Collaboration in Action: The Natural Resources Working Group - Forest and Grassland Restoration

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Goals Statement – August 1997: The greatest potential threat to wildlife habitat and community well-being in the White Mountains is uncontrolled wildfire. With current forest conditions, clean air considerations, and other constraints prescribed burnings often are not a viable option. Therefore, a broad based collaborative process involving communities, public management agencies, interested parties, and individuals must be maintained to provide solutions. This will provide a process that ensures preservation of public safety, property, recreational values, wildlife habitat, and watersheds. Recognizing that humans are an integral part of the environment, the mechanism to accomplish this must include an economic incentive for management processes that will return the forest to a healthy, diverse, sustainable, and viable natural habitat. (Goals Statement for Natural Resources Working Group)

This simple statement represents the culmination of four years of discussion beginning with the Ari-Pine Resource Coalition in 1993, resultant Desired Future Conditions (DFC’s) for forest and woodland areas and defined vegetation allocations for livestock and wildlife. Following this effort a working coalition of stakeholders representing all aspects of the resource management equation came together in an effort to define salient landscape level issues, develop consensus on the issues, define workable solutions, implement, and evaluate results. That group became known as the Natural Resource Working Group of the White Mountains (NRWG). The goals statement represented consensus among the group and was the key to moving forward with defining and implementing landscape level solutions designed to restore, existing, decadent forest ecosystems to health and sustainability.

Forest Conditions in 1997: In 1994 The University of Arizona conducted a Business Retention and Expansion program in cooperation with the City of Show Low. The critical finding of that process was that the local forest ecosystem, within and external to local communities, was an essential component of the regional
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economies of the White Mountains Region. Restoring health and vigor to forest ecosystems was crucial to long term community economic viability. Elk and cattle were in serious competition for limited understory resources, and watershed conditions across the landscape were non-functional. In the Juniper woodlands, grazing resources were more limited than in the forest and watershed conditions were worse.

Basis for Implementing a Collaborative Process: The only avenue that would accomplish a resolution was to provide all interest groups, involved parties, and agencies a protected seat at a collaborative table. One absolute was that respect for existing laws and statutes be honored. Contrast this to the stance of activists, both from the environmental and forest products industry, that the only way to solve the impasse was to change existing law to be more supportive of their particular platforms. The NRWG approach required that all individuals would have a protected seat at the table; all projects would require group consensus before implementation; all activities and proposals would work within existing laws, regulations, and statutes; recognition that people are a part of the environment and must become an integral component of any effective solutions; and respect for all opinions, even divergent ones, would always be the basis for discussion and decision making. A measure of the success of this process is the continued participation of all the original participating entities and the addition of many new participants.

In December, 1997, a multi-party MOU was signed by all parties for implementation of the Blue Ridge Demonstration Project. Four landscape management protocols, Natural Processes, Pre-settlement Restoration, the existing Forest Plan, and a no action control were implemented on approximately 12,000 acres of USFS land within the Lakeside Ranger District of the Sitgreaves National Forest immediately adjacent to Pinetop, Arizona.

White Mountain Stewardship Project: The ten year, White Mountain Stewardship Project (WMSP), implemented in August, 2004 was a product of the Blue Ridge Demonstration Project. WMSP employed a Service Contract approach to forest restoration, greatly simplifying contracting processes for woody biomass removal. The value of biomass removed from the landscape was recovered by the contractor. If the costs of removal and transporting exceeded the value of removed materials the differential was paid for the services rendered. Ponderosa Pine forests were the primary focus of the 10 year (WMSP) which allowed for up to 15,000 acres of restoration annually. Actual annual acreage thinned was in the 7-8,000 acers range. Upon completion of the WMSC in 2014 approximately 71,000 acres of ponderosa pine forest type were treated to a standard developed and monitored by the NRWG collaborative. Co-incident with extraction, Future Forest LLC, the contractor developed a highly diverse processing and marketing entity. This diversity was critical to long term viability of the forest restoration effort. Because of the economic flexibility it provided, the loss of one or two processing business at any given time would not be fatal to the overall project. Local processing infrastructure has the capacity to profitably process biomass from 12 – 15,000 acres annually.

Impacts and Outcomes: The underlying motivation for forest restoration was mitigation of wildfire intensity on the landscape and the protection of communities embedded in the forest ecosystem. Ancillary benefits are improvements in watershed function, plant and animal biological diversity, forage and browse production, recreation opportunities, and job creation. Job creation is a critical component to the long term sustainability of regional economic and community viability. A 25 mw (Mega Watt) bio-energy electrical generation plant was developed to support the WMSP. This plant, which has been in operation for several years, is valuable as a destination for harvested juniper and other bio-mass unsuitable for value added processing or utilization. A total of 10,500 acres of grassland/pinion-juniper restoration have been completed in one Ranger District of the last six years. This work has
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been funded through EQUIP, Economic Stimulus, HPC, and appropriated forest funding. The bio-energy plant has been critical in the effort of removing these materials of marginal value from the forest system economically. Habitat improvements have benefited wildlife numbers and diversity, improved livestock grazing, and stimulated fishing, hunting, animal photography, and provided recreation opportunities for tourists and retirees.

Looking to the Future: The successes achieved in the White Mountains through collaborative restoration, and, a sustainable processing infrastructure, have exceeded the expectations of all involved. The existing focus is to sustain current momentum ensuring that the industries developed over the last fifteen years are supplied with necessary raw materials to sustain themselves, and the economic stability local communities require. NRWG has, and continues to support and facilitate grassland and *Pinion-Juniper* woodland restoration. Continued restoration ensures adequate forage and browse for livestock and wildlife across the landscape. Further, the intensity of wildfire on the landscape is greatly diminished, providing economic incentives for the amenity economy consisting of recreation, second homes, retirement, and tourism which depend on the same sustainable resource base. An important fact demonstrated by the success of this multi-year effort is the demonstrated synergy between extraction and processing economies and the amenity economy which all White Mountain Communities depend on. With the current progress of the Four Forest Restoration Initiative (4FRI) collaborative, future sustainability of the pioneering work of the NRWG looks to be viable over the long term.
The Lakeside Ranger District completed a NEPA analysis on the Railroad grazing allotment that allows for a total of 10,000 acres each of grassland and woodland pinyon-juniper restoration to be implemented on the allotment to restore woodland and grassland habitat types. The removal of this new pinyon-juniper growth, in tandem with the newly developed grazing guidelines, will serve to allow for an increase in the production of herbaceous and woody browse plants. The funding from grant dollars from various partners are being utilized to help with the landscape level treatments that are intended to improve wildlife habitat, reduce the fire hazard around communities, improve watershed conditions, and restore winter range/grassland habitat.

Since 2009 approximately $500,000 has been contributed by partners (Arizona Game and Fish Department, Rocky Mountain Elk Foundation, Arizona Elk Society, Eastern Arizona Resource Advisory Committee, Antelope Foundation, Arizona Deer Association, Habitat Partnership Committee, Mule Deer Foundation, and Permittee). Partner funding has been used to complete treatments as well as cultural resource surveys.

Accomplishments:
- Restoration of grassland and woodland stands
- Improved habitat for elk, antelope, mule deer, and turkey
- Treatments have helped improve forest health by improving wildlife and watershed conditions
- Reduced fuel hazards adjacent to WUI areas
Collaboration in Action….continued
Plant of the “Week” by guest writer Ariana Gloria

As a Coloradoan and Rangeland Ecology graduate from Colorado State University, who had never spent much time in the southwestern United States, I was extremely excited to move to the Mojave Desert and work with the Arizona Cooperative Rangeland Monitoring Program as a research technician for the University of Arizona Cooperative Extension. In this position, my main goal is to provide one-on-one rancher education and coordinate rangeland monitoring activities with grazing permittees and Bureau of Land Management personnel.

During the last few months, monitoring vegetation trend in the Mojave Desert and hiking the beautiful Monolith Garden and Camp Beale Loop trails near downtown Kingman, AZ., I have been mesmerized by the species and structural diversity of the surrounding plant communities. Most exciting, I have been discovering plants in their native habitat that I’d only ever seen on herbarium paper.

One such plant, with which I am familiar only due to Society for Range Management plant identification competitions, is the native, stoloniferous, drought-resistant bush muhly (Muhlenbergia porteri), also known as zacate araña or mesquitegrass. There are of course many different species of native muhly all over the United States, but I must say, I find bush muhly to be one of the most beautiful with its richly purple, widely spreading open panicle inflorescence. Depending on season and rainfall, cattle and many other classes of livestock are also drawn to this native grass due to its excellent forage value, high energy nutritional value and high palatability.

It is important to keep in mind, however that bush muhly is not usually found in abundance and the combination of bush muhly’s widespread panicle inflorescence and palatability make it prone to damage from overgrazing. Damage occurs when it is continuously overgrazed to a stubble height below 4 inches. During winter, when many other plants are dormant and bush muhly is still green, it is especially prone to damage from overgrazing. At the same time, if ungrazed, dense stands of bush muhly could add to the spreading of wildfires. Also, because bush muhly loves growing in shrubs, it is more likely to experience fire damage due to increased fuels and higher temperatures as the shrubs are overcome by fire and burn.
As mentioned above, some refer to this whimsical grass as zacate araña (spider grass) most likely owing to the fact that when rains are favorable and well-timed, this grass will produce a large amount of finely branched and widely spaced one-flowered, 5-12mm-long awned spikelets, hence giving the overall canopy a cobwebby look. It is sometimes referred to as mesquitegrass because this grass though once existing in extensive stands, now grows in and around shrubs like mesquite for protection. However, since cattle are quite fond of this grass, they can often times be found muscling their way in to mesquite and other shrubs to reach it.

Since bush muhly is quite bushy, it provides good cover to a variety of small mammals and even makes up a significant percentage of cactus-wren nesting material. We’re talking up to 95%. Cactus wrens are very important seed dispersers of bush muhly, capable of spreading the seeds as far as 64 meters away.

Bush muhly commonly grows alongside bristle grass (*Setaria leucopila*), plains bristlegrass (*Setaria macrostachya*), plains lovegrass (*Eragrostis intermedia*), Arizona cottontop (*Digitaria californica*), and Lehmann lovegrass (*Eragrostis lehmanniana*). Bush muhly inhabits dry mesas, hills, canyonlands, washes and rocky deserts. It is native to the southwestern United States and northern Mexico at elevations of 600-1700 meters and is most abundant on calcareous soils.
Lisa’s Class is Outside Today

Is it spring already? Sheesh! Where has the time gone? I can’t believe I have been with the Range Rocks! program for over a year now, and can say I am finally getting into the swing of things. Not that I was disorganized in the beginning, but with any new position, there is a learning curve to be expected and I feel I am now at the upper middle of the curve instead of the bottom. Baby steps…

The Range Rocks! program has been around for 8 years, and although my limited involvement can be considered a drop in the overall proverbial bucket, the program has experienced a quick growth spurt in the past year, much like we sprinkled a little Miracle-Gro onto a seedling and are just now seeing the beautiful flower develop.

Shortly after joining the program, I set one simple, overarching, attainable first year goal for the program – PROMOTE THE PROGRAM. Simple enough, right? Although this is was a singular goal, it is made up of multiple components necessary for success.

-Reach out to local stakeholders and work groups

-Build new working relationships and rekindle past working relationships

-Just let people know we are here and ready to help

I was surprised to find that there were several local groups and FFA programs who were not familiar with our RangeRocks! program. I made it a priority to reach out to these groups first. Being that they were literally in our backyard, I felt they were even more important to establish a good relationship with, both community and location wise. An example of this is Camp Verde High School, which is located just a few miles away from our office. After meeting with the FFA adviser and explaining our program, we were invited to join their Ag. Day last month where we were able to meet with over 500 elementary school students to talk about the importance of soil and rangelands. Another local group we began working with this year was the Yavapai-Prescott Indian Tribe, located just over the mountain in Prescott. We had a small group of very bright and inquisitive third-fifth grade spring day camp students (probably the youngest age we have had thus far) join us a few weeks ago and we learned about range animal diets, nutrition, and plant identification. We are looking forward to working with them again for their summer day camp.
I was (and still am) happy to talk to anyone and everyone who had a group of students interested in learning more about range science, or had even a slightly related event planned that would allow us to get our foot in the door and start building a relationship with them. You may remember my previous article talking about our time at Camp Colton, and I’ll use this as an example. After reaching out to the new Camp Director, we were invited to do six weeks of Range Rocks! lessons at their fall camp, and then asked back to do another four weeks of lessons at their spring camp. It was good experience for us to work with a younger group of kids and we are looking forward to seeing them again next month.

In addition to meeting new folks, we wanted to continue working with groups we had already built relationships with in the past. Prior to my arrival, Dr. Tolleson set the foundation for this, allowing me to focus on continued interaction. One example of this is Oak Creek School in Cornville. We visit Ms. Demoney’s Ag./STEM class four times a year to teach about all sorts of range related topics. Earlier this year we had a state climatologist out to discuss drought, Arizona weather patterns and the CoCoRaHS program to the class, and recently we have been working on plans to create a native plant walking path along the perimeter of the school, including native plant identification and lessons in landscape design. We will also be attending the Arizona Sci-Tech festival this year as we have in years past.

Lastly, I have attended many meetings, conferences and workshops to present to groups and share about our Range Rocks! program. I’m truly a believer in talking to everyone as you never know when an opportunity may present itself. That particular group may not have a need for your exact program type, but they may know someone who does. Some of these groups include local Natural Resource Conservation Districts (NRCD), the South Western Indian Agriculture Association (SWIAA) and the Navajo Nation Department of Natural Resources (DNR). We’ve had an especially strong interest in our Range Rocks! program from our tribal partners who are looking for engaging outdoor programs for their native youth groups and we are really excited about growing that relationship. So far I have received a great deal of positive feedback and have met many people who are interested in partnering with us.

The next goal I have set for the program will be to focus on producing deliverables, that is, resources that will assist educators in teaching Range Science, especially in a distance learning situation. Having an all-inclusive,
comprehensive Range Science curriculum available to educators is the holy grail of every range education person, but that probably won’t be happening for a while. However, we are beginning to compile specific Range Rocks! lessons we have used in the past (many of which are “just in our heads”) by getting them down on paper in an easy to follow lesson plan format for educators to use. We will also show how the lesson can be scaled up or down depending on the grade level it’s presented to. Additionally, we want to demonstrate these lessons in brief video format so educators can better understand the concepts and activities involved, and add them to our existing V Bar V Range Program YouTube Channel.

The weather is warming up and we are looking forward to spending a busy spring and summer outside working with Arizona youth. We will continue presenting and sharing the benefits of our Range Rocks! program and looking forward to meeting more new people. If you are interested in learning more about our program or would like to work with us, please feel free to contact me or check out our YouTube and Facebook pages. Our next July issue will find us shoulder deep (quite literally) in “cow work” at the V Bar V ranch. Until then, happy trails!

Save The Date

August 17 - 19, 2016

The AZSRM Summer Meeting will be held in Rucker Canyon of the Chiricahua Mountains in SE Arizona.
Natural Resource Conservation Workshop for Arizona Youth  
July 25 - July 29, 2016 James 4-H Camp

**Highlights**

- Learn lifelong skills and create lifetime friendships.

- Explore and study Arizona's forests, streams, rangelands, soils, plants, and wildlife with expert instructors who will intrigue and challenge you!

- Lots of small group learning activities in the forests of the Prescott National Forest.

- Gain hands-on experience with hi-tech equipment, field testing, data collection and project design.

**Details**

| Dates: July 25-29, 2016 Where: James 4-H Camp between Prescott & Jerome |
| Tuition: $150 per student (Financial assistance is available. Please indicate on application if assistance is needed.) |
| Limit: 35 participants. |
| Deadline for Applications: Postmarked by May 1, 2016 and include $75 deposit. |

Youth entering grades 8-12 in the fall of 2016 are eligible to apply. Youth must have an interest and desire to learn more about the environment in which we live. No applicant will be denied attendance because of financial need. Selection is made based on the merit of the application.

**How To Apply**

Complete the application or type the following on a single sheet of paper: Name, address, phone number, grade entering in the Fall of 2016, and email address (if available). Answer the following questions: 1) Explain why you would like to attend this camp. 2) Describe your interests and activities related to natural resources. 3) Describe any other special interests, hobbies, and involvement in community or school activities. 4) If appropriate, indicate the need for financial assistance.

Mail application with $75 deposit, postmarked by May 1st to: Kim McReynolds, Workshop Director, AZ Section Society for Range Management 450 S. Haskell, Willcox AZ 85643

**Questions:** Contact Kim at 520-766-3602 or kimm@cals.arizona.edu

**Location & Accommodations**

James 4-H Camp is located on a secluded 88 acre wooded site at an elevation of 6,500 feet on Mingus Mountain in the Prescott National Forest. Participants will be housed in rustic cabins with a central bathhouse consisting of modern bathrooms and showers.
The View from the Rim

Just a few quotes about spring:

*In the Spring, I have counted 136 different kinds of weather inside of 24 hours.*  
Mark Twain

*April hath put a spirit of youth in everything.*  
William Shakespeare

*The sun was warm but the wind was chill / You know how it is with an April day.*  
Robert Frost

*Spring is sooner recognized by plants than by men.*  
Chinese Proverb

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**Just me talking…**

April; one quarter of the way through another year. Calves are on the ground, mesquite has started greening up. A little rain, a little snow. Rattlesnakes are out and about. Lots of eagles in the Verde Valley. A great time to be in Arizona. The national SRM meeting in Corpus was great, even for those people who don’t like seafood. Congrats to UA Tierra Seca and Coach Larry Howery for a 3rd place finish in the URME contest. Hard work pays off. We had about 50 people at our VGS Symposium and most stayed through the whole morning, not too many dropping in and out. Thanks to Del Despain, Jim Sprinkle, Mike Hemmovich, Judith Dyess, Ashley Hall, and Lori Metz for making this a success. I had to leave to go to another meeting at noon but there were still people huddled around Del and others who were demonstrating VGS in our hands-on session when I left. Lisa Page attended the K12 activities at SRM and has come back to hit the ground running with Range Rocks! as you can see from her article this month. We are missing Chris Bernau but hear that he is doing well in Nevada. We should advertise to fill his position soon. Stay tuned. Still burning up the roads around Arizona. Tried to go to Washington DC to speak about how global land use changes are affecting animal agriculture at an ASAS function. Long story short is that the flight was delayed out of Tucson, missed the connecting flight to DC and gave the seminar via my laptop from a hotel room in Minneapolis. My suitcase went to DC and finally showed back up in AZ a few days later. We are getting ready for the 38th annual Arizona-Utah Range Livestock Workshops in Orderville and Hurricane UT the first week of April; the Range Livestock Nutrition Workshops the second week of April in Flagstaff and Willcox; and then the Ranching Heritage Alliance meeting the third week of April at the X Diamond Ranch between Greer and Springerville. I am looking forward to visiting with my MS major professor Dr Ron Randel at the X Diamond. He will be talking about cattle temperament and stress response. Should be a good one. I am also looking forward to starting a range cattle performance/nutritional monitoring study in June at the Santa Rita Experimental Range with MS student Rachel Turner. Lots happening. We will keep you up to date.

Till next time,

Doug