

The first rule of country living is BE SURE YOU HAVE RELIABLE WATER, BEFORE YOU LOCATE.

If you've already moved in, and don't have reliable water, all is not lost. There are some easy and relatively inexpensive things that can be done to improve your water situation without having to call upon government to deliver an inferior product to your home, taken from the seriously contaminated Lake Erie. (Government will tell you it is wholesome, but common sense will tell you it is filled with industrial wastes and nastiness. Are you aware that sewage treatment plants routinely discharge excess untreated storm surge directly into the Great Lakes whenever there is flooding?)

The first questions to ask will need to define the problem. (It can't be solved until it is understood.) What are the issues at my site? From there, various basic low-tech approaches can be deployed.

MINERALS. I have no respect for "softeners" and will not discuss them here. There are other, simpler ways to reduce hardness, or mineral content from water. Two powerful approaches include various uses of activated charcoal, and magnets.

When I moved to Alden, our farmhouse had terribly stinky water that stained everything red or black. My wife wouldn't do laundry at home. (We learned later that we did not have adequate supply, either.)

My brother used to sell softeners for one of the leading firms. Rather than calling the softener people I researched some facts with Cornell and Rodale. (This is when I acquired my aversion to softeners, which I had never liked, as the feel in the shower was too slippery.) I learned that charcoal is an excellent mineral and flavor/odor corrector. But later I learned it is also a poor sediment filter. I hired Bill and Pete Blair of Blair Hardware and Plumbing in Townline to install some hardware for me. (The firm is now run by Bill's family.)

The Blairs put in a large charcoal filter which stands about 4 feet tall. And they installed a backwash timer which flushes the charcoal filter in reverse, into my septic system every third day. Before they installed the system, which includes an 80-gallon holding tank, I bought some very powerful ceramic ring (disk) magnets with one-inch holes in them from Edmund Scientific. They are coated with epoxy paint. When the Blairs came to install the tank, I had them put the supply line to the tank through the donut holes of the magnets to form a very powerful magnetic field at the entrance to the tank.

They also installed a chlorinator. I no longer use this device, as about a year later I learned that chlorine is a very nasty chemical which forms some very unhealthy compounds from the dead corpses of all those little critters it kills. (Erie County Water Authority always uses chlorine because they know there is mucho ugly bacteria in the lake.) But good bacteria is necessary to keep your gut cleaned out properly. Waging chemical warfare against all bacteria is not wise. I trust the water locked into the rocks for thousands of years, more than I care for the water flushed into the lake last week. I no longer use my chlorinator. I disconnected it in 1990.

When I learned that a charcoal filter would eventually clog because it isn't a good sediment filter, I cut a 9-inch sediment filter into the system ahead of the charcoal filter. It uses a 5-micron polypropylene bobbin to remove junk that would otherwise clog the big charcoal filter, and sediment would also adversely affect my domestic hotwater heater. I change these 9-inch filters 4 times per year, by holiday: Groundhog Day, Mothers Day, Labor Day, Thanksgiving Day. They're not expensive. Be sure not to use cotton filters, as they will provide a rotting medium for bacteria to feed on, and breed. The best filter housing will be clear plastic, so you can see the condition of the bobbin.

The water here at the outdoor spigot still comes out that famous Alden black, but indoors it is clear and odorless and very nice. We have no problem with laundry. I've never had to change the charcoal filter. My AquaStar tankless water heater has been running flawlessly for nearly ten years. I had gone through several tanks before I gave up on that approach, and went tankless. But I also quit using a hot water tank to conserve energy, and I'm able to take an unlimited shower with the tankless system. It uses propane, and only comes on when we call for hot water. Very sensible.) I did burn out a well pump once, during drought, because it kept calling for water that wasn't there. I will discuss that next.

SUPPLY. All water comes from the heavens. (Doesn't everything?) If you are having supply problems, this should be an obvious fact. But it took me 19 years to wake up. Periodically, we have a dry summer, and prior to my awakening, we had always run out. Our area gets over 3 feet of precipitation per year. When rain is scarce, we shouldn't waste what we get. I finally realized this, and did something easy and basic to capture the rain before it ran off. Simply stated, I ran the downspout through an underground pvc pipe, over near the shallow well. Next, I dug a pit near the well, but NOT directly into the well. (As I'm on a gravel farm, I didn't need to add gravel to the pit, but this should be done, if needed, to allow the flow from your roof to absorb all of the water into the ground during heavy rain.) Then I took a bag of hardwood charcoal and "activated" it. This means that I pulverized it, and put the entire 25-pound bag into the pit. This will captivate any rainborn contaminates and sequester them in the charcoal while they deteriorate, rather than allowing them to leach quickly into your well. Carbon is an amazing compound in this regard. Its capacity to purify is huge.

You would be amazed at how much water you can capture off a roof. A calculation can be done to figure out how many gallons can be recovered for each downspout. Even though we had an extremely dry summer two years ago, we did not run out of water that year, which was the first time during such a dry spell since we moved here! I credit the downspout with recharging the well. (This approach may meet with differing results depending on the depth of your well. Water has a mind of its own, and it heeds substrata and gravity out of sight.)

If your well is deep, a cistern could be joined to a downspout. Such a device could be made of plastic or concrete, and buried. It can become a supplement to your well, or it could become the sole source of your water. One woman I shared this with was squeamish, as she said "birds poop on my roof." Well, dear lady, do seagulls respect

your water supply over Lake Erie? Industry doesn't either! Remember, water from the sky has been distilled. Yes, it picks up some chemicals and junk as it falls; but it is a much cleaner source than the lake.

I have several wells at home. But the best well is shallow. It was dug by hand by real men over a hundred years ago, and lined with large river rocks. The well is about 15 feet deep, and about 3-4 feet in diameter. I've actually crawled down into the well to replace a foot valve, with the guidance of my friend Gordon Glauser, of Alden -- another plumber who is very knowledgeable about country water. He stayed above ground to be sure I could get out of the well again. (I didn't know Gordon when I first moved here.) He showed me how to replace the valve, and helped me improve my plumbing skills.

Gordon also taught me about having the proper shut-off valve on a well pump. An earlier plumber, before we moved here, had put the wrong switch on our well pump. It didn't have a low-water trip switch, as well-pumps should. So when we were away, the backwash came on by timer, and continued to call for water when the level was low. The result was that the pump ran, and ran, until it fried. So I bought an irrigation-style pump which keeps a pocket of water always inside to cool the motor. This way it can't burn out, even if the right switch were to fail to trip.

Another approach to supply issues is to consider drilling a wider well. A 12-inch well, instead of the usual 6-inch well, usually will yield much more water. Bill Frey at Frey Well Drilling, or Ken Frey at Reserve Gas, both in Alden, are experts with substantial experience in these matters. A new well will cost significantly less than paying \$1000 per year for 35 years. If your current well is not keeping up with your demands, consider an expanded hole, or maybe some fracking. My cousin in Orchard Park had Frey frak his well, and now has a very adequate supply. (It didn't happen the next day, but it did get good results. He wondered if he would have to move, the water was so scarce. Now he's happy.)

While I am not a professional plumber, I do have substantial hands-on experience with supply issues. I care about my neighbors, and am willing to help any who are struggling with water issues. I can share my experience and even some of my time. However, I would rather not share \$1000 per year of my retirement income to deliver tainted water to my neighbors via Erie County Water Authority. (Did you know that a manager at ECWA ordered scientists to cover up the discovery of e-coli bacteria at a school! I have the clipping from Buffalo News in my file.) Really folks, there is a better solution to our water situation in Alden than forcing everybody to spend over \$10,500,000 to drink a bad product. I care too much for my neighbors, and I can't afford to pay, to see you go this route. But I'm very willing to help you solve your water challenges, now that I've solved my own. So, please don't do anything hasty about the new water district. Call me. I'm glad to help.

Sincerely,
~eric.
Eric Chaffee