

What is Happening to Our Land?

In the 25 years between 1982 and 2007, the U.S. lost 23.1 million acres of agricultural land to “development” (houses, roads, parking lots, shopping centers, etc.). That’s about the size of Indiana! Texas lost the most of any other state, by a large margin—2.9 million acres! That is about the size of Bandera, Gillespie, Kendall, Kerr and Kimble counties combined! (American Farmland, Fall/Winter 2010 pp 13-16)

“Agricultural land” as used above means cropland, timberland or rangeland. So as the population of the state increases, the amount of available land to produce the food, fiber, wood and paper that the increasing population requires is decreasing. It should be obvious to all that this is not something that can continue indefinitely.

In the ideal case of pre-settlement days, when rainfall fell on a landscape that had more grass and fewer trees than we have now, a very large fraction of the rainfall infiltrated into the ground, saturating the soil. This stored water would then be purified as it slowly flowed downhill through the soil and out in springs and seeps that fed the creeks and rivers of the Hill Country. This underground flow could continue for months after a rain and constituted the “base flow” of the rivers, and provided the early settlers with reliable water sources. Some of the water that did not wind up in the creeks and rivers seeped deep underground to replenish our deeper aquifers.

Today, where most raindrops fall is agricultural land, and in the Hill Country, primarily rangeland, and that is where both the quality and quantity of water that we all depend on is determined.

As “development” has taken place, several things have happened. First, with many more folks demanding water, very much more of the available water is used by humans. Much of the human “development” is the construction of what are called “impervious surfaces”—surfaces that water cannot soak into, but instead runs off immediately. Think roofs and pavements of all kinds. When the rainwater that used to soak into the soil to nourish plants and provide a slow release into the creeks and rivers now hits impervious surfaces it runs off immediately. In cities it is called storm water and municipalities have to spend huge amounts of money to build storm water catchment and distribution systems to handle the runoff.

This water that falls in a rainstorm thus runs into rivers and down to the Gulf without being available to humans (some of it may help fill reservoirs if they are not already full). But water that runs off roads and parking lots is contaminated with motor oil and gasoline residues and water that runs off lawns is full of fertilizer and pesticides. So as more and more development occurs, we not only lose land that would have previously captured, stored and purified our water, but the water that does fall on developed areas becomes contaminated.

The problems associated with an increasing population moving onto what was productive agriculture land are not just issues with water capture and use. When hundreds of families move into a “development”, occupying what used to be a ranch with a single family living on it, it introduces not only more impervious cover, but it introduces more fences, more power lines, more water wells, more septic systems and potentially many more detrimental land use practices.

The increased human density in rural areas has detrimental effects on native wildlife caused by the introduction of exotic plants and animals, including feral cats and dogs, and the indiscriminate use of pesticides and herbicides. More landowners also lead to more alterations in natural drainage patterns, an increase in artificial ponds and lakes. In short, the characteristics of the countryside are drastically altered from the native habitat that supported wildlife and captured rainwater to one that no longer functions as it did before man arrived.

Finally, we know that a major reason many of us moved to the Hill Country was to enjoy the natural beauty we see every day as we travel around the area. More roads, more traffic, more homes atop the hills, more power lines, more overgrazed pastures all detract from that beauty we came to see.

Aldo Leopold said, “...the standard paradox of the twentieth century...[and] the oldest task in human history is to live on a piece of land without spoiling it.” Somehow, we are going to have to learn how to do that.

Once again, I will be at Riverside Nature Center from 10 to 12 on Fridays, so people can come with questions, concerns, etc. or just to talk about our native environment

Until next time...

Jim Stanley is a Texas Master Naturalist and the author of the books “Hill Country Ecology,” “Hill Country Landowner’s Guide” and “A Beginner’s Handbook for Rural Texas Landowners.” He can be reached at jstmn@ktc.com. Previous columns can be seen at www.hillcountrynaturalist.org .