



FEMA

Homes are High and Dry Protection from Verde's Floodwaters

Cottonwood, AZ – Arizona's Verde River showed its dangerous side by flooding four times during the winter of 2004-2005. But for the most part, the Cottonwood homeowners along Comanche Drive with front-row views of the river escaped serious damage. Under a Yavapai County requirement, homes built in the Verde's floodplain must be elevated at least one foot above the base-flood level. Although the rising water entered some of the lower-level crawlspaces, no flooding was reported in the living areas of these homes. The recent flooding – the worst since 1993 – proved to be a lesson for those who wondered whether elevating a home was worth the bother and expense. Before the recent severe winter weather, some homeowners had questioned the need for elevation.

"The hardest part is convincing people that it's going to flood," said Luke Sefton, vice president of Southwestern Environmental Consultants. The owner of an elevated home on Comanche Drive, he has done engineering work on 200 other elevated homes in flood-prone areas. The past season's floods, Sefton added, demonstrated why an elevated house was a wise investment for him as well as others along the Verde River. In the four times the river rose, it did not reach his living space. Sefton, a registered professional engineer and certified floodplain manager, had designed and built his elevated home five years earlier in the Verde Village neighborhood during a dry spell, but he never doubted that floodwaters would one day test his work. "I knew exactly what I was getting into," he said.

Along the Verde River, he said, he helps design homes which, in most cases, can withstand an assault from trees as well as floodwater. Soils in and beneath the house can become saturated, creating enormous pressure. Because of those risks, he prefers to design homes with a solid foundation and thick walls – vented to let the floodwaters flow through the bottom -- rather than constructing houses on stilt-like piers.

Besides elevation, county codes require openings in a new structure's exterior walls no higher than a foot from the ground to equalize water pressure inside and outside the structure. Louvered vents over the openings allow floodwaters to flow through the crawlspace but prevent animals from making homes under the house or debris from accumulating.

Among other requirements, homes must be set back from an erosion-hazard area, and foundations must go at least three or more feet below the scour depth of floodwaters. The county's floodplain rules are under review to see whether they need to be fine-tuned even more. "A new floodplain ordinance is in the works for 2006," said Jeff Low, the county's flood unit manager. He added the county will propose in next year's budget to conduct a topographical aerial study of the VerdeValley, which will be used to create vital new floodplain mapping of the area. The county hopes to form a future partnership with the Federal Emergency Management Agency (FEMA) to undertake the project.

Meanwhile, residents in the elevated homes on Comanche Drive enjoy the beauty of the valley while having the peace of mind of knowing their houses are built to survive the river's occasional rampages.



Yavapai County,
Arizona



Quick Facts

Sector:

Public

Cost:

Amount Not Available

Primary Activity/Project:

Building Codes

Primary Funding:

Community Assistance Program (CAP)