
- Adding Water On-Site
- Chemical Admixtures
- Concrete as a Carbon Sink
- Early-Age Cracking
- Evaluating Concrete Defects
- Mixing Water for Concrete
- Mass Concrete
- Material Incompatibilities
- Perils of Power Washing
- Recycled Aggregates
- Ultra-High Performance Concrete
- Use of Aggregates in Concrete

### [Concrete Products](#)

#### [Durability](#)

- Acid Resistance
- Alkali-Aggregate Reaction
- Case Histories
- Corrosion of Embedded Materials
- Corrosion Resistance of Concrete
- Durability References
- Exposure Conditions and Deterioration Mechanisms in Concrete Structures
- Freeze-Thaw Resistance
- Guide to Durable Concrete
- Preventing Joint Deterioration
- Prevent Scaling
- Snow & Ice Control Materials Chart
- Winter Weather and Using Fly Ash

## [Concrete Technology FAQs](#)

### [Focus on Floors](#)

- Concrete Floors and Moisture
- Concrete Shrinkage
- Decorative Floors and Other Flatwork
- Durable Floors
- Elevated Slabs—Concrete Floor Systems
- Industrial Floors
- Radiant-Heated Floors

## [• Education](#)

### [Education Foundation](#)

- Research Fellowship Program
- Fellowship Proposal Format

### [Professors' Workshop](#)

### [On-Line Courses](#)

- Design and Control of Concrete Mixtures
- Cement and Its Impact on Concrete Performance
- PCA Government Affairs: Grassroots Series
- MIT Sustainability Hub

### [Concrete Industry Courses](#)

- Design and Control of Concrete Mixtures Course

### [Customized Training](#)

### [General Information](#)

### [Concrete in the Classroom](#) (Grades 7-12)

- Lesson 1: The Uses of Concrete
- Lesson 2: What are the Parts of Concrete?
- Lesson 3: A Further Look at the Content of Concrete
- Lesson 4: A Collection of Aggregates
- Lesson 5: So, You Think Concrete Dries Out?



# Formaldehyde in Your Home

The Minnesota Department of Health Environmental Health Division is aware of issues raised by recent news reports of high levels of formaldehyde in certain types of laminate flooring sold by Lumber Liquidators in California. Minnesota homeowners and residents who have questions or concerns about the laminate flooring in their homes should review the information below and see this California EPA fact sheet: [Flooring Made with Composite Wood Products \(PDF\)](#).

## What is formaldehyde?

Formaldehyde is a colorless chemical with a strong pickle-like odor that is commonly used in many manufacturing processes. It easily becomes a gas at room temperature, which makes it part of a larger group of chemicals known as volatile organic compounds (VOCs). When an item gives off formaldehyde, it is released into the air through a process called off-gassing.

## Where is formaldehyde found?

Formaldehyde is a chemical used in the production of adhesives, bonding agents and solvents. For this reason, it is commonly found in a variety of consumer products including:

- Pressed-wood products (plywood, particle board, paneling)
- Foam insulation
- Wallpaper and paints
- Some synthetic fabrics (example: permanent press)
- Some cosmetics and personal products

Formaldehyde is also a byproduct of combustion. When burning natural gas, kerosene, gasoline, wood, or tobacco, formaldehyde is produced. Automobile exhaust is a common source of formaldehyde in our environment. Tobacco smoking in the home is another source of the chemical in the indoor environment.

## What are the health effects?

Exposure to formaldehyde may cause health effects in some individuals. The severity of symptoms depends upon the concentration (how much) and duration (how long) of formaldehyde exposure. Additionally, some people are more sensitive to chemicals such as formaldehyde and may experience symptoms earlier than others. Short-term exposure may result in immediate symptoms including:

- Eye, nose and throat irritation
- Coughing
- Headaches
- Dizziness and nausea

Long-term exposure to formaldehyde may cause some types of cancer.

## Is the use of formaldehyde banned?

No. Formaldehyde is still used in many consumer products. Minnesota Statute 325F.181 requires that all plywood and particle board used as building materials comply with federal standards that limit the amount of formaldehyde that can be released. Minnesota law also requires that there is a written warning attached to certain building materials made with urea formaldehyde. These requirements have been in effect since 1985. While not directly related to air concentrations of formaldehyde, Minnesota Statute 325F.176-178 bans the use of formaldehyde in products intended for children. As of August 1, 2015, manufacturers and retailers cannot sell children's products that intentionally contain formaldehyde.

### **How can I reduce formaldehyde levels in my home?**

The best way to reduce your exposure is to avoid products that contain formaldehyde, and to not allow cigarette smoking in your home. Look for products that are labeled as 'no' or 'low' VOC or formaldehyde. When purchasing pressed wood products for your home, look for those that are labeled as compliant with ANSI or California Air Resources Board Air Toxics Control Measure (CARB- ACTM) standards.

When purchasing products that may contain formaldehyde, methods to lower your exposure include:

- Allow products to off-gas: Remove the packaging from products and allow them to air out before bringing them into your house. Consider asking the manufacturer or store to leave the product unsealed in their warehouse for a few days before delivery. You may also consider purchasing a floor model where chemicals have already off-gassed.
- Ventilate your home: Increase the supply of fresh air to lower the concentration of formaldehyde. This can be done by opening windows, using fans or bringing in fresh air through a central ventilation system (such as a furnace air exchanger).
- Control the heat and humidity: Lower the temperature and humidity in the home through air conditioning and dehumidification. The amount of formaldehyde released goes up with increases in air temperature and humidity.

To minimize exposure to combustion by-products, including formaldehyde and carbon monoxide, ensure that combustion sources are properly maintained and vented outdoors. Avoid smoking indoors.

### **How can I measure the level of formaldehyde?**

If you are having formaldehyde-related symptoms, it is important to examine your environment before making the decision to test. Air testing can be expensive and the results can be difficult to interpret because most homes contain products and other sources of formaldehyde. Ask yourself a few questions, such as:

- Have you made changes to your home? For example, have you installed new pressed wood materials such as new cabinets, flooring, or furniture? Have you applied coatings or finishing products to floors or other surfaces?
- Are all combustion appliances properly vented to the exterior of the home?
- Do you or others smoke in the home?

If you answer yes to any of these questions, you might be exposed to formaldehyde. The best course of action is to remove the source of the chemical from your environment. If you choose to test your air, there are a couple of ways to do so:

- Hire an indoor air quality (IAQ) consultant: While this is the most costly option, hiring a consultant provides you with a variety of testing methods that are not easily available to consumers. In addition, consultants can help you interpret your results.
- Order a test kit: You can search for "formaldehyde test kit" on the Internet or call an environmental testing laboratory for an at-home kit to measure your formaldehyde levels. It is important to follow the kit instructions to obtain accurate results.

### **What is an acceptable level of formaldehyde?**

Indoor levels should be as low as possible, assuming that you cannot get indoor levels below background (outdoor levels). In Minnesota, outdoor levels of formaldehyde average about 2.0 ppb. According to research from the California Environmental Protection Agency (2004), levels of formaldehyde in conventional homes average about 20 ppb, while levels in manufactured homes the average is about 40 ppb.

# Heating Fire Safety

Source: ©2013 US Fire Administration  
<http://www.usfa.fema.gov/>

Each year fire claims the lives of 3,400 Americans, injures 17,500, and causes billions of dollars worth of damage. People living in rural areas are more than twice as likely to die in a fire than those living in mid-sized cities or suburban areas. The misuse of wood stoves, portable space heaters and kerosene heaters are especially common risks in rural areas.

All heating equipment needs space. Keep anything that can burn at least three feet away. Supervise children whenever a wood stove or space heater is being used. Have a three-foot “kid-free” zone around open fires and space heaters.

## Wood Stoves

Wood stoves cause over 4,000 residential fires every year. Carefully follow the manufacturer’s installation and maintenance instructions. Look for solid construction, such as plate steel or cast iron metal. Check for cracks and inspect legs, hinges and door seals for smooth joints and seams. Use only seasoned wood for fuel, not green wood, artificial logs, or trash. In pellet stoves, burn only dry, seasoned wood pellets. Inspect and clean your pipes and chimneys annually and check monthly for damage or obstructions.

## Electric Space Heaters

Buy only heaters evaluated by a nationally recognized laboratory, such as Underwriters Laboratories (UL). Check to make sure it has a thermostat control mechanism, and will switch off automatically if the heater falls over. Heaters are not dryers or tables; don’t dry clothes or store objects on top of your heater. Plug space heaters directly into wall outlets and never into an extension cord or power strip. Always unplug your electric space heater when not in use.

## Kerosene Heaters

Buy only heaters evaluated by a nationally recognized laboratory, such as Underwriters Laboratories (UL), and check with your local fire department on the legality of kerosene heater use in your community. Never fill your heater with gasoline or camp stove fuel; both flare-up easily. Only use crystal clear K-1 kerosene. When refueling, allow the appliance to cool first and then refuel outside. Never overfill any portable heater. Use the kerosene heater in a well ventilated room.

## Fireplaces

Fireplaces regularly build up creosote in their chimneys. They need to be cleaned out frequently and chimneys should be inspected for obstructions and cracks to prevent deadly chimney and roof fires. Check to make sure the damper is open before starting any fire. Never burn trash, paper or green wood in your fireplace. These materials cause heavy creosote buildup and are difficult to control. Use a screen heavy enough to stop rolling logs and big enough to cover the entire opening of the fireplace to catch flying sparks. Don’t wear loose-fitting clothes near any open flame. Make sure the fire is completely out before leaving the house or going to bed. Allow ashes to cool before disposing of them. Place ashes in a tightly covered metal container and keep the ash container at least 10 feet away from your home and any other nearby buildings. Never empty the ash directly into a trash can. Douse and saturate the ashes with water.

Finally, having a working smoke alarm dramatically increases your chances of surviving a fire. And remember to practice a home escape plan frequently with your family.



# Energy Tips for Daylight Saving Time

As the days get longer and the weather gets warmer, your energy bill gets bigger. Take advantage of these tips to reduce the energy consumed in your home as spring and summer approach.

Daylight Saving Time will be here before you know it. With it comes longer, hotter days that can drastically affect your energy bill. Here are some creative tips to help you save money for the spring and summer months ahead.

## Take Advantage of the Extra Sun

Natural light is a great way to reduce your energy costs. Instead of hiding behind closed blinds, open them up and let the sunlight brighten your home. When your air conditioner is on, keep your blinds closed during the day to lower the temperature of your home.



*Photo by: American Home Shield*

## Keep Your Cool

Find your threshold for cool air and set the temperature accordingly. As a basis, 78° when you're at home and 85° when you're not is a good way to lower costs. Also, to maximize the effectiveness of your unit, don't forget to change your air filters and clear any vent blockages.

### Fans Are Your Friends

One of the biggest contributors to your energy bill is your air conditioner. Turn it off completely and cool down your home with window, ceiling and whole-house fans for big savings.

## Turn Down the Heat

Water heaters account for about 18% of your home energy costs. Lowering the temperature on your unit to around 120° will help reduce how much energy it consumes.

## Seal Your House

Weather stripping, caulking windows and sealing air leaks will keep the cold air in and the hot air out. This trick will benefit your heating costs in the cold winter months as well.

## Strategically Run Your Appliances

Running the dishwasher and dryer during the day increases the temperature of your home. Wait until the sun goes down to do the dishes and laundry so your air conditioner won't have to work as hard to cool your home. Washing your clothes in cold water helps lower costs, as does unplugging electronics when they aren't in use.

## Fire Up the Grill

Need an excuse to spend more time manning the BBQ? Grilling outdoors, as opposed to using your oven, also reduces the heat of your home.

Sources: [Energy.Gov](http://Energy.Gov)

# Don't Call The Plumber Just Yet: A Guide To Water Heater Maintenance

Water heaters are often forgotten about until we need them. We've put together a guide to water heater maintenance that will help keep your water heater strong.

Many homeowners don't realize that properly maintaining a water heater can help increase the appliance's efficiency and may help it last longer. Water heaters are often tucked away out of sight in basements, garages, attics, or closets, making it easy to forget about them until there's a malfunction. Giving your unit a little regular TLC can help you depend on your appliance for your family's hot water needs and may help you avoid water heater repair bills and problems. Here are some water heater maintenance tips that you can do yourself to help avoid inconvenient water heater issues:

- Know if your water heater is a gas, electric, or tankless model. Gas models will have a pilot light near the bottom of the unit.
- Always read and follow the manufacturer's instructions for your specific water heater model regarding how and when to perform maintenance tasks. These are general tips and are not meant to replace your manufacturer's recommendations.
- Pay attention to your home's hot water production. If you notice a drop in the amount of hot water, cold bursts coming from faucets when the hot water is turned on, unusual noises, or if it seems to take longer than usual for hot water to come through the pipes, these may be signals that you're headed for water heater problems.
- Be familiar with your water heater unit and its components. You'll need to know how to adjust the water temperature, how to shut off power to the unit, how to close the water shutoff valve, and where the pressure release valve is located. If it's a gas unit, you'll need to know where the gas supply line is, too.
- For safety, wear heavy gloves and goggles when working on your water heater.
- Draining your water heater regularly helps eliminate sediment, minerals, and debris that can harm the tank and that may cause a malfunction. Check your manufacturer's recommendations for how often you need to do this. Many plumbers suggest draining the unit once or twice a year, depending on how many people are in the household and how much the water heater is used.



Photo by: iStock



- To drain a water heater, shut off the water and power to the unit. If it's an electric model, flip the power off at the circuit breaker box. For gas units, turn the pilot light gas supply line valve to the off position. After you shut off the water, attach a hose to the water heater spigot located near the bottom of the appliance to drain the water. You'll need to decide where the drained water will go. If the hose will reach outside, you can drain into your yard, or you may be able to use a basement floor drain or a large tub. Keep in mind that the water inside the tank will be very hot, so allow some time for the water to cool before you begin the draining process, if possible, and be very careful when handling the hose.



- Once the hose is securely attached and positioned, turn the spigot to open the water flow. Then, open the unit's pressure release valve (often found at the top of the water heater) to allow the water to run out from the unit. Draining the water can be a slow process and may take a half an hour or longer.

- When the water has drained, leave the pressure valve in the open position and turn the water to the unit back on until the water runs clear. This helps to clean any sediment that has fallen to the bottom of the tank during the draining process. When the water runs clear, turn the water off again.



*via Angie's List*

- Now you need to refill the tank. With the water still off, remove the hose and make sure the spigot is tightly closed. Close the pressure release valve next. Open all the hot water faucets in the house. Then, turn the water to the unit back on. You can close the faucets when water starts flowing out of them. When the tank is full, you can restore power to the unit and wait for the water to heat back up again. Always wait to restore power to the unit and wait for the water to heat back up again. Wait until the tank is full before turning on the power to avoid damage to the heating element.

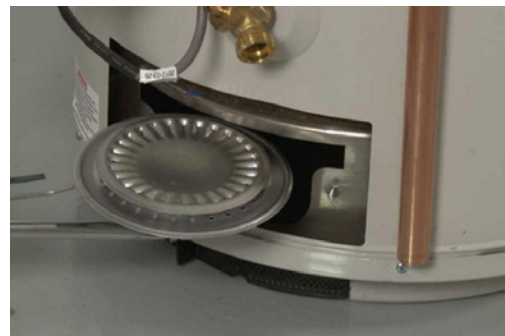
- Every few years, it's also important to inspect the anode rod inside the tank. Since the tank needs to be partially drained to do this, it's a good idea to go ahead and check the rod before refilling the tank after draining sediment. The anode rod is an important component of your water heater, because it helps prevent from rust forming in the tank. Refer to a diagram of your unit to find the anode rod on top of the unit. With a wrench or other tool, unscrew the rod. If it's less than about a half-inch thick, if it's covered in calcium, or if more than six inches of the wire in the center exposed, you need to replace the rod. You can purchase replacement rods at hardware and home stores.

- You'll also need to check the pressure relief valve periodically to make sure it isn't clogged and is working correctly to prevent the tank from over pressurizing. If you've drained the tank, this is the valve that you released to let the water flow out. To check the valve, turn off the electricity or the gas to the tank. Then, turn off the cold water pipe to the tank. Be sure to have a tub or bucket ready to catch any water that releases. Pull the valve, and listen for the sound of air or water coming out. If you don't hear anything, the pressure relief valve may need replacing.

*via Repair Clinic*

- If you have a gas heater, you'll also need to clean the burner and ports regularly. Refer to your owner's manual for specific instructions for your model, and make sure the parts have cooled sufficiently before you begin.

- Check the area around your water heater periodically to make sure it has at least two feet of clearance around it. If you have a gas unit, keep materials away from the pilot light.



*Repair Clinic*



- Periodically check to make sure your water heater's temperature is correctly set. Keeping the thermostat set to 120 degrees is recommended for energy efficiency and to prevent scalding accidents, especially if you have children in the home.
- If your unit has a vacation setting, be sure to use it whenever you leave town for an extended period to help save on energy costs. Simply turn it back to normal operating mode when you return.



- If your water heater is an older model, consider adding insulation to reduce heat loss and to save on energy costs. You can find insulated jackets for the tank at hardware and home stores as well as insulation materials for the connecting water pipes. If you have a gas water heater, be careful not to place insulation materials near the flue, which could pose a fire hazard.



If you don't feel confident in performing routine maintenance on your water heater, a qualified plumber can do these important tasks for you. Many plumbers offer annual service plans for water heaters, which include draining and inspection of the tank, connections, rods, and valves. Whether you call a professional or do it yourself, add water heater maintenance to your annual checklist to help your unit operate at peak efficiency and to help prevent cold water surprises in your home.

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# CAHI Law Seminar Really Huge

A “huge” success that is! Our February Law Seminar packed in a full house at a new venue, Billy Tees in Cromwell. Our favorite presenter, Attorney Kent Mawhinney, was brilliant again and gave us a lot of pertinent information to help us run our businesses. We even had a double dealing magician to entertain us during the social hour. Wish he could help us find clients the way he found hidden playing cards. Special thanks to Scott Monforte for coordinating the event.



Still don't know how he did it.



All attention on the presenter.



Chow hounds anonymous; guys this was only the appetizers.



John can always be counted on to express himself.

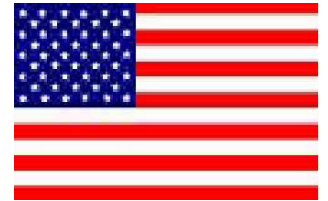


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		They have served as our primary leaders and in other capacities since 1992.		
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