Hold Your Water...

from Bob Quinn, the Water Doctor

Let's suppose that in your best efforts to tap into a ground water source well to meet the water needs of your family, the end result is a well that has a flow rate of 2 gallons per minute. Should you despair of ever having enough water to run your household?

The fact is that a flow rate of just 2 GPM translates into a total of 2,880 gallons per day (GPD). Experts tell us that each individual in your household could be expected to use 100 GPD. Even an average family of four would need less than 15% of your well's daily production.

Still unsure? Give yourself the advantage of a large quantity of water with the use of a holding tank. This is a large, usually concrete inground tank designed to store quantities of water (1,800-2,000 gallons). Buried underground, this reserve supply stays cool in the summer and is protected from winter freeze. Unless your typical house guest list includes a battalion of soldiers, you'll have no problem!

Water is a geological cocktail, so DRINK MORE WATER!

Did You Know- *We guarantee that if you have an out-of-water emergency, & call Mon.-Fri. 8-5pm they will respond within 8 hours* ***or your labor is FREE!***

Bob Quinn is the owner of **Quinn's Well, Pump and Water Filtration** located at 6811 Williams Hwy. We install, maintain and repair complete water pumping systems, and we offer a complete line of water filtration equipment. Contact our professional staff by phone, e-mail, or visit our office. **quinnswell.com** CCB #192047

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Applegate forests: A product of human tinkering

BY JAKOB SHOCKEY

Fire suppression of a 2013 lightning strike on Humpy Mountain. Photo by Jakob Shockey.

My work with the Nature Conservancy this summer has helped me see the difference between forests of pre-white settlement and those resulting from fire exclusion. Standing under a thick grove of medium-size Douglas firs in the cool shade of a northern hillside in Star Gulch, I find the massive rotted stumps of oaks, madrones and pines that once covered the same hillside when stands had fewer, bigger trees more resistant to fire than the ones we see now. There are remnants of old-growth fir, too, but in pre-settlement times most of their prolific saplings would have regularly burned in low-intensity fires. Without these wildfires, dense fir saplings have grown and shaded out the old-growth oak savannas. The forests became thicker, more combustible, and younger, as most of the large sugar and ponderosa pines were logged long ago. While our forests may still look natural, they are the product of human fire suppression.

Big trees often scar when a low fire sweeps through, burning past their bark on the uphill side of the trunk and leaving a blackened triangle. Cutting into any old fire-scarred snag on a ridge, I find chronological scarring for every year a fire came through—every decade or so. Many of today's stands haven't seen fire in over a hundred years. When a fire starts, it burns the accumulated "fuels" and denser trees so hot that nothing survives. Old-growth trees no longer scar in today's fires—they die.

This valley's ridges are not the only ecosystem that we have dramatically altered—our waterways, too, have changed. Our free-flowing cobbled creeks used to be a saturated system of beaver ponds and shifting stream beds. Diverse communities of maple, ash, cottonwood, willow, elderberry, cascara, yew and conifers have given way to red alder, the riparian tree that heals disturbed areas. Blackberries and reed canarygrass have pushed out native shrubs, and finer spawning gravels have been washed away in less complex streams that flow faster than they historically ever did.

Much of this change is because we trapped out the beaver. That one simple human action, like fighting fires, has caused the ecosystem to pitch forward into something it never was. Much as a Roman arch holds up around a keystone, these wild places were dependent on these ecosystem "keystones": beaver and wildfire.

Like a ship without a rudder, these places still look whole and functional at a glance, and they are familiar. What we see right now and over the course of our lifetimes influences what we think a forest or creek "should look like." This is our baseline, from which we call "old-growth" stands healthy and "clear-cuts" unhealthy. We are used to our forests being thick and young, just as we are accustomed to this new version of a stream without beaver. Yet even as I write this, the Oregon Gulch fire is turning a forest into a moonscape and our valley's creeks and ponds have gone dry earlier than many remember. In the face of climate change, our rudderless ship is being drawn into a dangerous storm, and we are all aboard together. The question becomes, how best do we guide our ship through the storm?

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Old–growth madrones—watch for fairy rings

Conifers have coevolved with wildfire, building up impressively fire-resistant bark. Madrones, in comparison, seem shockingly ill prepared for a fire with their nude trunks and gently peeling bark. Yet they, too, have a strategy for living through wildfire. Much as willows and cottonwoods re-sprout after a beaver cuts them down, madrones will re-sprout in a tight ring around the fire-killed trunk. This ring of sprouts grows from the same roots as the dead stem—they are the same tree. As the old trunk decays, these new stems become a "fairy ring" of trunks. In the next wildfire, this ring of stems will die, and the cycle repeats with a new set of re-sprouts, thus expanding the circle's diameter. The wider the fairy ring, the older the tree, the more wildfires survived. Oaks have the same strategy, and we can't really know how old some of these trees are. So next time you're out cutting firewood, pay attention—you might be taking down a tree many hundred years your senior.

—Jakob Shockey