

What Should We Do When There is Not Enough Water?

A couple of recent events have prompted the question, What should we do when there is not enough water?

In a recent article in Texas Parks and Wildlife magazine, Jenna Craig describes the dilemma faced by the Lower Colorado River Authority in allocating the decreasing amount of water in the river and lakes among the various demands of municipalities (more than 1 million people), businesses, industry, agriculture, wildlife and the environment. Lakes Travis and Buchanan are at 37 percent of capacity and inflows have been near historic lows for several years.

Back during higher rainfall times and when the population of the area was lower, water flowing into the lakes was more than was needed by municipalities and the lakes were full so the excess water flowed down the river to industries near the coast and was diverted (as it had been for over 100 years) to rice farmers. And still there was enough water flowing into Matagorda Bay to reduce the salinity and make for ideal habitat for young shrimp, oysters and fish, as well as for ideal migratory waterfowl habitat.

But now, LCRA has had to suspend sending water to the rice farmers with the devastating effect you can imagine. And unless the lower Colorado River basin receives substantial rainfall soon to provide the environmental flows necessary for the health of the Gulf fisheries and migratory waterfowl, that habitat will be severely damaged. Municipal water users trump agriculture and the environment by virtue of sheer numbers of people.

The second event that I recently became aware of is a plan by the Texas State Soil and Water Conservation Board that has as its goal to increase the amount of water flowing off the land and to decrease the amount infiltrating into the ground. The idea is to get rainwater off the land as quickly and efficiently as possible and to have it run into lakes and reservoirs where it will be available for municipalities.

This turns out to be an example of a simple solution to a complex problem that is fundamentally wrong. Most experts would define an ideal functioning Hill Country ecosystem as one with a diversity of native vegetative species from the ground to the tree crown with little bare ground. Good native grass cover slows down the flow of water and easily absorbs the rainwater where the water can infiltrate into the shallow aquifers, flow downhill to the riparian areas where it is stored in the riparian sponge along the sides of the creeks providing the base flow for the creeks.

But the goal of the TSSWCB is just the opposite of the above-described ideal ecosystem. In order to maximize the amount of rainfall that runs off the land, they would subsidize landowners to remove cedar, but without any requirement, or even any

encouragement, that the land be well-managed thereafter. The maximum amount of runoff means the maximum amount of erosion and the minimum amount of vegetation. As more water runs off and less soaks into the ground, the amount of vegetation decreases and as the amount of vegetation decreases more runoff will occur and less recharge of the shallow aquifers and riparian creek-banks will result. In time the land will have less soil, less vegetation, more rocks and fewer springs and seeps. The land will become less and less productive, for either livestock or wildlife, and the process of desertification will begin.

In short, managing for maximum runoff would destroy our Hill Country landscape and leave us, and the cities, with even less water in the future and the landowners with less useful and valuable land.

Back in 1947, Lyndon Johnson said, "Saving the water and the soil must begin where the first raindrop falls". He understood back then that a healthy, functioning ecosystem was essential not only for the health and productivity of the land, but for efficient capture and storage of rainwater. The TSSWCB plan will result in muddy water flowing into the lakes after every rain, but nothing flowing in between rains. A healthy system will capture the rain on the land and release it slowly as clear, pure water fed by the base-flow of the creeks and rivers.

But these are complicated concepts and people can easily be misled by simple answers to complex problems. There are lots of different demands on our limited water supply. Will we be smart enough to figure out the correct policies and optimal allocation? Only time will tell.

Until next time...

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