Public Lands Don’t Need Livestock Grazing!

Issued by the Sierra Club Grazing Core Team

Celebrating the Introduction of the
Rural Economic Vitalization Act
(H.R. 2201, 113th Congress)

June 12, 2013

Preface by Mike Hudak, Leader, Sierra Club Grazing Core Team

Shortly before Congressman Adam Smith (WA-9) introduced the Rural Economic Vitalization Act (H.R. 3432, 112th Congress) on November 15, 2011, his office asked officials from the Bureau of Land Management (BLM) to provide scientific information that demonstrates benefits of livestock grazing. As Congressman Smith’s bill would facilitate the permanent closure of federal grazing allotments, what better way to anticipate criticism the bill might receive than to request the likely basis for that criticism from the government’s foremost agency for managing livestock grazing?

The BLM responded with a list of sixteen articles, some of which had been published in peer-reviewed journals, with the remainder in popular-press ranching magazines.

Congressman Smith’s office then provided the BLM’s list to members of the Sierra Club’s Grazing Core Team, which, in turn, asked team member George Wuerthner to review them. Wuerthner, the author or editor of thirty-five books including Welfare Ranching1 and Wildfire,2 agreed to take on the task. On his own initiative, Wuerthner first wrote a lengthy introduction about the nature of ranching advocacy research, thereby providing a context within which to view all the articles provided by BLM. Wuerthner then critiqued ten of the sixteen articles, the remaining six deemed either too difficult to obtain or redundant.

BLM, in addition to the articles just mentioned, recommended five websites of organizations which can be characterized as “pro ranching.” Following Wuerthner’s critique, Mike Hudak, Grazing Core Team Leader, provides brief remarks about those sites.

Introduction by George Wuerthner

I’ll begin with few general comments before tackling specific points from the articles. Livestock production is the single most pervasive private commercial activity (by geography, not economic value) on public lands. In the pursuit of public forage, public lands are

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essentially turned into forage farms for privately owned livestock. Indeed, many western ranchers think of public land allotments as an extension of their private base property. As a consequence, many public lands are managed to first benefit livestock permittees with other user and public values secondary.⁢³

Although one can always point to livestock operations that appear to have minimal impact on public values, numerous reviews and statistics demonstrate that those values are significantly impacted by livestock production. While highly conscientious livestock management may mitigate some of the worst abuses and impacts, most of these “solutions” are either impossible to scale up while remaining commercially viable, or while correcting one negative impact, they produce additional ones.

For instance, it is well documented that livestock production is the primary factor responsible for damage to riparian areas⁴ on public lands. Riparian areas are critical to many western wildlife species, with some estimates suggesting that 70 to 80 percent of them are dependent on riparian areas at some point in their lives.⁵ Cattle tend to congregate in riparian areas not just for the water, but because the presence of water produces lush green forage in addition to shade. Cattle hooves then trample and break down stream banks. Compacted soils reduce infiltration. Cattle wastes pollute water. And grazing of vegetation reduces hiding cover and habitat for many wildlife species.

While it’s possible to reduce livestock impacts on riparian areas, doing so almost always incurs more time and expense. One can fence cattle from riparian areas, but this entails an additional cost to the rancher or taxpayer. Fences are also barriers to the free movement of other species and may even threaten their lives. For example, fences are a major mortality factor for sage-grouse.⁶

Alternatively, one could hire riders to herd cattle away from water, but this is also an expense, and herding is often ineffective. A number of other measures can be used to lure cattle away from waterways, such as use of salt blocks. But only total exclusion is truly effective.

Similarly, it is reported that livestock, particularly sheep, can be used to control weeds. While there is some truth to this claim, it greatly exaggerates the presumed benefit. For one thing, the only way to get sheep, or any livestock, to eat a significant amount of weeds is to enclose the animals in a small area so that they have no choice but to consume all the vegetation, including weeds. This is usually accomplished with fencing. However, as with the above example about mitigating riparian damage, using livestock for weed control has

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⁢²Public values include, for example, clean water, pure air, fertile soil—broadly speaking, healthy ecosystems supporting native vegetation and abundant populations of native wildlife, including non-game species.

⁢³Riparian area: an ecosystem that occurs along a watercourse or water body.


many unintended consequences. Concentrating enough animals in a sufficiently small area that they are forced to consume weeds, means that soils will be compacted and biocrusts trampled. A high concentration of animals will leave behind a lot of wastes, and, if near water sources, will likely result in water quality degradation. The complete consumption of plant forage required to remove or weaken weed populations leaves little vegetation for native wildlife to consume or to use as hiding cover. Additionally, the great number of hooves will trample the nests of ground-nesting birds, along with bees, many species of which live in the soil.

This points to one of the many problems with any literature that purports to demonstrate benefits associated with livestock production. In most cases the cost of operations far outweighs any economic return.

There is no right way to do a wrong thing. It is impossible to commercially graze domestic livestock on public lands without significantly degrading many public values.

Much of the research about livestock grazing is performed by range departments in the western United States. These departments owe their very existence to continued livestock grazing on public lands since nearly all employment opportunities for their graduates lie with public lands agencies. (Few private land owners hire range managers.) As a consequence, there is a strong tendency for range departments to conduct research that demonstrates favorable results from livestock grazing practices. And there is often a presumption that there will be livestock grazing, thus many studies do not even include a non-grazing control nor do they examine the effects of livestock removal.

This is not to suggest that range scientists “fudge” the data. Rather what occurs is more subtle and more insidious. The bias towards continuing livestock grazing affects what kinds of studies get funded, what kinds of questions are asked, what kinds of study questions are avoided, and even the “spin” that is given to scientific findings.

For instance, since wildfire can destroy the forage sought by ranchers, many range scientists view wildfire as a negative—and seek ways to prevent the spread of wildfires. But there is abundant research demonstrating that natural fire regimes are beneficial to healthy ecosystems. While there may be inappropriate places for wildfire, much of the West’s native rangelands are adapted to periodic fire and, indeed, require it for rangeland health—so long as the natural periodicity and intensity is maintained.

Grazing induced changes, such as the spread of cheatgrass, can alter fire regimes and have a negative impact on native sagebrush communities. However, that doesn’t mean that cattle can reduce wildfires by consuming cheatgrass where cheatgrass dominates the landscape. I’ll address this seeming contradiction in my critique of a paper about grazing and wildfire below.

There is a common myth that prior to widespread fire suppression that all or most fires were “light” burning that burned limited acreages. This characterization has come under increasing scrutiny, and new research has cast doubts about this generalization.

Another example: there are studies that purport to demonstrate that grazing has “improved” riparian habitat or some other landscape of concern. The title and abstract

7For information about biological soil crusts, see http://www.soilcrust.org (accessed 25 November 2012).
8See, for example, William L. Baker, Fire Ecology in Rocky Mountain Landscapes, Island Press, 2009.
will state that such-and-such study concluded that livestock grazing had led to greater vegetation growth, increased stream channel depth, or improved some other ecologically beneficial attribute. However, when you read the fine print, you may discover that the study compared a heavily grazed pasture with one that was more moderately or lightly grazed. Study findings? Improvement in the lighter or moderately grazed pasture. But what the study really shows is that less grazing improves vegetation and stream habitat.

Another common tactic is to measure some factor that may be considered desirable, like an improvement in stream riparian habitat, but fails to consider other impacts that may result from the presence of livestock. So, for example, let’s say that a study purports to demonstrate that moderate grazing improves riparian vegetation—as in the example above. Some may suggest therefore that grazing is good for public lands ecosystems. But without considering the multiple impacts of livestock grazing, one cannot draw such a conclusion. For instance, livestock can and do displace native herbivores like elk over competition for forage. Livestock compact soils, reducing moisture infiltration. Livestock can alter fire regimes. Livestock may spread weeds. These and other impacts may be associated with livestock grazing even where one or another factor may appear to be an improvement.9

As already mentioned, one must be careful of spin. For instance, there are studies that purport to demonstrate that grazing increases biomass production in rangelands, i.e., increases the amount of grass. There are a number of things wrong with these studies.

First, increasing biomass in rangelands isn’t necessarily a goal unless you are trying to promote livestock. Native ecosystems are not concerned with maximizing grass production.

Second, be careful about what is being measured. Most studies measure above-ground production (which is all that ranchers care about since that is what their cows eat). However, even as above-ground production may increase, it is often at the expense of root systems—cropping of the above-ground parts, especially during the growing season, causes a plant to respond by translocating reserves from roots to new grass leaves which the plant needs to photosynthesize. But a diminished root system means the grass will be less competitive in drought conditions. Yet range scientists will proclaim that grazing had “increased biomass.” The outcome could just as easily be spun as demonstrating that grazing had caused a decline in “grass competitive advantages.”

Lastly, there is the disconnect between “controlled studies” and “real life grazing” out on the land. Many of these studies suggesting that this or that management prescription can improve, or at least mitigate, grazing effects are done under highly controlled conditions with ideal parameters. Studies on plants in greenhouses, where ample water and soil are provided and there is little competition for nutrients, may not reflect actual field conditions. Even studies conducted outdoors may not emulate realistic situations. For instance, having small pastures with five or six animals, whose grazing influences are highly controlled, is completely different from the kind of grazing managed by a rancher with cattle

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spread over a couple thousand acres of rangelands, kids to take to basketball games, hay to harvest before the next rain, and so forth.

George Wuerthner’s Critique of References Provided by BLM


Critique: Just because grazing reduces herbaceous litter does not necessarily guarantee it will reduce fires. Most large blazes are driven by climatic conditions, not fuels. Under extreme drought conditions, combined with high winds, fires are driven through low- and even moderate-fuel landscapes.

Secondly, sagebrush steppe under natural conditions typically burns at intervals of 80–200 years in mountain big sagebrush, and even longer intervals—up to 450 years—in low sagebrush habitats. In other words, fear of wildfire is grossly exaggerated in healthy sagebrush landscapes.

Indeed, the factor that has most changed fire frequency in sagebrush has been the influence of livestock grazing upon the ecosystem. This has resulted from two factors.

First, livestock hides can spread cheatgrass seeds, which typically do not disperse far from the parent plant (a highly flammable, annual, exotic grass).

Second, by trampling biological soil crusts with their hooves, livestock contribute to more rapid spread of cheatgrass. In broken crust, cheatgrass’s small seeds can more easily penetrate bare soil to establish roots. In contrast, sagebrush ecosystems with intact soil crusts act to thwart annual grass establishment. Native perennial grasses, whose larger seeds can live longer before they exhaust their energy, are therefore more successful at germinating even in areas with intact soil crusts. In addition, since perennial grasses are long lived, and will produce seeds over a number of decades, they need not successfully germinate every year as does an annual species.

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12 For a review of this topic, see A. Joy Belsky and Jonathan L. Gelbard, Livestock Grazing and Weed Invasions in the Arid West, report issued by the Oregon Natural Desert Association (Bend, OR), April 2000.

While some have suggested that targeted grazing by livestock can reduce the spread of cheatgrass, this appears to be of limited value other than under highly controlled conditions, as I’ll now describe.

First, given a choice, most livestock prefer to graze upon native, perennial grasses. Consequently, if any native perennials remain on a site, grazing animals target these plants, reducing their competitive advantage against annuals like cheatgrass. In addition, as previously mentioned, trampling of soil crusts by concentrated livestock can facilitate reinvasion of cheatgrass by creating the conditions that favor its establishment.

Because cheatgrass possesses many competitive advantages, such as rapid early growth (early green-up), abundant seed production, long-lasting viability in soils, adaptation to frequent fires, and the ability to increase under almost all grazing regimes, the plant is difficult to eliminate once established.

In summary: regardless of whether the duration of grazing is short-term or long—it’s of questionable value in reducing fires because most fires are driven by climatic factors rather than by fuels. Grazing can enhance fire spread by exacerbating invasion of cheatgrass, a highly flammable, exotic grass. And commercial grazing is largely untargeted and thus not effective in reducing fuels except in very limited and highly controlled circumstances.

Reference: Kirk Davies et al., “Livestock Can Help Rangelands Recover from Fires,” *Ecological Applications* (September 2009), [http://www.ars.usda.gov/is/pr/2009/090930.htm](http://www.ars.usda.gov/is/pr/2009/090930.htm) (accessed 21 November 2012). [Editor’s note: this link is not to the named article, but to a news story about it by Ann Perry dated 30 September 2009; no additional evidence has been found that the article exists.]

Critique: As I was unable to obtain the actual study, only a summary issued by Agricultural Research Service, I lacked the specific findings of the study and therefore can’t comment except in a very general way. There are several things that I would draw your attention to with this study design, demonstrating the pro-livestock bias.

First, the region where the study was conducted—eastern Oregon rangeland—was outside the main historical range of bison and other large herd grazing ungulates. As a consequence, it is usually accepted that the vegetation of these rangelands was not adapted to grazing by livestock. Litter buildup is a natural consequence of limited herbivory pressure from large ungulates—in other words, the condition described as negative—“buildup of litter” is exactly what one would expect under natural conditions in such ecosystems. Thus wildfires, when they occurred, would tend to burn hotter as the researchers suggest. Whether this study’s experimental burn conditions emulated natural fire frequency, intensity, the kind of conditions that would prevail under a natural fire event, and other factors, is difficult to determine, but it’s unlikely.

Furthermore, rapid recovery after a fire isn’t necessarily desirable—it is if your goal is to maximize forage for cattle, but there may be other positive values to slower vegetative response that the researchers are failing to consider. Just to mention one, some ant species are favored by wildfire, and ants are important for soil enrichment, in addition to being
food for many species of animals. So a rapid recovery after a fire may negatively impact many other species that are dependent on ant populations.


Critique: Rather than respond to the above articles individually, I will reemphasize the problems common to both. I’ll be repeating some of the points I’ve made in more detail for earlier articles.

First, each of these papers starts with the presumption that wildfire is bad for the land and particularly bad for public lands.

In contrast, there are hundreds of papers documenting the ecological benefits of wildfire. One reference is my own book Wildfire: A Century of Failed Forest Policy. The presumption that wildfire is undesirable is likely driven by the fact that if grass is burned in a fire, it is unavailable for private profit of public lands ranchers whose animals are grazing these lands. But, in general, most wildfires, assuming that natural timing and intensity are not outside of the historical variability, provide a positive influence on ecosystems.

Second, even if wildfires were never a benefit, there are far more values that need consideration on public lands than simply “wildfire prevention.” Because livestock grazing has many negative effects on public lands, including water pollution, compaction of soils, competition with native herbivores, alteration of plant communities, spread of weeds, creation of a demand for predator control (wolves) and pest control (prairie dogs), trampling of soil crusts, destruction of riparian zones, and so on, one can’t just point to one potential benefit (if indeed it is a “benefit”) like “reduction of fires” and argue that this justifies livestock grazing. One must do a full accounting of all the costs in addition to articulating any potential benefits.

Third, another problem with the above citations is the qualification of their results by the assumption that grazing pressure is “moderate.” In the real world, maintaining moderate grazing pressure is atypical for a host of reasons, not the least being that controlling livestock use over a large landscape is almost impossible. Add in normal environmental variation like droughts, and the inability of most ranchers to reduce their stocking rate under drought conditions, and grazing pressure will be anything but moderate.

Critique: First, I want to point out that Congressman Smith’s legislation that would facilitate the voluntary retirement of federal grazing permits would in no way prevent the use of livestock for specific ecological treatments such as weed control.

But beyond that point, trying to justify public lands grazing, because it may under very highly controlled and carefully managed situations over very small areas help to control weeds, is a red herring. The intensive management required for this grazing to be effective simply can’t be done on large blocks of public lands. Here are a few of the problems. Weeds are “weeds” because livestock, as a rule, don’t want to eat them. So before they eat the weeds, they’ll eat all the other native plants available. Then as a last resort they’ll eat the weeds. As a consequence, the vigor and abundance of native plant species is often compromised. Sometimes livestock can be forced into very small enclosures for very intensive grazing so that all plants, including weeds, are consumed. However, this often results in soil compaction and destruction of soil crusts. Such intensive grazing also totally eliminates hiding cover for native wildlife. In addition, livestock often carry the seeds of exotic weeds on their hides or in their guts, then “deposit” those seeds on the area being treated. Thus in the attempt to eliminate one weed, a host of others are introduced.

In addition, grazing within small plots, usually contained by movable fencing or herders, is labor intensive—in other words, costly—thus providing a considerable disincentive for its use.


Critique: For the most part this paper lists all the reasons livestock production is harmful to sage-grouse. Grazing reduces hiding cover, and damages meadows and riparian areas—all factors detrimental to the survival of sage-grouse chicks.

Then there are indirect consequences of livestock use of public lands that impact sage-grouse. A common factor in sage-grouse population decline is the reduction (through burning and herbicide application) of sagebrush to favor the grasses preferred by livestock. Planting of exotic grasses like crested wheatgrass, largely done to increase forage production for livestock, reduces native forbs and sagebrush cover, which negatively impacts

Red herring: an expression denoting that the argument under consideration is irrelevant to the larger issue being discussed.
sage-grouse. Even fences used to manage livestock may be responsible for up to 18 percent of sage-grouse mortality.\textsuperscript{16}

The only benefit associated with livestock that’s mentioned in this paper is the suggestion that lighter grazing has fewer impacts than heavier grazing. But there is abundant evidence that NO grazing has the most positive influence. Hart Mountain National Antelope Refuge (OR), from which all livestock grazing has been removed since 1990, contains one of the highest sage-grouse populations in the entire Great Basin.


[BLM’s note: “Unlike conventional grazing management, livestock are used as a tool for improving land health by performing weed control, reducing wildland fire, and aiding in restoration projects.”]

Critique: The response to this paper is basically the same as to the above Frost and Launchbaugh paper about weed management. Targeted grazing is nice in theory but is unworkable in most public lands situations. It is like suggesting that one can get 100 mpg in a standard SUV. One can probably do that with a professional driver, driving at precisely calculated speeds, special fuels, and a special carburetor. But that is not the kind of SUV the average person owns nor how they drive. So the fact that under highly controlled and very special situations, one can use livestock to achieve a particular goal, does not justify commercial grazing of public lands by ranchers.


Critique: For the most part this is a technical paper that describes how plants deal with above-ground forage losses—or “cropping.” There is evidence that under ideal conditions, forage production can be increased by cropping the growing parts of a plant. However, as noted in this paper, most of the supportive evidence has come from laboratory settings where important factors such as adequate water, nutrients, light, and even competition with other plants, have not been considerations.

Plants grown under field conditions often yield less desirable results. Cropping a plant just prior to a drought can result in little or no regrowth. Excessive cropping year after year, can result in continued above-ground biomass production, but at the expense of the root system (as the paper notes). As a consequence, measurement of above-ground biomass

(i.e., the grass leaves that livestock consume) may be a poor barometer of ecosystem health and integrity.

More philosophical, and not considered in the article, is the question of whether increasing plant above-ground biomass is important and to whom? It’s obviously important to the livestock industry, since more leaves (grass), or biomass per acre, can be transformed into pounds of beef or lamb. But is it important to the public? Is this a public “good”? Does the public benefit from more pounds of beef? Especially if this may, over time, increase plant mortality due to root losses or other factors.

Another assumption inherent in this paper is the notion that “old” forage is less desirable: what range conservationists call “wolfy” plants—also termed “decadent” and “over-mature.” If these terms sound familiar it’s because loggers used them for decades to denigrate what we now call “old growth forests” which, like older grass plants, do not necessarily produce as much annual biomass as a forest of young growing trees. But mature trees have other values that are more important to functioning ecosystems.

Similarly, older grass plants with dead leaves have other important functions. Dead leaves can trap snow and moisture that is directed by the culms down to the roots. They can shade the soil, thereby reducing evaporation and wind-induced soil erosion. They can provide hiding cover for many species like birds, invertebrates, and butterflies that are important pollinators.

Consequently, the assumption that deliberately increasing biomass production is desirable has to be tempered by the understanding that for thousands of years there have been many plants that were not cropped, but which performed a vital function in ecosystem services.


Critique: This paper begins by observing that livestock grazing may have been, and continues to be, detrimental to plant communities in the Southwest, Great Basin, and Intermountain Region, noting correctly that in pre-settlement times, these plant communities were not subject to significant herbivore pressure. In other words, there were not massive herds of elk, bison, or other herbivores grazing the plant communities.

It is worth noting that these same regions make up the bulk of public lands in the West—namely the region stretching from the western edge of the Great Plains to the Sierra-Cascade Mountains on the Pacific Coast. This is the Great American Desert for the most part—arid lands that have little water, a lot of rugged terrain, and low productivity due to climate and other conditions. It’s a lousy place to try raising an exotic water-loving, slow moving animal like domestic cattle that evolved in moist woodlands of Euro-Asia.

Because of this mismatch between the land and the animals used to exploit it, the paper notes that grazing has negatively impacted riparian areas, contributed to desertification, eroded soil, and destroyed biological soil crusts, just to mention a few of the harms grazing
has inflicted on the land. But despite all this, the author continues to assert that “proper” livestock grazing management is sustainable. Part of this assertion is based on the premise, explored in the paper, of “grazing optimization” which suggests that moderate grazing can increase grass biomass. Some have even suggested that grasses “need” grazing to survive. This claim is based on the observation that a grazed grass plant (under ideal laboratory conditions with adequate water, nutrients, etc.) seems to produce more above-ground biomass when clipped or cropped.

However, there may well be a different interpretation of the same observation—that is, cropped plants “tolerate” cropping, rather than require it or thrive on it. A well-documented analogy is that of persecuted coyotes who respond to trapping, shooting and poisoning by producing more young to compensate for the losses imposed by predator control. Would it be correct to presume that coyotes “need” to be trapped, shot and poisoned just because one can demonstrate greater pup production as a response?

The key qualifier in so many of these pro livestock papers is “proper” or some other adjective that suggests restrained and careful husbandry of the land. As we have seen in many other situations, “proper,” “judicious,” “careful”—whatever qualifier is used, there is always a huge difference between what can be done in a controlled livestock experiment and the reality on the ground under field conditions. We have seen very little of such management on public (or even private) lands because it is more intensive, requires more capital expenditures, and more monitoring—all of which adds to costs. And if these costs were not subsidized by the public then livestock producers in these arid regions could not compete with producers from more environmentally benign regions of the country.


Critique: This paper is similar to those in the BLM’s list that extol the value of livestock for weed control. Yes, it is possible to achieve specific outcomes such as a “reduction in weeds” or an “improvement in wildlife habitat” over a small area with a lot of intensive management. But it’s another matter whether intensive management is practicable over large grazing allotments with high variability in terrain, vegetation, and water supplies, especially when other public values (e.g., clean water) may be compromised by the presence of livestock.

Even the authors of this paper acknowledge that livestock grazing is responsible for a lot of damage to wildlife habitat, and that its benefit to wildlife is highly specific. For example, the authors concede: “We must recognize that managed change will seldom, if ever, result in uniformly positive changes for all species involved.”

For instance, grazing rangelands in the fall can produce spring green-up that has more young leaves (and thus more nutrition) than an ungrazed pasture. (Assuming, of course, that there’s no drought—a big “if.”) Elk tend to select such pastures, so one could argue that fall grazing could favor elk. Grazing for the benefit of elk, though, can have many unfavorable ecological ramifications. These impacts are seldom considered, much less articulated. For example, grazing of taller grasses reduces the “snow fence effect” which traps snow, which in turn, melts and adds to soil moisture. Loss of taller grasses that slow wind velocity also increases soil erosion from wind. And loss of tall grasses destroys hiding cover for many species, including ground-nesting birds like sage-grouse and various mammals like the endangered Washington ground squirrel.

One also needs to ask, “How did wildlife manage to flourish, and ecosystems function, in the absence of livestock in the past?” For instance, elk in Yellowstone National Park appear to do quite well nutritionally in the absence of any livestock grazing.

The paper also acknowledges what is often not discussed—the overlying philosophy and assumptions that guide livestock management—which is usually to enhance livestock production, not ecosystem values or ecological integrity. For instance, the paper cites the conclusion in a paper by co-author Urness that “over-grazing is bad only if it leads succession away from management objectives or if it degrades site integrity.”

A problem with this view is that management objectives are nearly always defined in terms of producing a profit for the rancher and enhancement of conditions for domestic livestock. While these objectives will sometimes result in benefits to the public at large, this is not the usual situation on public lands.

This deficiency is demonstrated by one of the studies cited in the paper. Livestock grazing by removal of nearly 100 percent of the native bunchgrasses resulted in more sagebrush. More sagebrush in turn favored mule deer. But whether this objective is worthy of public-lands-management activity cannot be answered without questioning whether there was any shortage of deer, and whether management geared towards mule deer production might not have negative impacts on other wildlife that are far more rare. Such questions are seldom raised since the common assumption is “more deer are better because then there are more animals for hunters to shoot.”

While this objective may superficially gain the approval of hunters, there is abundant evidence to suggest that quantity of sagebrush is not the only important criterion for mule deer—other vegetational changes caused by heavy grazing can be detrimental to deer. Plus, under heavy grazing, forage competition can exist between deer and cattle.

In addition, the virtual removal of all bunchgrasses by livestock grazing has many negative consequences for the land that include altered natural fire regimes, changes in nutrient cycling, changes in soil temperature and soil moisture, and so on.

Furthermore, there are all kinds of qualifiers in this paper like “judicious livestock grazing,” “carefully managed livestock grazing,” and “moderately grazed”—terms that describe management that is generally lacking on most public lands allotments. If

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livestock grazing were judicious and carefully managed, there would likely be few controversies about livestock grazing. The problem is that such management is more theoretical than the reality on the majority of public lands (as well as private lands for that matter).

This is not unlike suggesting that very carefully placed radiation can be used to control cancer, which is true. But livestock grazing is more like exploding a nuclear bomb on the land—it’s anything but careful, judicious, or moderate. To argue, or even demonstrate, that livestock can be managed under laboratory conditions is not the same as what occurs under normal conditions. When a rancher has to get his hay harvested, or when a downed fence is not keeping the cows where they’re supposed to be, or the pickup is in the shop getting a new set of brakes when the cows need to be moved, or the rancher just is short handed in a thousand other ways—proper livestock grazing is not occurring out on the land, even if in theory it could be shown to work under ideal conditions. Just because livestock can be utilized to promote a specific animal or ecological outcome does not mean there are not a lot of negatives associated with its application.

Finally, there are often other ways besides livestock grazing to accomplish the same goals—assuming that these goals are worthwhile in the first place. For instance, burning grasses in the fall (the natural time of year for fires) promotes nutritional regrowth in the spring that is favored by elk. And it has fewer of the negatives that are associated with livestock grazing such as the need for fencing (fences being a major mortality factor for sage-grouse, for instance), spread of weeds (common with livestock) and the need for predator control (as is often the case when livestock are present).

BLM's Online Pro-Grazing Reference Recommendations

Comments by Mike Hudak

Reference: Holistic Management International – http://www.holisticmanagement.org (accessed 8 June 2013). [BLM’s note: “The concept and practice of holistic resource management can be controversial, even within the ranks of range management professionals, due to the fact that high density grazing and heavy impacts are promoted. However, the results of holistic resource management are often impressive because plant recovery is provided. Time for plant recovery is the key to seeing improved vegetative health.”]

Critique: Holistic Management International is in the business of helping ranchers improve their profitability. There’s no reason to believe that such management would yield environmental conditions superior to those achieved by the absence of livestock. Other things being equal, without livestock, over time, landscapes would recover their native vegetation. And they would again be abundantly populated with native wildlife. Numerous critiques of Holistic Management can be found on the web. Here are a few:


Critique: The Society for Range Management is a professional society dedicated to supporting persons (typically ranchers) who (presumably) have a commitment to the sustainable use of rangelands. But the use of these lands for economic gain is a given. The organization has no interest in demonstrating that lands not commercially grazed have superior environmental condition to those that are commercially grazed. Their concern is in helping ranchers manage livestock sustainably while maximizing profit. But even if (a big “if”) the management is sustainable, where is the evidence that in a broad environmental sense, it is superior to land ecologically recovered after secession of commercial grazing?

Critique: This organization provides technical assistance to private-land ranchers, i.e., ranchers who do not have federal grazing permits. As such, their remarks are not necessarily relevant to the management of public lands.


Critique: This organization develops indicators of rangeland sustainability. Even if landscape conditions are sustainable in the presence of commercial grazing, it does NOT mean that those conditions are optimal in terms of native vegetation and populations of native wildlife.


Critique: Much of the focus here is on privately owned ranchland. Any public lands within their concern are managed by the state or counties. The environmental conditions present on these lands bear little resemblance to those found on BLM and Forest Service lands across most of the West.