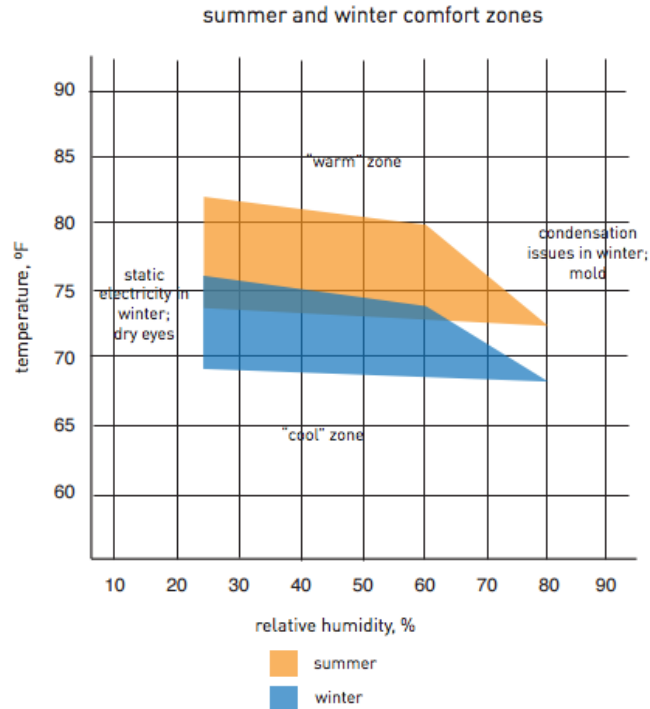


## 2016 GreenEdge Supply Tip Archive

October 24, 2016: Understanding Comfort

Robert J. Kobet

One of the challenges in a tiny house is matching the right space conditioning equipment to one's comfort needs. Because tiny homes are usually mobile, it is often a matter of understanding the microclimate the tiny house will be located in, and selecting the most energy efficient, cost effective space conditioning systems available for what should be an energy efficient enclosure.



*The relationship of comfort, temperature and humidity.*

[https://soa.utexas.edu/sites/default/disk/preliminary/preliminary/1-Boduch\\_Fincher-Standards\\_of\\_Human\\_Comfort.pdf](https://soa.utexas.edu/sites/default/disk/preliminary/preliminary/1-Boduch_Fincher-Standards_of_Human_Comfort.pdf)

Being comfortable is typically a matter of maintaining acceptable interior temperatures and humidity levels, but what is "Acceptable" varies with a number of factors, many of which are personal and subjective. Consider these simple tips:

- *Dress appropriately.* Wearing warm clothes in the winter and lighter summer clothes can contribute significantly to being comfortable.
- *Use passive systems.* Weather permitting, open the windows and doors to maximize natural ventilation. Let in winter sun, but provide summer shading to keep out direct sun.
- *Fans before compressors.* Ceiling fans can be effective cooling devices, especially in modest sized spaces. Use them before turning on the air conditioning.
- *Use a dehumidifier.* Controlling humidity is important to both comfort and health. The above graph shows ideal humidity levels between 40%RH and 55%RH. Dehumidifying can be an effective summer comfort strategy. Warm and dry is better than comfortable, but damp.
- *Properly size air heating and air conditioning equipment.* Air conditioning systems should not be oversized. It is important they run long enough, or "cycle" to provide effective dehumidification.

84 Lumber and GreenEdge Supply share your interest in good tiny house design. We specialize in energy efficiency, health and comfort. Feel free to visit us online at [www.84lumber.com](http://www.84lumber.com) or [www.greenedgesupply.com](http://www.greenedgesupply.com), stop into one of our retail stores or visit our tiny house models on display in Eighty Four, PA. We look forward to seeing you!

October 10, 2016: Now you see it, now you don't

Robert J. Kobet

I contend designing small homes and spaces is much more difficult than creating conventional, ample size rooms. Tiny homes are the ultimate challenge, but many of the ideas and design approaches that make tiny homes livable can also be applied to conventional housing. Our friends at Buzzfeed have published some tips that I believe are worth sharing, for large and small homes alike. <http://bzfd.it/2e3reBk>



One suggestion is how to maximize convenient access to appliances that would normally be occupying valuable counter space when not in use. In the Buzzfeed image above, the two burner electric cooktop and toaster oven (or microwave) are both placed on pull out shelving that can be closed when not in use. This utilizes vertical storage instead of the more valuable horizontal kitchen work surfaces, while still providing convenient access to each appliance. The rolling shelf hardware is readily available and easy to detail. An efficient galley kitchen configuration that does not cramp or impede access to the appliances is created when the shelves are out, and they are completely stowed away when not in use.

Here, the pull out drawers take advantage of accessing the shallow, wide dimension of the storage space that may otherwise not be used because of the inability to reach deep inside the enclosure. Standing adjacent to the tub conveniently accesses the shelves, and everything is neatly tucked away when not in use. A convenient towel hook can serve as the drawer pull.



Good design is often a matter of rethinking common situations creatively. 84 Lumber and GreenEdge Supply share your interest in good tiny house design. Feel free to visit us online at [www.84tinyliving.com](http://www.84tinyliving.com) or [www.greenedgesupply.com](http://www.greenedgesupply.com), stop into one of our retail stores or visit our tiny house models on display in Eighty Four, PA.

September 26, 2016

Robert J. Kobet

Designing small homes and spaces is much more difficult than creating conventional, ample size rooms. Fortunately, there are many websites, books, newsletters, television shows and plans to help us optimize our tiny house projects. Our friends at BuzzFeed have published tips that I believe are worth sharing. <http://bzfd.it/2e3reBk> However, I recently reviewed a tip I believe needs a word of caution.



In the Buzzfeed image shown, the size and placement of glazing used to visually expand the space need to be evaluated:

- Overhead, angled glazing can convert any room to a “solar cooker.” Natural daylight is desirable, but sitting in direct sunlight can be uncomfortable, even in the winter. Proper shading is critical, as is orientation. South light has passive solar benefits but can be very harsh. North light, often referred to as “library light,” is usually glare free.
- Even the best glazing is not as good as a well-insulated ceiling. Large expanses of overhead glazing can unnecessarily increase energy costs and may result in uncomfortable downdrafts.
- In most spaces, operable skylights can provide adequate daylight and ventilation, adding to the comfort and energy efficiency of the space. The best quality provides good leak protection and the glazing is less expensive to replace than the large panel shown if damaged.
- Large panes of vision glazing can be dramatic, but they present challenges to keep clean of debris, bird droppings, leaves, tree resins, etc. Soiled, rain streaked diagonal glass may not be the view you are looking for.



*The glass doors and operable windows on these 84 Lumber tiny house models provide access, wonderful daylight, views, and ventilation.*

84 Lumber and GreenEdge Supply share your interest in good tiny house design. We specialize in high performance windows and exterior doors for both new construction and remodeling. Feel free to visit us online at [www.84tinyliving.com](http://www.84tinyliving.com) or [www.84lumber.com](http://www.84lumber.com), stop into one of our retail stores or visit our tiny house models on display in Eighty Four, PA. We look forward to seeing you!

#### September 12, 2016 Tiny House Tips

Robert J. Kobet

Today there are lots of websites, books, newsletters, television shows and plans to help us make the most of tiny home projects. Our friends at Buzzfeed have published some that I believe are worth sharing.

<http://bzfd.it/2d4IBFG>



*Tiny houses require using all the space that's available.*

### **Put a shelf on it**

One key to designing a livable tiny house is using all the space available. In previous GreenEdge Supply Tips and Blogs I have evoked marine architecture as some of the best examples of how to do this. In another, I have discussed how important understanding the vertical (third) dimension is in maximizing the utility of any space.

Horizontal surfaces are important in any home design, especially in kitchens and work areas. Tiny Houses (TH) have the additional concerns of how to secure items being stored on open shelving, especially when the TH is being moved, and how to access it. Some homeowners enjoy displaying their wares, while others are more inclined to put things away in cabinets that can be closed. Each option has different costs and flexibility. Anything used frequently needs to be within easy reach. Those items that are seldom used can be placed elsewhere. Anything left out in the open must be placed where children can't access it, and all storage systems should be designed to carry the weight of anything placed on it or in it.

84 Lumber and GreenEdge Supply share your interest in good tiny house design. We carry cabinets and anything needed to build and finish shelving. Currently we have three tiny house models available for your consideration. Feel free to visit us online at [www.84tinyliving.com](http://www.84tinyliving.com) or [www.84lumber.com](http://www.84lumber.com), stop into one of our retail stores, or visit our tiny house models at our office in Eighty Four, PA.

### August 22, 2016 Tiny House Tips

Robert J. Kobet

I contend designing small homes and spaces is much more difficult than creating conventional, ample size rooms. Tiny homes are the ultimate challenge. Our friends at BuzzFeed have published some tips I believe are worth sharing. <http://bzfd.it/2aL12kt>



*Owner built tiny house porch*



*84 Lumber Backyard Living pergola*

### **Add outdoor space under roof**

Many tiny houses incorporate outdoor space under roof. Doing so increases the amount of useful space, expands the potential for rainwater collection and provides an alternative place to cook, which reduces the heat generated by preparing meals in a small kitchen. Porch roofs can effectively shade exterior walls, shelter house pets and provide for covered storage of bicycles, grills, and exterior furniture. In the days before air conditioning porches were places of social interaction, getting to know your neighbors and watching out for each other.

Being under roof in many climates extends the seasons that can be enjoyed outdoors. Outdoors is a great place to unwind, enjoy hobbies, and conduct conversations without “speaking over” others. Outdoor space also enables entertaining a number of people that otherwise cannot be accommodated indoors. Many are discovering how pleasant it can be to sleep outdoors, be it in a comfortable hammock or portable daybed.

84 Lumber manufactures a number of pergolas and outside storage buildings that can increase the utility and enjoyment of living in a tiny house. See them at <http://bit.ly/1NtzyuM>

### August 08, 2016: Tiny House Tips

Robert J. Kobet

I contend designing small homes and spaces is much more difficult than creating conventional, ample size rooms. Happily, there are lots of web sites, books, newsletters, television shows and plans to help us make the most of tiny home projects. Our friends at BuzzFeed have published tips I believe are worth sharing. <http://bzfd.it/2aB2cfl>



*Window selection and placement are critical in a tiny house.*

### **Keep wall to window ratios high**

How walls are used in good tiny house (TH) design is a question of balance. First, structural integrity, rigidity, and road-worthiness must be maintained. Next, natural light and effective ventilation are critical to the psychology of space and the health and well-being of the occupants. This is particularly true of TH bathrooms, which are usually very compact, increasing the need for views that psychologically expand the space. Good ventilation is necessary in in TH baths to remove high humidity and odors, something operable windows can assist in.

High quality windows and well-insulated walls are important for energy conservation, comfortable interior surface radiant temperatures and condensation control. Whenever possible the orientation of the TH on its site should maximize beneficial passive solar gain, breezes and natural light.

In all cases, windowsill heights should not compromise the placement of wall mounted, drop down tables, murphy beds or storage systems. Sliding glass doors can serve as surrogate windows while providing access, maximum daylight and ventilation.

84 Lumber and GreenEdge Supply share your interest in good tiny house design. We specialize in high performance windows and exterior doors for both new construction and remodeling. Currently we have three models available for your consideration. Feel free to visit us online at [www.84tinyliving.com](http://www.84tinyliving.com) or [www.greenedgesupply.com](http://www.greenedgesupply.com), or visit one of our tiny house models at our office in Eighty Four, PA. We look forward to hearing from you!

### July 11, 2016: Know the (Tiny House) numbers!

Robert J. Kobet

Reams have been written about tiny houses – what makes them desirable, who lives in them, what they cost, etc. Less has been published on how they compare to traditional housing. The difficulty to define each makes an “apples to apples” comparison difficult. The question sparked an idea to have a tiny house survey. Our friends at



Tiny House Living crunched 120,000 data points and raised the money to publish the following graphic.  
<http://bit.ly/29w700s>



The infographic does not measure the degree of satisfaction tiny house dwellers have in owning a tiny home. Nor does it measure the influence of financial security, living with less debt, stress, or the benefits of environmental stewardship inherent in tiny house living. Other intangibles such as lowered levels of homelessness, pride of home ownership and how instant equity impacts credit ratings are also not included.

84 Lumber & GreenEdge Supply share your interests in the benefits of tiny houses. Visit us online at [www.greenedgesupply.com](http://www.greenedgesupply.com) or stop into and see our tiny house model at our office in Eighty Four, PA. We would be pleased to answer any questions you have about living in a tiny house.

June 29, 2016: Furnishing a Tiny House – Flexibility is Key



Robert J. Kobet

Selecting proper furnishings is one of the most challenging aspects of tiny house living. The most important criteria include flexibility and multi-functioning, light weight but sturdy, portability and overall compatibility with other aspects of the design approach. The best tiny house designs integrate furnishings that satisfy the need for vertical circulation to sleeping lofts, storage, seasonal adjustments that include transitioning to and from outdoor living, accommodating guests, pets and a variety of indoor activities.

To that end, Morten Storgaard has established a wonderful resource at *Go Downsize* where he shares a number of very clever tiny house furniture designs. <http://bit.ly/293MWPg> Each answers the challenges listed above and several can be fabricated by tiny house owners. Here is one of my favorites:

The folding table/chair/bed is a great piece that serves three different functions. It is lightweight, portable and can be moved by one person. Depending on the frequency of use and the other sleeping arrangements it can be used as a day bed and

guest accommodations. It can be fabricated with materials that are stain resistant, waterproof and UV resistant. It can be made with nontoxic wood finishes and fabrics in colors that complement the interior décor. Because it is compact and lightweight it can be carried easily through an exterior door, making it ideal for outdoor use. Placing two or three side-by-side results in a sofa that converts to a queen size bed.

84 Lumber, 84 Tiny Living and GreenEdge Supply share your interest in tiny houses. Visit us online at [www.greenedgesupply.com](http://www.greenedgesupply.com) or [www.84tinyliving.com](http://www.84tinyliving.com).

### May 16, 2016: Backyard Living – Get the most out of being outside

Robert J. Kobet

Part of living green is getting the most out of the property we have. This includes eco-sensitive site design, landscaping, home gardening, feeding wildlife, and other activities that enhance living outside our homes. Variable weather conditions make outdoor space under roof very valuable, and many activities like gardening are often more successful and enjoyable when small storage structures, pergolas, trellises and decks are effectively used. Each has the potential to increase property values, diversify the types of plants that can be grown, and generally enrich the green living experience. Properties from small, urban lots to rural acreage can benefit from the utility of backyard structures. Even roof top environments can be made more inhabitable and useful.

84 Lumber and GreenEdge Supply are pleased to offer a number of Backyard Living structures that contribute to your green living activities. Those picture below, and others, can be seen at <http://bit.ly/1NtzyuM>



Pergolas can be developed as arbors to provide shade and support grapes and other edible plants that attract birds and pollinators. Rain or shine, the classic gazebo can be a great place for outdoor cooking and dining, or just a place for some shade and fresh air. A playhouse cottage can encourage children to be outdoors, and/or be used as a home for pets. Each comes as a complete package with instructions for building with simple tools. And, each can be disassembled and relocated if the need arises.

84 Lumber and GreenEdge Supply share your interest in improving your property and getting the most out of your green living experience. Visit us online at [www.greenedgesupply.com](http://www.greenedgesupply.com) for more information.

April 18, 2016: So, why green cleaning?

Robert J. Kobet

<http://bit.ly/1qBJJCM>

Spring cleaning is a practice so ingrained in our American culture we seldom question what it really means. To some it is wishful thinking. To others it is an annual ritual. The healthy house movement has done much to enlighten us to the benefits of green cleaning products, often without explaining what is dangerous about conventional choices. Our friends at Treehugger explain, "*What's so wrong with conventional cleaning products?*"

Basically, they all clean with little more than a spritz and some elbow grease. But many of these cleaners contain toxic ingredients that could have long-term side effects. [Phthalates](#) help products hold onto fragrances, but may cause birth defects. [Volatile organic compounds \(VOCs\)](#) are known causes of respiratory problems.

[Phosphates](#) break down dirt but can also negatively affect the water supplies. [Petrochemicals](#) or petroleum-based by-products have been linked to cancer, and [chlorine bleach](#) disinfects but can cause serious health problems.

The EPA doesn't require manufacturers to list every ingredient in a household cleaner, so it is difficult to know exactly what they contain. Companies can claim their product is "99% natural," but there's no way of knowing what might be in the unlisted 1%. The least toxic options are plant-based and fragrance-free, and do not contain the chemicals listed above. Products that don't test on animals are preferable, as are ones that break down without harming the environment.



GreenEdge Supply is pleased to carry a number of effective, non-toxic cleaning products. And, we have healthy house expertise on staff to help you with all of your green living questions. Visit us online at [www.greenedgesupply.com](http://www.greenedgesupply.com) for more information.

### March 7, 2016: So, how's it going?

Robert J. Kobet, LEED Faculty

Okay, it's been two months since we've made our New Year's resolutions. I'm pleased to say that I'm attending spinning classes three days a week, I've taken meat out of my diet, I've actually lost the weight I wanted to and I feel great. If you have kept yours, wonderful! If not, consider this; spring arrives this month, and the season of renewal is right around the corner. Let's give it another go!

Living green should not feel like you are running a gauntlet, nor should it feel like you have abandoned everything comfortable or familiar. The transition to green living can be based on a modest but determined effort to live better for less, while being a good steward of the environment. Spring can inspire converting to green cleaning products and practices, composting food and yard waste, or installing any number of energy and / or water conservation products. Spring is the time we refurbish our landscaping, plan our painting projects and, perhaps, undertake anything from a small interior remodeling project to a more comprehensive home addition.



*Spring is a time for renewal. Think of all the ways that you can go green!*

'Point is, you can look at any spring activity through a green lens. And remember, going green can be very cost effective and much healthier than continuing old habits. Living green can also increase the comfort and value of your home in some very unique ways. All it takes is your ideas and willingness to get started.

GreenEdge Supply carries a full line of gardening supplies, and equipment, non-toxic finishes, and energy and water conservation products and construction materials to landscape, renovate, build or maintain your green, healthy home. Visit us online at [www.greenedgesupply.com](http://www.greenedgesupply.com) and let us help you celebrate the new "green you" and the arrival of spring!

### February 8, 2016: Breathe Deep!

Robert J. Kobet, LEED Faculty

The Pittsburgh region is fortunate to have the Breathe Project, a coalition of residents, businesses, government and many other groups in southwestern Pennsylvania that are working to clean up our air for the health of our families and economy. [www.breatheproject.org](http://www.breatheproject.org) Their findings support the fact that all of us have a stake in better outdoor air. It points to the negative impact of inefficient wood burning appliances and regional industrial polluters, and what we can do to improve regional air quality conditions.

For instance, one should never use burn barrels, even in rural areas. Burn barrels don't burn very efficiently, thus generating a lot of smoke toxins, including dioxins. Even worse, almost all those pollutants are released close to the ground, where they are easily inhaled. Long-term health problems associated with toxic pollution include cancer, leukemia, asthma, immune system changes, learning disorders, birth defects and infertility. Instead of burning outdoors, recycle or safely dispose of everything you can. Re-use products and packaging as much as possible. Donate unwanted clothing, furniture and toys to friends or charities. Give unwanted magazines to hospitals or nursing homes. Recycle newspaper, plastic, glass and metal. Use a chipper to grind up branches and yard waste for mulch or compost. Compost your kitchen wastes. Lastly, deliver hazardous household products to safe collection centers or a licensed disposal facility (landfill or incinerator), or have your household waste picked up by a licensed waste-removal company. Never burn plastics or Styrofoam, as their smoke is extremely toxic.

GreenEdge Supply shares your interest in environmental stewardship. We carry a number of indoor and outdoor composting and recycling containers to help you organize your waste stream. Visit us online at [www.greenedgesupply.com](http://www.greenedgesupply.com) or stop into one of our retail stores and have our staff help you with all of your green building needs.

### January 25, 2016: Been in your attic lately?

Robert J. Kobet, AIA, LEED Faculty

Like many of us, I choose the projects that I do around the house based on the time of year, and whether they are good indoor or outdoor projects. I consider insulating attics that are uninsulated or minimally insulated a good indoor project for this time of year. If an attic is uninsulated it can be surprisingly comfortable to work in the winter because of the heat being lost from the conditioned spaces below to the attic tempers the space. The same space can be very uncomfortable in the summer, so winter is a good time to be working up there. Adding attic insulation is a great do it yourself project sure to reduce your energy bills, improve comfort, and increase the value of your home.

There are several insulation alternatives to choose from. I prefer cellulose insulation because it is:

- made from 85% recycled paper produced from locally available raw materials
- produced using 10 times less energy than other insulation products
- itch free and formaldehyde free
- easy to install, and can be applied over existing insulation
- capable of filling gaps and voids, and
- able to be installed to almost any thickness and resultant R value. I recommend minimum R38.

Cellulose can be installed in bulk, using rented placement equipment, or purchased in bags. It is lightweight and easy to handle, but proper eye protection and face respirators should always be used. Effective attic insulation includes maintaining adequate attic ventilation, including free airflow through soffit and ridge vents.

GreenEdge Supply shares your interest in making your home as energy efficient and comfortable as possible. Let our trained sales staff help you with your product selection and installation questions. Visit us at [www.greenedgesupply.com](http://www.greenedgesupply.com) and click on Request a Quote to receive more information.

### January 11, 2016: Staying Healthy in Winter

Robert J. Kobet, LEED Faculty

Winter is officially here. As we close our windows, turn on heating equipment, cook more indoors and change our cleaning regimens, it is important to remain vigilant about how seasonal changes in our activities influence our health. Here are some things to be vigilant about:

- Conduct a yearly inspection and service your space heating equipment, including filters and induct humidifiers. Cleaning humidifiers that have been dormant during the summer is recommended to remove any mold or contaminants that have accumulated during unused periods. These are common allergy irritants.
- Drain the sediment from your water heater, and add an additional insulation blanket if you do not have a high efficiency model.
- Be sure all carbon monoxide sensors are in good working order. Add them to your home per manufacturer's recommendations if you do not have them.
- Inspect kitchen, laundry and bath exhausts to be sure they are clear and in proper working order. These take on added importance when we choose not to open windows in those spaces.
- If you use dry cleaning services for the extra blankets, quilts, and comforters that help us through the winter, seek out those that use eco-friendly materials and processes. Many dry cleaners now advertise themselves as green.
- Scrutinize your house cleaning products and laundry detergents to be sure they are nontoxic. A home that is "closed for the winter" can elevate the concentration of air pollutants in common cleaning materials, so avoid anything that is not eco-friendly.



*Smoke/Carbon Monoxide Alarm*



*Furnace/AC Filter*

84 Lumber and GreenEdge Supply share your interest in energy efficient, healthy living. We have in house expertise in these areas and are pleased to answer any questions you may have. Visit us online at [www.greenedgesupply.com](http://www.greenedgesupply.com) and click on Request A Quote to ask for more information.