

Brush Control and Water

By Steve Nelle

Most Hill Country residents and every area rancher know the problems caused by excessive amounts of cedar.

Although cedar (and mesquite) are native to the Hill Country and have important beneficial value, these brush species have caused great economic harm to ranching and livestock production. Ranchers have been fighting the encroachment of brush for four or five generations with some help from government subsidies.

Many people believe that brush is detrimental to our water supplies. The traditional belief is that brush is largely responsible for the drying of aquifers, springs and creeks and that brush control will restore these water resources.

The traditional logic was based on three assumptions:

First, that brush wastes abnormally large volumes of water.

Second, that the removal of brush will allow extra water to be slowly released to springs and creeks.

And third, that an improved cover of grass will develop which will cause more water to soak deeply into the ground.

There is a thread of truth to each of these assumptions, at least in certain situations; however, these old assumptions contain flaws, exaggeration and oversimplification. The old logic seemed to make sense at the time, but the extra water has not materialized despite massive brush control efforts.

New and compelling research conducted by top scientists over the past decade has refuted much of the old thinking about brush and water. This new science comes mostly from Texas A&M, the state's premier agricultural university, and is causing many people to rethink their beliefs about brush and water dynamics.

The results of the new research have been eye-opening and controversial. The first reaction of most ranchers and range management professionals was to discredit the research and ignore the implications. The initial response was to bury our heads in the sand and keep repeating the traditional chant, "brush control means more water; brush control means more water."

But now that the conclusions of the research have been found to be valid, more professional range scientists and range specialists across Texas are doing a 180-degree turnaround on the subject of brush and water. Not everyone is convinced; like the turning of a large ship, it is a slow process. Change of belief happens gradually and painfully, especially when bound by generations of tradition and inertia.

The federal and state government has spent untold millions of taxpayer dollars providing financial assistance to landowners to control brush in the hope of generating additional water for Texas. The sad news is that these government-funded programs have not increased the state's water supply despite decades of trying. In some cases, localized spring flow did increase, but the increases have been either temporary or of insignificant volume. Simply stated, gaining meaningful amounts of additional water through brush control has proven to be a colossal failure and a waste of public funds.

This isn't the first time that government programs have failed to produce the desired results. Responsible government does not continue doing the same things over and over when they are proven to be ineffective. Taxpayers of any

political persuasion can agree that such unsuccessful programs need to be carefully scrutinized and redirected, or perhaps even defunded or discontinued.

Not only have these programs failed to produce additional underground water supplies, but in some cases, they can actually harm the land they are designed to benefit.

The newest program is the Water Supply Enhancement Program or WSEP. Under this state-funded program, the goal is to increase the public water supplies of larger cities. In order to achieve this goal, the underlying strategy seems to be the generation of increased runoff through brush control. Instead of trying to get more water going into the ground, this program, in some cases, appears to promote the loss of water from the land so that it can be captured in downstream water supply lakes.

Clearly, most landowners do not want to intentionally do anything that will hasten the loss of water from their land. Even landowners who have a significant brush problem and who welcome financial assistance will be reluctant to accelerate the loss of water off their land with brush control. Not only is the loss of water a major issue, but the corresponding increase in soil erosion will degrade the productivity of the land.

Scientists have discovered that rangeland hydrology is much more complex than we originally thought. Although science has not yet provided all of the answers, this much we do know — that brush control has not produced the water we have hoped for.

There are many good reasons why ranchers and landowners engage in brush control. When properly carried out and with good sustainable management, selective brush control can help maintain or restore healthy grasslands, improve wildlife habitat and sustain ecologically diverse landscapes.

Government incentive programs that promote genuine land and water stewardship on private land are a worthy investment of public funds, but only if they deliver the benefits they promise.

If public funding of brush control continues, it must be justified for reasons other than an increase in water.

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