

## Report on Riparian Workshop in Evant by Ray Buchanan

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Who can forget the “Rain Machine”? With a big tank of water that simultaneously “rained” on a tall grass tank, a disturbed surface tank, a home yard grass tank, and a barren soil tank with pipes coming out marked as percolation or runoff water, Billy Kniffen or Bryan Davis used this machine to demonstrate what happened to rainwater when it fell on different surfaces. And then they reminded us, or perhaps it was Rangeland Specialist, Barron Rector who said it, that most of Texas was no longer “Tall Grass Prairie” and that most of the rain runs off carrying with it most of our topsoil. And with the knowledge that it takes 100 years to create a new layer of topsoil as thick (or more properly, as “thin”) as a dime, one can become discouraged about overcoming the consequences of excessive grazing and developmental sprawl that have so damaged Texas soils. How can we ever recover all that sedimentary runoff?

Well, the Riparian Workshop that 5 members of the HLMN Chapter (Ray Buchanan, Billy Hutson, Ed Lilly, Sammye Childers, and Mike Childers) attended in Evant, Texas on October 29<sup>th</sup>, 2010, shed some new light on that question. If a river or stream demonstrates the “Proper Functioning Condition of Riparian Areas”, which was the focus of the day-long workshop, that runoff soil is transformed into a streambed deposition where riparian vegetation becomes established. Shifting the focus from the uplands and a watershed approach to one of “water catchment” in a riparian area, a study of this “natural” functioning of rivers and streams highlights their restorative character and shows us that a “second chance” to recapture the runoff soil has always existed in nature.

As Ricky Linex, USDA – Natural Resources Conservation Service (who conducted the Riparian Session at the State Meet) and his NRCS colleague, Kenneth Mayben, pointed out: in many cases human action has undermined this natural function of riparian areas. Hence, this workshop, sponsored by the NRCS and the Lampasas River Watershed Partnership, pointed out what the “conditions” should be for a proper functioning riparian area and how to act with “proper management practices” in order to allow nature to heal these areas. It is a question of how vegetation, landforms, and wooded areas interact with the water flow so that moisture stays in any given place for the longest possible time. Water that does run off reaches the Riparian area, and if the Riparian area is functioning properly, it will slow the flow and enable water to be absorbed and sediment to be dropped. This in turn will create or enhance a vegetative riverbed and floodplain which is an underground sponge (composed of living and dead vegetation, organic matter, living organisms, soil, and sediment) which maintains the existing water table and a sustained base flow. The results enhance riparian values such as water quality and quantity, forage for wildlife habitats, recreation value, and aesthetic beauty.

Our visit in the afternoon to a creek on the Chris Meis Ranch outside Evant demonstrated the new terminology necessary for evaluating existing conditions and for developing management practices. For example, 145 riparian plants have been designated as OBL (Obligate Wetland – almost always occur in wetlands); or FACW (Facultative Wetland - usually occur in wetlands, occasionally occur in non-wetlands); or FAC (Facultative – equally likely to occur in wetlands and non-wetlands); or FACU (Facultative Upland - usually found in non-wet locations); and or UPL (Obligate Upland - almost always found in non-wet locations). Then, since it is important to distinguish between “colonizer” plants (those with short roots which initially appear on land created by accumulated sediment) and “stabilizer” plants (those with longer roots which can hold the soil against water flows), stability rating numbers are assigned to each plant, depending on their growth pattern and root structure: from 1 = bare ground that has no resistance to water flow to 10 = anchored rock or logs that are impervious to water flows. Colonizer plants usually have a 3-5 rating, while stabilizer plants usually have a 7-9 rating.

And this 6-hour workshop gave us only an “introduction” to this complex and highly significant subject. Wouldn’t it be fun to develop a core of riparian area experts in the HLMN Chapter to help out with actual evaluations and to keep the rest of us informed and fascinated??