Vermejo Park Ranch

By Ann Adams

Vermejo Park Ranch is a 560,000-acre ranch in northeast New Mexico and southern Colorado that encompasses six ecosystems from short-grass prairie to alpine. Elevations on the Ranch range from 5,867 feet to 12,931 feet. Given the diversity of ecosystems Vermejo provides habitat to approximately 7,500 elk, thousands of deer, pronghorn, Merriam's turkeys, bear, cougar and other native wildlife. Vermejo is engaged in many conservation efforts showing how conservation ranching can be sustainable ranching—economically and environmentally.

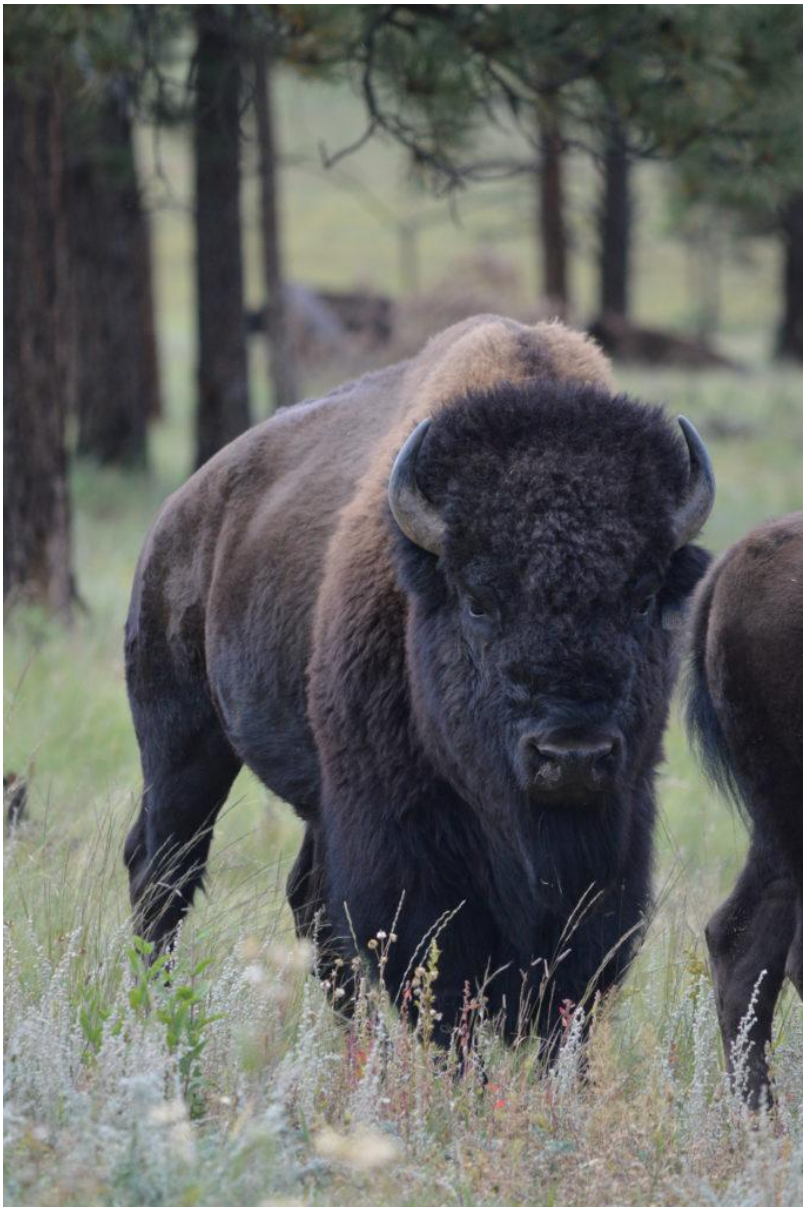
Photo Credit: J. Parker

Nature-tourism, which includes hunting and fishing, is a big part of the Vermejo budget as people come to experience the land and wildlife. The Ranch can accommodate up to 60 people in guest houses situated around the main lodge at headquarters, and a restaurant and gift shop round out the offerings.

Gus Holm is the current Ranch General Manager (GM) of Vermejo, starting in his current position in 2014. He is a geologist by training and came to Vermejo in 2001, from a position with Chevron's Coal Division (Pittsburg & Midway Coal Co.). Natural gas development on Vermejo Park Ranch began in 1998. Vermejo Park Ranch does not own the oil and gas rights under the Ranch. Gus was hired to be part of the Natural Resources Department and work as a liaison to the gas producer to work cooperatively to reduce environmental impacts from the gas development. The natural gas development at Vermejo is considered an example of drilling "done right," striking a balance between gas extraction and environmental sensitivity.

"The GM role requires a lot of administration," says Gus. "I also have to coordinate ranch operations with the hospitality division which operates as a separate entity. Including ranch operations and hospitality operations, Vermejo has 41 full-time employees and 50 seasonal employees." Ranch operations includes: the four key natural resource areas: Range, Forestry, Wildlife, and Aquatic Biology.

Gus received a certificate in Advanced Ranch Management from the King Ranch Institute for Ranch Management in 2015. While working as the Natural Resources Manager, Gus became interested in riparian restoration and had the opportunity to work with Bill Zeedyk and earned a certificate in River Restoration and Natural Channel Design from Wildland Hydrology in 2011.



One of the key tools for grassland management is the bison herd. Photo Credit: T. Lilly

One of the key tools for grassland management is the bison herd. The Bison Manager and Natural Resource Manager develop the grazing plan to make sure that vegetation outcomes are met. There are 40 rangeland monitoring sites across the ranch. The grazing plan has to take into account the 7,500 elk as well as a herd of ~1,500 bison. Much of what they do is track forage use and make sure that the combined pressure does not result in over-utilization.

Overall there are 100,000 acres in grassland, 275,000 acres of ponderosa pine forest, 55,000 acres of mixed conifer and subalpine forest and another 130,000 acres in Pinyon-Juniper and oak shrublands. "We manage for a "normal" dry year," says Gus. "We take the NRCS carrying capacity for what is considered as an unfavorable year and then we assume we can take 40% of that production." The result is an ecosystem that is trending favorably. "We see recovery of cottonwood stands and also have witnessed aspen recruitment," says Gus. "With our range monitoring we are looking at percentage of warm- and cool-season grasses and percentage of bare ground. We use the Land EKG system for our monitoring."

Conservation Economics

While conservation ranching and improving wildlife habitat is good for the land, it also helps generate income. "Currently hunting and bison are our most profitable sustainable incomes," says Gus. "The revenue from gas is our largest revenue source currently, but it's not sustainable because over the next 10-15 years that will diminish. When the Ranch pulled the cattle off in 1996 and replaced them with bison, the elk population surged to 12,000 by 2008-2009, so we were over our carrying capacity. We've been slowly reducing our elk numbers and are now reaching our carrying capacity. We are currently hunting animals born in 2011-13 (six- to nine-year-olds). Those animals were born during the 2011 – 2013 drought and elk

recruitment was down during that period. This has necessitated a decrease in the numbers of hunts we can offer for 2018 – 2020.

Vermejo Park works with New Mexico Game and Fish to determine hunting policy for the ranch. Photo Credit: Lance Bernal

"Our hunting policy is set by the Ranch wildlife biologist in coordination with the New Mexico Game and Fish" ("NMGFD"), because elk are a resource of the state of New Mexico and under the jurisdiction of NMDGF. Based on the carrying capacity of the Ranch, as determined by our Natural Resources department, we have a goal of maintaining 6,500 to 7,500 elk on the Ranch. This number will be modified based on what changes we see on the land, like the aspen, cottonwood, and willow recruitment, and range conditions. We have to balance the speed of recruitment of species with the economics of the Ranch. Our goal is to be environmentally and economically sustainable without the oil and gas. We are using that resource now for key investments.

"One of our key areas we want to grow is our fishing/nature tourism. We need to get our occupancy rates up during the non-hunting seasons.

"We are very proud of what we've accomplished with our fishing and aquatic biology program. We've helped restore the Rio Grande cutthroat trout in the Rio Costilla watershed. Vermejo in partnership with multiple government agencies and partners have restored Rio Grande cutthroat trout to more than 100 miles of stream and 18 lakes. In fact, that effort is one of the reasons why in 2015 the Rio Grande cutthroat trout was not listed as threatened/endangered. The opportunity to fish for Rio Grande cutthroat trout has become a real draw for guests and our efforts in conservation are beginning to benefit the economics of the Ranch as well.

Costilla Peak. Photo Credit: Gus Holm

"We began this program in 1999 and completed that program in 2017 and the fish population continues to improve, with Rio Grande cutthroat trout as large as 22 inches now being caught. We see this program as one of our biggest successes. We started way up in the watershed and set up fish barriers so we could remove all the non-native trout (rainbows, brookies, and brown) through to the Costilla Reservoir. It was a huge partnership with US Fish and Wildlife Service, NM Game and Fish, Colorado Parks & Wildlife, and Trout Unlimited. By 2020 this project will encompass more than 100 miles of stream habitat and 18 lakes, which represents a 20% increase in stream length occupied by Rio Grande cutthroat trout. The project is the largest contiguous effort on behalf of native trout in North America to date.

"We also have a US Fish and Wildlife partner grant that started in 2014 with five miles of exclosure fences over 10 miles of the Vermejo River to reduce elk grazing pressure. Vermejo has recently extended this project to include two exclosures on Leandro Creek, a tributary of the Vermejo River. We are starting to see willow and cottonwood outside the exclosures as well because of how we are paying attention to our carrying capacity. The exclosures give us a jump start on improving the tree recruitment along the river. In 15-20 years we will take out the exclosures once the trees have established. As part of that project we are conducting monitoring—photo monitoring, cross sections, vegetation transects, and stream stability. This monitoring will continue for many years. Getting long-term monitoring on the ground is critical to understanding these natural systems and getting some trending data."

The Forestry Department at Vermejo has had an active thinning program for the last 20 years to help re-establish a healthy forest ecosystem. This forest was previously logged and clearcut in the early 1900s for mine timbers, charcoal, and other lumber. As the forest grew back, and fire was suppressed, the trees grew back too thick.

In order to re-establish this forest, Vermejo's forestry division are decreasing the current 1,000-2,000 trees per acre down to a savannah-like stand of 100-200 trees per acre. They are able to treat 1,200 acres per/year which equates to 30,000 tons of timber per year which go to Western Wood Products in Raton, New Mexico (used for posts, poles, fuel pellets, and pallet wood) or to Silver Dollar Wood Products in Maxwell, New Mexico (used to make erosion wattles filled with wood chips, because they are weed free, and also for animal bedding). A total of 18,000 acres has been treated to date.

Vermejo Park is home for up to 7,500 elk. Photo Credit: Lance Bernal

Vermejo has a staff forester who directs the timber prescriptions and works with the contractor, Rue Logging out of South Fork, Colorado. This same crew has worked the area for 14 years. While it is a traditional operation, the prescription they follow is to increase diversity in tree sizes, species, and spacing. The work is done for forest system management. While Vermejo cannot use grant opportunities, like the NRCS EQIP program that many other land owners use, they have chosen to invest natural gas revenue to continue to treat these acres and get them back into greater forage production as well as improve forest resiliency. Vermejo recognizes that managing forested areas has a significant impact on the overall health of the Ranch and surrounding environments. They have seen an increase in wildlife utilization, and more water availability downslope of the treated areas. By working with local markets and selling material culled from treatment areas Vermejo is able to double the treated acreage of its forestry operations.

When asked what the estimated average increase in forage production is from pre-thinning to post-thinning, Les Dhaseleer, Natural Resources Manager, says: “It can vary a lot, but in ponderosa pine it is typically an increase of forage production of two to six times depending on soil types and percentage of crown canopy and/or the density of the trees left after thinning. Using approximately 150 pounds of forage per acre as a baseline for pre-thinning on 18,000 acres would result in 2,700,000 pounds increase. Assuming a 40% utilization of that forage equals 1,080,000 pounds which should support 98 1,000-pound bison. If you double the production to 300 lbs. an acre after thinning on 18,000 acres it results in a doubling of the bison carrying capacity to 197 1,000-pound bison.” This is a conservative estimate and carries forward each year for continuing an improved carrying capacity.

Vermejo has also made additional water and fencing investments to better control the bison’s grazing. Herding is the main way that bison are controlled in the high country. On lower areas the bison are often managed with a two-wire internal electric fences. Vermejo staff set the wires at 20 and 32 inches so the pronghorn can go under the bottom wire and the deer and elk can go over the upper wire. The wildlife do knock down some of the fences, but the staff have found that it is pretty easy to put the fences back up. During the winter months the bison are in the short-grass prairie and are in one group. In the summer they are moved with herding and go in seven family groups of 200-300 animals. The animals are placed using low-stress livestock handling about once a week or they move naturally as a pattern. Vermejo utilizes water as a way to move the animals and there are water points within ¼ and ½ mile from the creeks, with each water point serving 640 acres.

With these additional conservation efforts, Vermejo Park Ranch has improved the wildlife habitat for countless species as well as improving ecosystem function on the landscape they manage—thus allowing them to run more livestock as well as be able to earn sustainable income from well-managed hunting and fishing as part of their nature tourism program.

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