Permaculture**inPractice**

Homewise is where the heart is

Last May *The New Mexican* printed a lead article about a proposed Homewise project on the Eastside. Some Not-In-My-Backyarders (NIMBYs) were joining forces with the usual Development-Over-My-Murdered-Body Yokels (DOMMBYs), carping about the potential loss of the last unspoiled Santa Fe "gateway" at I-25 and Old Pecos Trail.

With all due respect to those who want Santa Fe's first impression to be a gated, golf-happy compound, most tourists would probably prefer to see an affordable community with bike trails, open space, water harvesting, solar heat, sky lights, live/work units, and a housing-density that tends to leaven neighborliness. More importantly, our priorities should not be aimed at the initial opinions of our guests. Most Santa Feans believe we still live in a town with a long and strong tradition of caring. Since the second ethic of permaculture is "care for people," I beseech these NIMBYs and DOMMBYs to stop wasting city staff's time along the barren banks of our local stretch of superhighway — ironically cut and paved at a time of almost unbridled homeownership in this country.

The Homewise project features clustered development, an excellent alterative to urban sprawl. The development pattern lowers per-unit infrastructure costs by reducing price tags on the installation and maintenance of roads and bridges as well as water, electric, gas, cable, and telephone lines.

Clustering also reduces the tax monies needed for garbage pick-up and public safety services, while it promotes a healthier population and cleaner environment by providing bike lanes and sidewalks. The project is likely to benefit neighbors by bringing in more school-age kids to the Eastside where there has been much debate about closing small schools.

But the most wonderful aspect of the proposed Homewise project is its affordability. According to executive director Mike Loftin, some one- and two-bedroom units will sell below $100,000. As I let you go back and reread that last sentence, let's just say that Homewise needs to be supported loudly and clearly by anyone who truly cares for people.

On Aug. 8 we will find out where the Santa Fe City Council stands. Will it encourage this carbon-conscious development? Will it prove its support for affordable housing? Will it promote development that costs less per capita for the city to maintain? Or will it fall for the superficial arguments of a few? Let your elected officials know where you stand, and plan to attend the meeting.

One silly, yet significant, salvo fired at Homewise Inc.'s proposed development was an accusation that the property in question is "topographically challenged." Unfortunately, folks hiding under this clever carapace haven't been to the site with a copy of the current plan. It's true

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that the land straddles a deep arroyo, but all of the building sites are planned for the gently sloping mesas. The only real "challenge" will be to build a road just like hundreds of others all over this state.

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Our**waterQuality**

Hardness an unregulated nuisance

By now you should have received your Consumer Confidence Report (CCR or water report) if you are connected to a public water supply governed by EPA water-quality regulations. But what might irritate you most about your water quality is not included in the list of EPA-regulated contaminants. Hardness is common in more than 85 percent of the country, and is the most common water-quality problem reported by U.S. consumers.

The presence of hardness minerals is not known to pose a health hazard and in low quantities actually enhances the flavor of water. There is no debate about the physical effects of excessive hardness, which can cause a variety of problems.

In general, the tendency of water to form lime scale increases with temperature. Hardness in water heaters means increased energy consumption and decreased appliance life because scale deposits act as insulation and reduce heat transfer. Hardness causes spotting on glasses, plates and flatware in dishwashers; scale accumulations on plumbing fixtures; and soap scum in tubs and showers. One positive aspect is that thick accumulations actually provide support for older household plumbing, but flow restrictions may eventually dictate that the pipes be replaced.

Calcium and magnesium ions are the primary constituents of hardness. Dissolved iron and manganese, which contribute to both staining and odor, are broadly considered to contribute to hardness but typically constitute only a fraction of total hardness. The EPA sets a non-enforceable secondary MCL (Maximum Contamination Level) for both iron and manganese, but not for hardness. And public water systems typically do not treat water for hardness.

Hardness is expressed in either mg/L (milligrams per liter = parts per million) or in grains per gallon (calculated by dividing mg/L by 17.1) as calcium carbonate (limestone). The fact that hardness is expressed in units equivalent to limestone is a hint of what effects hard water might have in your household! The following classification (in mg/L) is used by the U.S. Geological Survey: soft (0-60), moderately hard (61-120), hard (121-180) and very hard (greater than 180). To put this in local perspective, the high-low hardness ranges reported by the Sangre de Cristo Water Division in the 2006 Water Quality Report are as follows: city wellfield (56-174), Canyon Road water plant (25.9-26), and Buckman wellfield (40.5-532). A recommended hardness cutoff of 100 mg/L is widely used for considering treatment.

Hardness is the result of the complex interactions of chemistry and geology along water's pathway. Hardness minerals dissolved from rocks and soil may travel in solution for great distances within aquifers. In general, groundwater produced from wells has higher levels

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of hardness than runoff water. In cases of extreme hardness, treatment is not optional. Locally, some private wells have hardness levels as high as 1,800 mg/L and the water is virtually undrinkable without treatment. In the next column, options for treating water hardness will be discussed.

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