Most RVs simply weren’t designed to be used in the winter. They were built for family outings and weekend getaways during warm months and were intended to be stored when the weather became too chilly for outdoor picnics.

Full-time RVers are faced with living in their traveling home, whether it is well designed for cold weather or not. Luckily, there are many things you can do to make your RV more comfortable during the colder months.

Let’s start by keeping that cold weather outside and the warm air in. To do this, you need to increase insulation and reduce cold air infiltration.

All the Better to See You with

Your windows are a good place to begin. Most RV windows are single-pane, and many do not seal well. Some sort of storm window is needed, and there are several possibilities. Some folks use foamcore board to cover the windows from the inside. This works well, but it’s pretty hard to see through.

Other folks use sheets of Plexiglass or Lexan cut to fit the windows and held in place either with small brackets, Velcro or tape. This helps seal the windows, and you can see through it, but then you will be faced with storing the storm windows during the summer.

A simpler solution is to use shrink film on the inside of your windows. This film is readily available at home supply and hardware stores. It is a clear film that you cut to size and affix to the window frame using double-sided sticky tape.

Once the film is stuck down good, you use a hair dryer to shrink it until it is smooth and tight. This not only slightly improves the R-factor of the window, it makes the window airtight. This will eliminate those annoying cold drafts and also help reduce condensation on the inside of your windows. (See Emily Fagan’s article “Shrink-Wrap our Screen Door” in the September/October 2010 issue for step by step instructions. The same method can be applied to your windows.)

After the winter, you simply peel it off and throw it away. Getting the tape residue off the windows can be a bit of a hassle, but rubbing alcohol works well to remove the sticky stuff. It’s a great, inexpensive storm window and is relatively easy to apply. I do almost all of my windows, leaving one window at each end of the rig uncovered so that it can be opened on warmer days.

Consider Roof Vents Next

Now that the windows are covered, let’s do something about those roof vents.

Most vents really don’t seal well, and we all know that warm air rises, so what can we do to stop it?

Again, there are many possibilities.

That same shrink film can be used, or some fiberglass insulation can be cut to fit and held up with a piece of cardboard.
There are also nifty little pillows that are designed to fit snugly into the vent opening to seal and insulate it. These are great, as they are easily removed when you want to open the vent.

Finally, we need to seal all those other places where cold air can enter. Any compartments that open into the inside of the rig need to have good weather seals. Under the rig, there are many openings where water and gas lines enter the living area. These openings need to be sealed, and some of that aerosol self-expanding foam is great for this. Alternately, foam rubber can be forced into gaps to help reduce air leaks.

Finally, the entry door needs to be checked to make sure that it seals properly. Adding some inexpensive foam tape or weatherstrip will really help seal those air leaks.

Breathing Causes Moisture
Now that we’ve got the rig pretty airtight, we’ve got a new problem to deal with. Moisture from cooking, washing and just our breathing raises the humidity inside the RV.

As it gets colder, this moisture condenses on cooler inside surfaces, like window frames and doors. This can lead to mold and mildew, water stains or even worse. The best way to prevent condensation is to avoid introducing excessive moisture into the air.

A good practice is to always use the range-hood vent when cooking and the bathroom vent when showering. This will draw most of that moisture out of the rig. It may be necessary to keep a roof vent open slightly in order to provide some ventilation and keep condensation in check.

Insulating exposed surfaces that tend to collect moisture will also help. A small dehumidifier or some of those little tubs of desiccant crystals may be necessary, depending on the RV and how many are living in it.

Talking about condensation brings up a related subject: the method of heating that you use in your RV.

When propane is burned, it releases combustion byproducts, and one of those byproducts is a surprisingly large quantity of water vapor.

Most standard RV furnaces are vented to the outside of the rig and will not add any moisture to the inside air. This is not true of any unvented propane heater, including popular catalytic heaters. Using your stove-top burners also adds moisture to the inside air.

If you intend to heat your rig using an unvented propane heater, you will have to provide a larger amount of ventilation to remove the additional moisture added to your air. Most unvented heaters are pretty nice for milder climates and are great for taking that morning chill off. Using them as your primary source of heat in really cold weather can prove to be a challenge because of the potential for condensation problems.

Don’t Overload Electrical Wires
Many folks choose to use portable electric heaters to heat their rig. This method of heating doesn’t add condensation to the air and, depending on the cost of propane, may actually be cheaper to run. Care must be taken not to overload the wiring in your RV or the electrical system in the campground. Some parks will either put you on an electric meter or charge extra for electric heat. Use only UL-approved heaters and keep combustibles away.

Outside Your Rig Is Important
Now that we’re warm, draft-free and, hopefully, dry inside, let’s deal with the stuff outside your rig. The first thing we need to do is keep your freshwater hose from freezing. If you are traveling often, simply use the hose to fill your freshwater tank and then disconnect it each night. If you are parked for a longer period, consider heat taping and insulating your water hose.

Standard 110V heat tape can be wrapped in a spiral along the length of the hose and then covered with either round foam insulation or fiberglass batting wrapped with tape. Don’t forget to wrap the faucet to protect it, and add a pad of insulation where the hose connects to your RV.

In moderately cold weather, this should keep your water flowing. If it gets extremely cold (below zero), it may still be necessary to let a faucet drip overnight.

Continued on next page ⇒
Sewer lines need special attention in subfreezing weather, too. It’s necessary to support the hose and provide a continuous slope from the RV sewer connection to the park sewer hookup. That way, water will drain from the hose and not create an ice plug at the low point. Alternately, you can use a straight section of thin-wall PVC sewer pipe and the necessary fittings to complete your sewer hookup. The PVC will stand up to cold temperatures better than your plastic hose and is fairly inexpensive.

**Overexposed Holding Tanks**

Depending on your RV’s design, you may need to take extra steps to protect your freshwater and holding tanks from freezing. In milder climates where the temperature routinely rises above freezing during the day, you can usually get by without draining your fresh tank and simply keeping both the gray- and black-tank valves closed until you need to dump them.

If it gets down into the single digits at night and rarely rises above freezing during the day, you will almost have to insulate and/or heat your tanks or use significant amounts of RV antifreeze in them to keep things flowing.

If you are parked for a while, tank insulation for exposed holding tanks can be fabricated from fiberglass insulation and light plywood. Just build a small lightweight box around the tank, and line it with fiberglass.

A small electric light bulb can be used to provide a safe source of heat. For rigs with enclosed tanks, it’s often enough to provide some source of heat in the tank compartment, and small electric bulbs can be used here as well.

**Special Heating Pads**

If you are too mobile for such solutions, you should look into special heating pads designed for RV holding tanks. They can be purchased from many RV parts dealers or camping catalogs and will allow you to use the holding tanks as you normally would with no fear of freeze-ups. Alternately, many RVers who travel in the winter simply minimize use of the holding tanks and keep plenty of RV antifreeze handy to treat them.

Okay, all of that information applies only as long as you are in a relatively temperate location. However, there are a number of hardier souls who gladly brave the snow and cold and stay well north all winter long. Many RVers in search of winter recreation use their RV well into the subzero winter months.

For those of you who intend to winter in extremely cold parts of the country, I really can’t help you much. I’m one of those full-time RVers who run south at the first sign of a snowflake. However, check the Web links provided below for some firsthand tips from folks who like their RV-ing with a topping of snow.

Wherever you choose to spend the winter, a little preparation and planning will make your stay more comfortable. Here’s wishing you all the warmth of the festive winter holiday season!

Mark’s “Survive the Winter in Your RV” article originally appeared in the November/December 2001 issue of *Escapees* magazine. If you are a long-term camper in snow areas, consider renting a large propane tank. It will be delivered and filled, probably once, and then picked up at the end of your stay by the propane company.

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**Additional Information through Web Links**

- [web.ncf.ca/bf250/rwwinter.html](http://web.ncf.ca/bf250/rwwinter.html)
- [www.rverscorner.com/wintercamp.html](http://www.rverscorner.com/wintercamp.html)
- [www.your-rv-lifestyle.com/winter-rving.html](http://www.your-rv-lifestyle.com/winter-rving.html)