

Few take time to heed dangers of washes

Flash Floods

by Bert Edises

Mr. Smith (as we shall call him) was a stranger to the Sonoran desert. He was driving a 1982 Buick, his wife beside him on the front seat, their two little girls playing together in the rear. It was summer, the day was warm and the sky above was clear and blue, although black clouds could be seen on the horizon to the east. The road was full of dips, almost like a roller coaster, and on the shoulder were yellow signs with the legend "Flash Flood Area".

Those words meant nothing to the stranger; after all, no sane person expects to encounter floods in the desert. So Mr. Smith maintained his steady pace, confidently watching the road ahead, glancing neither left nor right.

As he neared the bottom of one of the larger dips, a wall of water three feet high, travelling about 20 miles per hour, entered the dip from the east; and struck the Buick broadside.

The car was hurled into the wash — no longer a wash but filled to overflowing with churning, viscous fluid — and turned over and over until it finally came to rest some 300 yards from the original point of impact. All four occupants of the automobile were drowned.

The Smith family story is a composite based on actual incidents which have occurred in Arizona in recent years. A look at these unpleasant events may give us some clues to the happening and possible avoidance of flash flood fatalities.

But, first, some words about the phenomenon itself. A flash flood is a violent cloudburst (usually a summer thunderstorm) accompanied



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by rapid runoff. The storm may disgorge several inches of rain in a very short time. There is no way that the rainfall can be absorbed into the ground, first because of sheer magnitude of the downpour, and second, because the surface of the desert consists largely of gravel, rock and other so-called "duricrusts" which are impervious, or nearly so, to water. So the deluge must seek other outlets.

Spreading first in vast, shallow sheets, huge quantities of runoff quickly find their way into the washes or arroyos. There, hemmed in by the banks and pushed forward by the continuing heavy inflow, an actual wall of water may be formed.

As the torrent races down the wash, it picks up and carries with it large amounts of sand and gravel, boulders, too, as well as trees and bushes torn from the banks, and numerous trapped and helpless animals.

So powerful is this avalanche of water that it has been known to inundate a railroad locomotive weighing many tons and sweep it downstream more than half a mile. Such was the terrifying object that struck and killed the hapless Smith family.

A dangerous attribute of the violent thunderstorms which produce flash floods is their ability to cause harm at a distance. Thus, the fatality may occur miles from where the storm erupted.

Recall that the sky above Mr. Smith's automobile was sunny and blue. Not even a meteorologist could have predicted that the menacing black clouds to the east would result in a particular, or indeed any, flash flood.

Difficult though the question may be to answer, we are bound to ask whether there was any way the Smiths could have avoided this senseless drowning in the supposedly waterless desert.

The truth is, probably not. The flood waters struck the highway just as the car was entering the dip, so it is hard to see how the impact could have been averted.

One may speculate that if Mr. Smith had been aware of the potential long-distance effects of desert thunderstorm, he might have been on the watch for a flash flood, might have spotted it in advance, and might have stopped the car in time. But that is sheer speculation.

The fact is that flash flood victims are not confined to novices; more than one oldtimer, deeply versed in the ways of the desert, has lost his life in a flash flood.

How can we defend ourselves and our loved ones against the destructive effects of flash floods? There is no sure way, short of never leaving home, but the danger can be lessened considerably by following certain rules. (These apply mainly to motor vehicles, where most such casualties occur.)

Truthfully answer the question: Do you really need to drive down to Phoenix (or wherever) on this stormy day? If the answer is yes:

— Stay alert. Don't assume that you are not in danger of flash flooding because the sky above you is (or has become) clear.

— Drive at moderate speeds so that you can brake quickly and effectively.

— Carefully watch not only the road ahead but also the space on each side of the highway, both abreast and ahead of your vehicle.

— Be especially wary of dips in the road. As was the case with the Smith family, a dip can be the highway continuation or a wash, which in turn may be the channel of a flash flood.

— If the dip is flooded, be very careful before you undertake to cross it. It is easy to be deceived as to the depth or force of the water, or both. Better wait until the water subsides than run the risk of being swept downstream.

And don't forget to hold onto your rabbit's foot.