

# Riparian Notes

Note Number 29, January, 2013

Steve Nelle, San Angelo, Texas

## Myth Number 2 – Droughts are Bad

Seven common myths and misperceptions about creeks and rivers have been identified (see Note No. 28) which perpetuate a misunderstanding of important riparian truths. These myths will each be addressed in upcoming issues.

Myth Number 2 is especially challenging to debunk in these present drought conditions. It is always difficult to force oneself to see the positive side of adversity. However, most people will readily admit that hardship, suffering and pain are not only a normal part of life, but are actually beneficial and desirable when viewed as part of the big picture.

Without a doubt, drought *seems* bad when experienced in the present tense. For landowners and agricultural people, drought is one of the worst calamities because it seems never-ending and inescapable. When in the midst of prolonged hardship, it is difficult to remember the bounty of the past or to see the hope of the future.

Riparian Note Number 26, dated August 2009 addressed some beneficial ecological aspects of drought in the riparian area. As water levels recede, and as more and more of the channel becomes exposed, existing riparian vegetation has an opportunity to expand. Not only does top growth increase in extent, exploiting newly exposed ground, but also the root systems expand in depth and area. The root systems of riparian plants are programmed to accelerate growth during dry times to stay in contact with receding subsurface water levels. This helps to create greater root systems, which in turn can support greater top growth.

Besides the expansion of existing riparian vegetation, exposed dry channels provide a niche for new seedlings to get started. In central Texas, an extraordinary increase of new switchgrass, bushy bluestem, and sycamore plants has been observed during the ongoing drought. Just enough rainfall has been received to germinate seed and sustain seedlings until their roots can reach the riparian water table. The lack of scouring flows and floods has allowed the new fragile seedlings a chance to establish.

This ironic expansion of riparian vegetation during drought will subsequently help dissipate stream energy, trap sediment, build floodplains, store water and recharge aquifers, and generally enhance riparian function.

Another “positive” aspect of riparian drought is the death of some old post-mature trees and the addition of large wood to the riparian area. This will be discussed in more detail as part of Myth Number 6.

After several dry years, including the one-year drought of record in 2011, Texans are now painfully familiar with drought. Many creeks that flow in normal times have ceased. Many strong flowing creeks and even some rivers have diminished to trickles. Shallow alluvial aquifers are much reduced and retreating.

Disturbance is often the prerequisite for change in nature. Droughts and floods are the primary disturbances that precipitate changes in creeks and rivers. The inevitable floods that will follow this current drought will scour away sediment from some places and move new sediment to other locations. This is how nature restores and reconstructs damaged creeks. The present drought and the condition of the uplands will boost the channel altering forces of the next flood. Drought - Flood - Change. Ready or not, here it comes. As old timers are fond of saying, “the longer the drought persists, the closer we are to the big rains that will break the drought.”

At another level, drought causes us to ponder the big picture of nature and our role in the stewardship of natural resources:

- Drought causes us appreciate rain even more; and for some, to express gratitude to the One who sends rain.
- Drought is part of “normal” and causes us to recalibrate our perception of normal.
- Drought should encourage the adoption of a responsible water conserving lifestyle.
- Drought is a form of adversity that teaches us the hard lessons of humility, endurance and patience.

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Wayne Elmore, nationally recognized riparian authority, is credited with compiling the original list of riparian myths, which he uses to teach riparian principles. Wayne has been instrumental in teaching and encouraging a proper appreciation and practical understanding of riparian dynamics and riparian management. The author is indebted to Wayne as a mentor, for sharing his expertise, and for allowing the use of his material in these notes.