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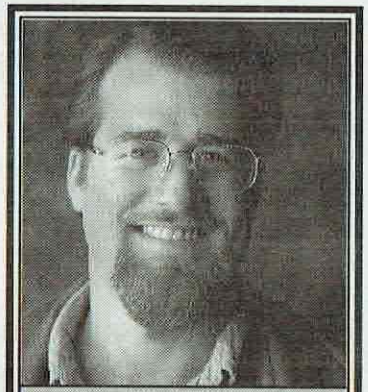
Keep fire in mind when selecting building site



Permaculture in practice

Nate Downey

On the first full day that Los Alamos reopened after the fire, the effects of the catastrophe were everywhere. Green ribbons were wrapped around telephone poles to thank firefighters. Red Cross vehicles waited in traffic. A big, hand-painted sign advertised "FREE SHOWERS." Along Diamond Drive, cops were stopping rubbernecks like me from snooping around the burnt-out neighborhoods.

Not much smoke wafted through the City on the Hill, but a thick haze choked Española. The huge cloud finally dissipated on the other side of Oklahoma, according to an interview on the AM dial. Everyone was trying to make sense of the city's newly blackened backdrop.

There has been a firestorm of finger-pointing. Blaming the poor soul who struck that fateful match is silly when one considers that an even worse fire (starting below, instead of next to, the city) could easily be ignited by a careless smoker, a car backfiring, or a bolt of lightning. On the other hand blaming an "act of God" after decades of suppressing natural fire cycles also seems ridiculous.

The ultimate cause of the catastrophe is that most modern people do not put enough thought into their land before they develop it. We tend to think about a piece of property just as it was on the first day we laid eyes on it. We are oblivious to nature's power – just as nature is oblivious to whomever thinks he has the power to own her.

In order to combat this problem permaculture design stresses two important strategies. The first is site selection. There are appropriate and inappropriate places to build. The tops of big hills in fire-dependent landscapes are among the least appropriate. In the heat of battle, it was appropriate to protect a high-security lab high above some steep, densely forested terrain. On a day like today, however, it does not take a rocket scientist to see that the site for the Manhattan Project is much less appropriate as a site for a large human settlement.

The other strategy is to design for catastrophe. In the case of fire, if an inappropriate site has already been selected, we design ways to prevent the fire from having a catastrophic effect. First, we determine the fire's likely path. Slope is often the determining factor, but wind directions, fuel loads and moisture content within fuel loads all play critical roles in determining a fire sector.

Once the fire sector has been determined, we decide how to incorporate a variety of techniques. Firebreaks, driveways, ponds, animal grazing pastures, on-contour swales, fire retardant plant species, graveled areas, hardscaped patios, high-water-use flora (such as vegetables and fruit trees) can all be placed in the fire sector.

Sprinkler systems may also be installed on rooftops, but remember that fire can take out powerlines, rendering pumps useless – just as pumps died at important water tanks during the Cerro Grande fire. This means that an alternative power source such as solar panels should be designed and installed to create redundancy.

As part of the design, residents need to be informed about wildfire. One thing that is essential to understand is that people do not usually burn up in flames during a crown fire – the radiant heat far out in front of the flames poses the real danger. Therefore a root cellar is an ideal place to be during a fire – much safer than in a car, for example. Sometimes even waiting in the fire shadow of a house until the fire passes could save a life.

Fortunately, here in Northern New Mexico we have relatively few natural catastrophes and fire happens to be one against which a good design can have a significant effect.

A good reference is *Permaculture for Fire Control* from a 1981 talk by Bill Mollison. Contact me if you would like a copy.

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