



# Stewardship

Providing Leadership for the stewardship of rangelands based on sound ecological principles

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## Inside this Issue

- 3 On Stewardship
- 4 Sustainability
- 4 The Drought Killed All My Grass
- 6 Myth: Creeks should be Wide and Straight



## Why Stewardship?

- Demand exists for a clear and practical source for the best science, and SRM can fill this void.
- Execution is the key to improving rangelands. This new publication will help foster channels for the implementation of sound scientific solutions to range problems, and bring the best science available to a wide audience.
- Targeted to those putting science into action on the range and those interested in how to implement good range
- By publishing *Stewardship*, SRM Membership can provide an invaluable and unique service to both current and prospective members: uniting the best science and practical implementation. This would make an SRM membership essential to anyone whose livelihood is dependent upon healthy rangelands.

Society for Range Management

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*Photos Respectively By: Jason Martin, Steve Kolarik, and Jim Thorpe*

## Introduction

Welcome to the first issue of Stewardship, a quick perspective of taking care of the rangeland resources around the globe. Our goal with this publication is to provide you with articles such as case studies of good and bad management practices, opinions, historical happening, pro and con debates, and many other items presented in a short non- technical format; which may help you to manage the rangeland resource. Note that the first article presented in this issue covers and defines the topic of Stewardship, after which we have named our publication. If you have a short topic you wish to talk about, let us know. We will consider all submissions, including short advertisements, for inclusion in an upcoming issue. All pieces are subject to the Editor's approval and editing.

### Taking Care of Rangelands

Sincerely,  
Gary Frasier  
Editor  
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*Photo by: Diana Doan-Crider*

# On Stewardship



*Photo By: Jim Thorpe*

**Stewardship.** Defined by Webster as “1. The office, duties, and obligations of a steward; 2. The conducting, supervising, or managing of something; especially: the careful and responsible management of something entrusted to one's care. We in SRM believe strongly in stewardship. It is right there in our Mission Statement: “Providing leadership for the stewardship of rangelands based on sound ecological principles.” Reverend J. Hugh Magers of Bryan, Texas used to explain the origins of the

word “stewardship” to the youth at the Texas Section Youth Range Workshop in a way that captured their attention and was remembered. When he was through, the audience got the message. I guess it comes from his many years in front of a church congregation and his reputation as one of the best fundraisers the Episcopal Church of North America ever had! Where exactly did “stewardship” come from? Why do I have to take of my rangeland? Or my family? Or my bank account?

It started in the somewhere in the 11<sup>th</sup>-15<sup>th</sup> centuries...references are conflicting and my memory just isn't that good anymore. Nonetheless, the story is the same. Times were simpler then. No Wal-Mart. Not a grocery store of any kind anywhere! Households raised their own food, preserved, etc...planning their food supply into the future. It was common to have a pig, or four, outside in the “sty.” The pig's fate was always the same, to be food for the family. The manager of the food chain for that family was responsible for keeping the pigs healthy.....they were fed everything from small grains to scraps from the household. The manager of the food chain for any particular household, be it a one family dwelling or an estate with a large castle, was a very important position. Without his/her careful management, the people would go hungry. The pig needed to be at the right age and weight to slaughter when the current supply of meat ran low. That important household position came to be known as the “sty ward.” Sty-ward.....Steward.....the one responsible for care of the animals and the people. And one could suppose the care of the animals depended upon wise use of the land available for those animals to graze or wallow in, whatever the case may be.

## Continued...

In time, the rise of Wal-Mart and the availability of food from across the globe at any season has diminished the role of the “Sty Ward” of any household. Or certainly changed it! We do find that even today, good stewards of the groceries are much appreciated!

Today, the term stewardship is applied to a variety of occupations. However, there is no higher calling than to recognize and practice stewardship of our natural resources. It impacts everybody from the folks buying meat at the grocery store to the folks who enjoy bird watching on federal land to everyone who turns on the tap for a drink of water.

What we do in Range Science is pretty important stuff!

- Jenny Pluhar



*Photo by: former CSU Extension Agent  
Leonard Pruett*

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# Sustainability

Several months ago a member of SRM raised the question “how do we define ‘sustainability?’” I am not sure if a response to the request was developed. My dictionary defines “sustain” as: 1. To support, hold, or bear up from below, 2. To bear, and seven more similar statements) but not “sustainability.” I am not sure the meanings are the same.

As members of SRM, we advocate natural resource management actions, which are sustainable or produce a sustainable result. Each of us in our own mind has an interpretation of what this means, but what about the general public who are not trained in natural resource management? What do they think?

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Recently I was given a copy of a publication from a College of Liberal Arts and Sciences from a major university. Within this publication was an article *A More Sustainable Planet*. This well written article by a staff editor for the publication covers the topic in an easily understandable manner. The item, which caught my major attention, was a sidebar notation with the following: "Sustainability is often defined as – 'Meeting the needs of today without compromising the ability of future generations to meet their own needs.'" The article credits this definition to the Brundtland Commission, 1987.

I like this definition and hope that SRM can promote this concept in all their material as one of their philosophical items. If all SRM members can promote this concept then we have made a major contribution to communicate with the general public.

- Gary Frasier

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# The Drought that Killed All My Grass

Heard in the coffee shop somewhere in the west early this morning: "The drought killed all my grass!" The drought is indeed powerful. Texas has lost many trees, from live oaks in the Hill Country to stately elms in the city parks of Amarillo, since the debilitating drought of 2011. Oh, 2012 was better and 2013, according to the weatherman, is "above average." A trip around the country quickly shows that it will take more than an average year and an "above average" year to build subsoil moisture. Why we have even had some rains that were "gullywashers" here lately. Evidence in the draws indicates that water 4-5 feet deep passed through. Yet the clay loam sites, the very sites cattle prefer, are haunted with large patches of dead grass; perennial grass, that tough stuff the livestock industry was built on. Dead. Not dormant. No sir. Deader than a door nail!

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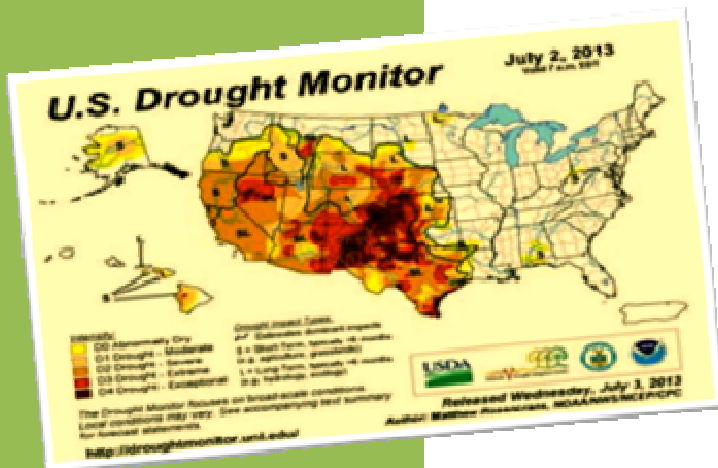


But, wait.....is that the reason? The Evil Drought Monster laid claim to the rancher's grass. I have had the sad responsibility to explain to more than one landowner that his stocking practices of many years are more to blame for the dead grass than the drought. The perennial grasses, grazed year after year, have put all their energy into maintaining life above the soil while, below the soil, their root mass was shrinking, shrinking, shrinking. When the mother of all droughts came in 2011, following a wonderful year in 2010, at least in the

Texas Panhandle, much perennial grass could no longer hang on, and died; couldn't even go dormant and survive. One of the hardest moments of my life as a range scientist was watching a man, more than seventy years old, pull out a worn bandana and wipe tears from his eyes as I gently explained what had happened to his deceased grass. "I should

have known better," he lamented.

Stocking rate is easily the most important decision a land steward makes and must be adjusted frequently. We must do a better job of convincing folks that what is happening beneath the soil surface is far more important than what you see on top!



As for me, I am carrying a few worn bandanas when I get the calls from landowners to come look at their dead grass. I dabbed at a few tears in my eye as I drove away from that ranch as well.

- Jenny Pluhar

# Myth: Creeks Should Run Wide and Straight

Seven common myths and misperceptions about creeks and rivers are being addressed in this series. When misunderstandings are explained, clarified and untangled, riparian managers are in a better position to apply appropriate management and avoid some of the mistakes of the past.

Various government entities as well as landowners have spent untold billions of dollars making crooked creeks straight. Countless thousands of miles of creeks and rivers have been re-engineered to take out the meanders and bends to make the water flow where people want it to flow.

The straightening of creeks and rivers, often called channelization, has been done for several different reasons. One of the primary reasons for straightening a meandering river is to allow more efficient farming. Rivers that meander back and forth across a valley make farming more difficult, with fewer acres available for crop production.

Channelization has also been done on larger rivers to improve their use in navigation, shipping and barge traffic. In other places, creeks and rivers are straightened to accommodate more efficient road construction and land development. Flood control is another common purpose for straightening creeks and rivers.

Regardless of the reasons for straightening creeks and rivers, nature does not agree with this kind of engineering. Usually there will be undesirable long-term consequences. A chain reaction of negative side effects often occurs when meandering streams are made straight:

- When Sinuosity (meandering) Decreases, the slope of the channel necessarily increases
- When the slope of the channel increase, the velocity of the water increases
- When the velocity of the water increases, erosive energy increases
- With increased erosive energy, channels often cut downward or wider
- As channels cut down, water tables are drained
- As channels cut down, floodplains become less accessible and groundwater recharge decreases

## Continued...

In addition, there are other negative consequences of straightening channels. With decreased channel length, there is decreased riparian area, decreased water storage capacity, decreased sediment trapping, decreased floodwater retention and decreased aquatic habitat.

Conversely, when creeks and rivers are allowed to meander naturally, water is slowed, erosion is reduced, sediment is trapped, more water soaks in, more water is stored, and the riparian area is enlarged.

Engineers have often widened creeks and rivers as they straighten them. The widening is done to accommodate floodwater. However, what often happens is the intensification of flooding problems farther downstream. In nature, the general rule is a relatively narrow main channel, and a comparatively wider floodplain. When this general rule is violated, bad things often happen.

Channelization projects treat creeks and rivers like drainage ditches with the goal of getting rid of the water faster. With natural channel configuration and functional riparian areas, water will be retained longer and creeks will be water-catching and water-holding parts of the landscape rather than simply drainage features.

Fortunately, channelization has been greatly curtailed over the past several decades. People and government agencies have come to realize the importance of naturally meandering creeks and rivers and have come to see the damage caused by straightening. While the effects of past channelization projects are still apparent in many places, creeks and rivers are putting meanders back into the channel through the natural process of erosion and deposition. Let nature do the engineering.

By Steve Nelle, in *Riparian Notes* Number 31, March 2013. (Reprinted with Permission) Credit is given to Wayne Elmore, Riparian Specialist and former Leader of the National Riparian Service Team for compiling the list of creek and river myths, which are used to help teach riparian principles.