

Be green, safer, and a good neighbor by shutting down propane at your tank valve when your cabin is unoccupied.

A very small percentage of home owners at Soda Springs are permanent residents. During the winter, most homes are unoccupied. Based on the report made by the fire chief at the July meeting of the Donner Summit Municipal Advisory Committee, propane tanks are not known to fail or to be crushed by ice: all reported failures are downstream from the tank valve.

My tank is above ground, near my driveway and protected by concrete filled steel posts. Whenever I return to the bay area, I turn off the propane at the tank main valve. This requires that I keep the tank valve accessible, which is not hard to do even when there is a large amount of snow, as I dig a hole sideways in the snow wall to the valve.

This approach clearly improves safety for my cabin and my neighbors, and has the added advantages of being "green". No propane is consumed when the cabin is unoccupied, and much money is saved. Historically, contractors have discouraged this practice, mostly, I believe, to minimize liability. I share hereafter my experience in order to encourage second home owners with above-ground tanks to take a good look at their specific situation and adopt the same policy. At the state level, it would make sense for the legislature to evaluate how much energy is currently wasted by second home owners in the Sierra, and whether the law should be changed.

Clearly the practice has several drawbacks:

- The cabin is cold upon re-opening. It takes one night for it to become warm again.
- The cycling from very cold to warm is supposed to be bad for the wood work inside. But I have not observed any problem in that area.
- The water needs to be drained at the water main when closing the cabin, but, even if I left the heat on, I would still do that to avoid the possibility of flooding following a burst pipe. Proper draining of all the water pipes is a bit tricky:
 - a. All the faucets must be open, and in a position to let air in both the hot and cold pipes.
 - b. The anti-scalding devices in shower valves may prevent proper draining of the hot water pipes. This is a very little know fact even among plumbers, and I explain at length the issue and [how to mitigate it in a companion piece](#).
 - c. My cabin is equipped with a continuous water heater, so I do not have to worry about draining a water tank. But I believe that a properly insulated hot water tank would not need to be drained, even if the cabin stays unoccupied the whole winter, provided that the tank is full of hot water at the time the cabin is closed. The reason is that the calorific capacity of water is very high (that is the amount of energy it takes to warm a gallon of water by one degree F), and the insulation very good. Furthermore, many water heaters are in basements where the temperature stays more constant due to the earth warmth. Obviously, this is a matter for each home owner to evaluate.
- Antifreeze must be poured into every sink and toilet to make sure that the siphons in the drains do not freeze and burst.
 - a. I use RV antifreeze (rated at -60F) made of alcohol (\$2.99 a gallon at local ACE hardware store). I use one gallon for each closing.
 - b. I flush every toilet to make sure that the tank is empty, but I have found it unnecessary to put any antifreeze in the tank.
 - c. I have found that one must pour antifreeze in the kitchen sink drain to protect the garbage disposal, or it might develop a leak.

- d. I have never poured any antifreeze in the dishwasher, and never had any problem with it. I believe that the drying cycle removes all the water, and the small amount of water that may stay stuck in the plastic/rubber hoses feeding and draining the washer is not a problem.
- e. The cloth washing machine requires special attention:
 - There is a siphon in the drain pipe within the wall behind the washer. It is a pain to pour antifreeze in it, as the flexible washer drain pipe must be disconnected (not too hard, as it is loosely attached). I use a car transmission oil funnel to pour antifreeze in it. This needs to be done only if the washer was used during the stay.
 - It is not possible to drain the water left inside the cloth washer. But the piping and the pump within my washer (and I assume most washers) are made of plastic which easily expand and do not break when frozen. I do not pour any antifreeze in the washer. However, the washer cannot be used immediately after reopening the cabin, as the pump takes about a day to defrost. If it is used while frozen, a strong rubber smell develops, as the belt connecting the electric motor to the pump slips.
- More snow may accumulate on the roof of my unheated cabin. I make sure my furnace, water heater vents and wood burning chimney are clear when I open my cabin.

Every cabin has its own idiosyncrasies which need to be taken into account:

1. A water few pipes may be less than horizontal, resulting in poor draining. The most likely consequence is that it may take several hours upon opening the cabin before the water flows everywhere.
2. An unheated roof may shed less snow resulting in the clogging of appliance vents, a potentially dangerous situation.
3. Old appliances with pilot lights should be replaced with modern ones equipped with automated electronic ignition, to avoid the intervention of a plumber.

The proper closing and opening of my cabin is a bit complicated. It takes me half an hour to go through the procedure, and I had to document it (three pages posted in various places), and be very tough with my boys (26/28 years old) to ensure that they follow it (I put the fear of god in them!).

I will be happy to get in touch with other home owners already “green” and I am ready to help other get “green”.

Bernard