

**THE ESSENTIAL ROLE OF LIVE-  
STOCK GRAZING ON FEDERAL  
LANDS AND ITS IMPORTANCE TO  
RURAL AMERICA**

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**OVERSIGHT HEARING**

BEFORE THE

SUBCOMMITTEE ON FEDERAL LANDS

OF THE

COMMITTEE ON NATURAL RESOURCES

U.S. HOUSE OF REPRESENTATIVES

ONE HUNDRED FIFTEENTH CONGRESS

SECOND SESSION

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Thursday, July 12, 2018

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**OVERSIGHT HEARING ON THE ESSENTIAL  
ROLE OF LIVESTOCK GRAZING ON  
FEDERAL LANDS AND ITS IMPORTANCE TO  
RURAL AMERICA**

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**Thursday, July 12, 2018  
U.S. House of Representatives  
Subcommittee on Federal Lands  
Committee on Natural Resources  
Washington, DC**

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The Subcommittee met, pursuant to notice, at 10:00 a.m., in room 1324, Longworth House Office Building, Hon. Tom McClintock [Chairman of the Subcommittee] presiding.

Present: Representatives McClintock, Pearce, Thompson, Tipton, Westerman, Gianforte, Curtis, Bishop (ex officio); Tsongas, and Gallego.

Also present: Representative LaMalfa.

Mr. McCLINTOCK. The Subcommittee will come to order. I would ask unanimous consent that Congressman Doug LaMalfa of California be allowed to sit with the Subcommittee and participate in the oversight hearing today.

Without objection, so ordered.

Under Committee Rule 4(f), any oral opening statements at hearings are limited to the Chairman, Ranking Minority Member, and the Vice Chairman. This will allow us to hear from our witnesses sooner and help Members keep to their schedules.

Therefore, I would ask unanimous consent that all other Members' opening statements be made part of the hearing record if they are submitted to the Subcommittee Clerk by 5:00 p.m. today.

Without objection, so ordered.

And now, for the time we have all been looking forward to, opening statements by the Chairman and Ranking Member, and I will begin.

**STATEMENT OF THE HON. TOM McCLINTOCK, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA**

Mr. McCLINTOCK. The Subcommittee on Federal Lands meets today to examine the continuing importance of grazing on Federal lands, as well as some of the growing challenges facing this truly American industry.

The BLM and the U.S. Forest Service control 440 million acres of public lands, and are charged with the responsibility of putting them to sustainable, productive use. Gifford Pinchot's maxim was, "the greatest good for the greatest number of people in the long run." An integral part of meeting this responsibility has always been through cattle grazing, both for fuels management and to supply the Nation with a vital part of its food supply.

Cattle grazing has a long and colorful history in the American West, and that legacy lives on today. For generations, America's cattlemen and ranchers have proven themselves good stewards of our national rangelands, animated by a time-honored respect for the land, and motivated by a desire to pass this way of life on to succeeding generations.

Across the United States, over 22,000 public lands ranchers manage over 250 million acres of public lands. Additionally, these hardworking families own 129 million acres of private rangeland intertwined with Federal lands. Their herds are reliant on forage from both.

Public lands ranchers regularly go above and beyond the call of duty to improve their grazing allotments. They frequently pay out-of-pocket on improvements that include wildfire fuels reduction, wildlife habitat restoration, water source management, and clearing trails. And when wildfires do occur, it is often public lands ranchers who are the first to respond. Their stewardship provides significant cost savings for Federal land management agencies that are already struggling to keep up with substantial deferred maintenance backlogs.

As we will hear today, public land grazing faces growing challenges and opposition that threaten the future of this important industry. Ever-expanding regulatory burdens continue to drive up the cost of ranching on public lands. Public lands ranchers and the Federal land management agencies they work with daily have also increasingly become the targets of endless harassing litigation seeking to stop all grazing and many other productive uses of our Federal lands.

I have often cited Eric Hoffer's observation that, "Every great cause begins as a movement, becomes a business, and eventually degenerates into a racket."

In recent years, we have witnessed the rise of organizations whose business model is based on sue, settle, and award—all at taxpayer expense.

The purpose of use, resort, and recreation, for which these lands were originally appropriated and for which our land agencies were originally created, would be replaced with a new exclusionary policy forbidding the public's use of the public's land. We have already seen the damage this policy of benign neglect has done to our precious forests. Now we see the same destructive ideology being turned against our rangelands.

These attacks, orchestrated by well-funded political groups, are creating a paralyzing environment in which sound, scientific land management decisions are abandoned, both by ranchers and public lands managers, for fear of endless frivolous lawsuits filed by serial litigants.

This Subcommittee's principal priorities are to restore public access to the public lands, to restore good management to the public lands, and to restore the Federal Government as a good neighbor to those communities directly impacted by the public lands.

Cattle grazing is integral to all three objectives. It puts our public lands to productive use, it provides an important management tool for fuel reduction and fire prevention, it supplements and extends our ability to superintend our vast public land holdings,

and it provides revenues and livelihoods for the surrounding communities.

I look forward to hearing the testimony from our witnesses today as we seek to preserve responsible public lands ranching for generations to come.

[The prepared statement of Mr. McClintock follows:]

PREPARED STATEMENT OF THE HON. TOM MCCLINTOCK, CHAIRMAN, SUBCOMMITTEE  
ON FEDERAL LANDS

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The BLM and the U.S. Forest Service control 440 million acres of public lands and are charged with the responsibility of putting them to sustainable, productive use. Gifford Pinchot's maxim was, "the greatest good for the greatest number of people in the long run." An integral part of meeting this responsibility has always been through cattle grazing, both for fuels management and to supply the Nation with a vital part of its food supply.

Cattle grazing has a long and colorful history in the American West, and that legacy lives on today. For generations, America's cattlemen and ranchers have proven themselves good stewards of our national rangelands, animated by a time-honored respect for the land and motivated by a desire to pass this way of life on to succeeding generations.

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Public lands ranchers regularly go above and beyond to improve their grazing allotments. They frequently pay out-of-pocket on improvements that include wildfire fuels reduction, wildlife habitat restoration, water source management, and clearing trails. When wildfires do occur, it is often public lands ranchers who are first to respond. Their stewardship provides significant cost savings for Federal land management agencies that are already struggling to keep up with substantial deferred maintenance backlogs.

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I look forward to hearing the testimony from our witnesses today as we seek to preserve responsible public lands ranching for generations to come.

With that, I recognize the Ranking Member for her opening statement.

Mr. McCLINTOCK. And now, I am pleased to yield to our returning Ranking Member, Congresswoman Tsongas of Massachusetts.

**STATEMENT OF THE HON. NIKI TSONGAS, A REPRESENTATIVE  
IN CONGRESS FROM THE COMMONWEALTH OF  
MASSACHUSETTS**

Ms. TSONGAS. Thank you, Mr. Chairman, and thank you to all our witnesses for being with us here today.

Generation after generation of Americans have endorsed the idea that our public lands should be managed for the benefit of all Americans to support a wide range of uses, including recreation and sportsmen activities, energy development, grazing, and protecting open spaces that provide wildlife habitat, clean water, and clean air.

We all want to see this important aspect of our national heritage managed in an effective and efficient manner, so we rely on professionally staffed agencies like the Bureau of Land Management and the U.S. Forest Service. Both agencies operate under a multiple use and sustained yield mandate. In other words, public lands must be managed in a manner that ensures the development and extraction of natural resources while preserving their long-term value for future generations of Americans.

Both the Bureau of Land Management and the Forest Service are invested deeply in working with local communities to develop on-the-ground partnerships that responsibly balance conservation with the needs of people whose economic livelihoods depend on healthy forests and grasslands.

I want to emphasize that I understand and appreciate concerns from my colleagues and some of our witnesses today that public lands and our Federal land management agencies can at times be frustrating neighbors and partners. The Federal bureaucracy is not always the well-oiled machine that we would all prefer to see.

Federal lands pose unique challenges in communities all over the country. We should be having constructive conversations about how we can give these Federal land management agencies more tools in the toolbox that will help them be better partners, so that public lands continue to be managed in a way that reflects our collective commitment to balancing conservation for future generations with sustainable productivity for local communities.

This task is made more difficult by the fact that the Federal Government pays more to manage the grazing program than it receives in return through fees. The Government Accountability Office report said that in 2016 the BLM and Forest Service spent \$135.9 million on grazing management, but only collected \$26.5 million in grazing fees. That is a loss of \$109.4 million to the taxpayers. In 2017, the Bureau of Land Management loss was \$60.7 million, and it is expected to be \$63.6 million in 2018.

Ranchers on Federal lands pay a rate that is substantially lower than many private and state lands. The Federal grazing fee is adjusted annually, and is calculated by using a formula originally set by Congress in the Public Rangelands Improvement Act of 1978. Under this formula, the grazing fee for 2018 is \$1.41 per annual unit month, down from \$1.87 in 2017. The Department of the Interior Economic Report for Fiscal Year 2016 points out that



grazing fees on state and private lands are as much as \$20.50 per animal unit month.

Federal land managers must have adequate resources to manage the thousands of grazing permits across millions of acres of public lands, and ensure that they meet agency standards for ecological health. Ranching has a significant economic impact in many rural communities, but it is not without impacts on the land, air, and water. Without careful public land management, grazing can increase soil erosion and stream pollution, both of which impact wildlife habitat and hurt overall rangeland health. The ecological impacts of grazing are multiplied by extreme drought conditions associated with climate change.

One proposal to improve the Federal grazing program is Representative Adam Smith's H.R. 3624, the Rural Economic Vitalization Act. This legislation would allow ranchers to voluntarily retire their grazing permits to the Bureau of Land Management and the Forest Service. Ranchers would receive fair market value compensation for their permits paid for by private parties.

The legislation creates a market-based incentive for ranchers to receive compensation for their permits, save taxpayer dollars, and promote conservation. I hope that this legislation can be considered by the Subcommittee at a future hearing.

Thank you again to our witnesses. I look forward to your testimony, and I yield back.

Mr. McCLINTOCK. We have been joined by the Chairman of the House Natural Resources Committee, Congressman Rob Bishop.

You are recognized for 5 minutes.

OK, then we will get on to our witnesses.

Our microphones are not automatic. You will need to press the button when you begin your testimony. I warn you, all testimony is limited to 5 minutes. That is about the maximum attention span of an average Congressman, so after that you might as well quit talking because we have stopped listening.

And I will begin. We are very honored to have with us the Lieutenant Governor of the state of Idaho, the Honorable Brad Little.

Welcome.

**STATEMENT OF THE HON. BRAD LITTLE, LIEUTENANT  
GOVERNOR, STATE OF IDAHO, BOISE, IDAHO**

Mr. LITTLE. Thank you, Mr. Chairman, Ranking Member Tsongas, and Chairman Bishop. It is great to be here. My name is Brad Little. I am the Lieutenant Governor of the state of Idaho. I have a long history with my friends on the Public Lands Council, the National Cattlemen's Beef Association, and the American Sheep Industry. I used to be President of the Idaho Wool Growers.

I am here today, Mr. Chairman, as you stated in your opening statement, to talk about how we want our fifth generation ranching children to have an opportunity to do what I have been so lucky to do in my lifetime and my father's and my grandfather's, and that is to be successful ranchers.

One of the things I have learned in life in both politics and the ranching industry is change is inevitable. Adaptation and survival

are optional. I would like to talk briefly about what I think survival looks like in the public rangeland ranching industry.

First, it is obviously survival of the ranches, so that they can continue to be there and be active parts of the management of the Federal lands, whether it be fire suppression, fuels management, wildlife enhancement, watershed enhancement, all the things that ranchers do today.

Second, survival looks like those ranchers being part of those communities. In my current job as Lieutenant Governor, I meet with school trustees, hospital board members, and county commissioners in county after county in the West. Those leaders, those people that make those communities work, that the rest of the public of America goes out and enjoys, the backbone of those communities are those ranchers serving on the school board, serving on the hospital board, being part of those communities.

Ranchers are an indispensable part of successful management of public lands. The reductions in AUMs being grazed, there is a huge cost to abandonment. Since the dawn of the West, ranchers have been involved in partnership with the Federal agencies. Grazing truly is one of the original public-private partnerships.

Unlike government administrators who often are only there for a few years, ranchers are there for generations. If ranching is regulated off of the public lands, the most effective and efficient public land managers will be lost.

I will tell you a personal story of an allotment that we used to have, a big forest allotment, where one of the conditions was we had to maintain the trails. This is a heavily timbered area, and every year in July and August we spent a lot of time clearing trails so we could manage our land. The sportsmen, the wildlife advocates use those trails.

We were regulated off with the introduction of a non-native species that just basically made it impossible for us to operate. As a result, after we left with our livestock, the area burned, decimating the watershed. And now access to that area has been totally lost.

When I look at wildlife habitat and fuels management being done today, there are several areas where the agencies have had very successful programs, where we are using livestock to manage wildlife, and in Idaho, in particular. Several other states have it, but we have been at the forefront, where since 2000, in just 6 years, we have 330 ranchers that are signed up. They are part of the initial attack team that all the agencies use. Today, there are 9 million acres of real estate in Idaho that are being protected by initial attack in RFPAs.

And in the endangered species area in Idaho we have the Idaho Governor's Office of Endangered Species, where over the last several years we have protected 33 different plant and animal species under the framework of the Endangered Species Act.

Today, I would like to advocate for Senator Barrasso's draft legislation, which is part of the Western Governors' bipartisan resolution on endangered species.

Mr. Chairman, ranchers who have grazing permits are an integral part of the West today. Regulatory reform from here in Washington plays a critical role in determining the efficacy not

only for those benefits, for those communities, but whether our children and grandchildren are going to continue to be part of our great public lands in the West.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Little follows:]

PREPARED STATEMENT OF THE HON. BRAD LITTLE, LIEUTENANT GOVERNOR,  
STATE OF IDAHO

Good morning. Thank you, Chairman McClintock, Ranking Member Hanabusa, and members of the Subcommittee. My name is Brad Little. I am the Lieutenant Governor of Idaho, and a cattle and sheep rancher. I am also a longtime member of the Public Lands Council, the National Cattlemen's Beef Association, and the American Sheep Industry Association. In the past, I have been involved in volunteer leadership for these organizations, and have advocated on their behalf here in Washington, DC.

My grandchildren will be fifth generation Idaho ranchers. I cannot help but wonder what the ranching landscape will look like when they are ready to take the reins.

With our private lands scattered within public lands, my family has always believed in providing access to all kinds of recreationists and other multiple use activities. There are thousands of acres of the family ranch lands open for public use and hunting throughout five Idaho counties. My family founded the Little-Gem Cycle Park, one of the largest off-road vehicle parks in America. Near Boise, our private land is part of the city trails system. In both areas, we work with local, state and Federal agencies to deliver access.

I am here today to better define the benefit to America of our public lands ranchers and guide you through the livestock industry's rich history of stewardship for our western lands.

I urge you to address the burdensome regulatory environment which threatens our way of life and those rural communities where ranching is the year-round backbone that sustains our schools, health care, and economies. Additionally, we provide access to individuals who seasonally visit our public lands.

While current efforts by this Administration and Congress give me great optimism for future generations of ranchers, we still have a ways to go. More work is needed to create a regulatory environment where Federal lands ranchers can survive.

In the conservation world, nearly all grand scale successes are a result of public-private partnerships. I would argue that grazing is the original public-private partnership. Livestock producers provide a myriad of benefits to the land. With the reduction in AUMs being grazed, there is a huge cost due to the abandonment of these allotments.

Ranchers are indispensable in the successful management of our public lands. Unlike government administrators, who are only there for a few years, ranchers have been on the land for generations. They are the public lands management infrastructure across the West. If ranchers are regulated off, our country loses the most effective and efficient public lands managers, and the private inholdings are likely sold for development.

As Lieutenant Governor, I have seen these benefits most prominently during fire season. Grazing reduces the fuel loads and prevents the catastrophic, fast-moving fires that Idaho has experienced more frequently in recent years.

BLM's Targeted Grazing program is an example of how ranchers and Federal land managers can work together to prevent these natural disasters. According to the National Interagency Fire Center, the average cost of fuels management (including prescribed fire, manual removal by chainsaw, and herbicide application) comes to \$150 an acre. Ranchers provide this service at virtually no cost to the taxpayer.

Ranchers don't just prevent fires, they also fight them. Six years ago, Idaho created Rangeland Fire Protection Associations. These volunteers, totaling about 330 ranchers through nine RFPAs, extend protection to 1.8 million acres of private land and nearly 7.1 million acres of adjacent public land. All their work is done at a mere fraction of the traditional costs to the taxpayer. If you want to save money, this needs to be duplicated across the West, in rangelands and in timberlands.

Ranching activities also provide benefits to other multiple uses. For example, our cattle grazed a large Forest Service allotment in central Idaho. As part of that permit, we maintained miles of trails throughout the forest. A substantial side benefit was recreationists benefited from our efforts. This service was provided at no cost to the taxpayer. Because of the regulatory pressure, we have had to abandon the

allotment. Ultimately, the area has burned and most of the trails have been abandoned, leaving no access for recreationists.

My situation is not unique in Idaho, nor is it rare across the West.

The Endangered Species Act and the National Environmental Policy Act are the usual suspects. While well-intended when enacted in the 1970s, ESA and NEPA have evolved into weapons for habitual litigants, and the regulations they produce are as ineffective as they are burdensome. Species conservation doesn't work from the top-down.

In Idaho, the Governor's Office of Species Conservation has worked since 2000 to protect and recover 33 different plant and animal species using the framework of the ESA. We tried using the same tactics to recover the Greater Sage Grouse, but were blindsided in 2015 when the Obama administration imposed range-wide mandates that did not allow for adaptive management.

Luckily, the BLM and the Forest Service are working to put us back in the driver's seat, so we can resume our efforts through means that work in our unique areas. Efforts are also underway in Congress to increase state involvement in ESA implementation. Sen. Barrasso's recent legislation, crafted after the Western Governors' Association bipartisan resolution last year, would give states a greater role in species recovery and decision making.

In short, America's goal should be to perpetuate our beautiful and productive western landscapes, while fostering the next generation of western ranch stewards.

In closing, Mr. Chairman, ranchers with grazing permits provide an irreplaceable service to the land, the taxpayer, and to those who enjoy our public lands. The regulatory environment from Washington, DC plays a critical role in determining the efficacy of not only those benefits, but also the economies and communities that depend on them.

Mr. Chairman, thank you and I look forward to answering your questions.

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Mr. McCLINTOCK. Thank you for your testimony. Our next witness is Dr. David Naugle. He is a professor in the wildlife biology program at the University of Montana. He comes to us today from Missoula, Montana.

Thank you for joining us, Doctor.

**STATEMENT OF DAVE NAUGLE, PROFESSOR, WILDLIFE BIOLOGY PROGRAM, UNIVERSITY OF MONTANA, MISSOULA, MONTANA**

Dr. NAUGLE. Thanks to the Committee for the opportunity to testify today on the compatibility of ranching and wildlife conservation. My name is David Naugle. I am a 20-year scientist, including 17 as professor in the wildlife biology program, University of Montana. I also serve as independent science advisor to USDA sage-grouse initiative, or SGI, part of the agency's working lands for wildlife model, administered by the Natural Resources Conservation Service.

SGI has proved popular with ranchers, enrolling 1,700 producers to conserve 6.4 million acres of grazing lands, an area the size of Maryland. The U.S. Fish and Wildlife Service recognized these accomplishments when they ruled not to list sage-grouse under the Endangered Species Act. This proven working lands for wildlife model now extends nationally to New England cottontail, Louisiana black bear, Oregon chub, and many others.

I help NRCS evaluate farm bill conservation outcomes to assess their effectiveness and improve program delivery. Two evaluations I just published in 2018 find grouse conservation compatible with a variety of locally appropriate grazing strategies that promote native and resilient perennial plants. Evaluations were made possible by ranchers who enrolled with NRCS in rotational grazing

systems, voluntarily capped utilization rates, modified timing of grazing, and periodically rested habitat.

Non-enrolled lands, including BLM public lands, were managed less intensively under season-long grazing or slower rotations through larger pastures.

Nest survival of sage-grouse was similar between enrolled and non-enrolled ranches and was consistent with that of a stable grouse population. Livestock presence, utilization, and rest were unrelated to bird use and survival. Instead, populations were driven primarily by severe weather events.

Adequate shrub cover and low road densities maintained intact habitat provided by these big and intact ranches. And in a new twist, Montana State University researchers report that periodic disturbance by livestock may increase insect foods preferred by grouse chicks. In an example of adaptive management at its best, NRCS now, as a result of this new science, no longer alters grazing plans or offers higher incentives through the farm bill to rotationally graze or rest enrolled acreage simply in the name of sage-grouse.

Grazing restrictions on public lands assume a 7-inch grass height to hide nests from predators. Our final examination shows that biased field methods incorrectly attribute higher nest survival to this 7-inch grass height, bringing current public land policy into question. Common practice is to delay data collection until bird nests hatch or fail, for fear of nest abandonment by the incubating female. Allowing nest fate to dictate timing of data collection introduces bias, because hatched nests are measured later than failed nests, giving spring grasses more time to grow.

After correcting for this bias, grass heights at hatched and failed nests were within the thickness of a penny of one another. Analyses and progress suggests that sagebrush, not the single measure of grass height, provides the necessary concealing cover.

Ranchers are part of the solution, who if given flexibility, may prove to be valuable partners in crafting solutions to common threats facing ranching in wildlife. In the Great Basin, this means reducing wildfire frequency and severity, restoring watersheds at risk of cheatgrass invasion, and removing invading juniper trees. East of the Rockies, it means addressing subdivision, energy extraction, and crop land conversions that threaten to fragment these large and intact grazing lands.

In closing, 21st century technologies will help us combat these common threats to ranching and wildlife. So, our science team, with Working Lands for Wildlife, created the first-ever plant cover maps that tracked changes in U.S. grazing lands. Dubbed the rangeland analysis platform, or RAP, this web application empowers users to visualize annually the impacts of drought on production, evaluate effectiveness of cheatgrass treatments over time, identify post-fire sites in most need of restoration, and much more.

Powered by our industry relationships with Google's earth engine, mapping will be free to everybody starting this September at the site [rangelands.app](http://rangelands.app).

I yield the remainder of my time back to the Chair.

[The prepared statement of Mr. Naugle follows:]

PREPARED STATEMENT OF DR. DAVID E. NAUGLE, PROFESSOR, REPRESENTING  
WILDLIFE BIOLOGY PROGRAM, UNIVERSITY OF MONTANA, MISSOULA, MONTANA

Chairman and members of the Committee, thank you for the opportunity to testify today about the compatibility of ranching and wildlife conservation.

My name is David Naugle, I am a 20-year applied scientist, including the last 17 years in my current position as Professor in the Wildlife Biology Program, part of the Franke College of Forestry and Conservation, at the University of Montana in Missoula. I have researched the ecology of the greater sage-grouse (*Centrocercus urophasianus*; hereafter, sage-grouse) and sagebrush and grassland systems my entire career, publishing >90 papers and two books on these and related topics. Since 2010 to present, I also serve as an independent, third-party science advisor to the U.S. Department of Agriculture's (USDA) Sage Grouse Initiative (SGI), part of the agency's Working Lands for Wildlife (WLFW) model of species conservation administered by the Natural Resources Conservation Service (NRCS).

Vast grazing lands that span the western United States are irreplaceable assets, producing food and fiber, supporting rural economies, generating recreational revenue, and sustaining world-class wildlife populations. Working rangelands are the common thread that weaves together these economic and societal values in the western half of our Nation. Thus, keeping local ranchers productive, profitable, and sustainable considering challenges they face—extended drought, commodity price swings, and societal pressures to produce more with less—is a top priority for conserving rural ways of life and wildlife populations.

Tackling these challenges across the western geography presents a unique opportunity, but limited resources necessitate a strategic, watershed-scale approach that replaces 'random acts of conservation kindness' that fall short of achieving desired outcomes. As the Federal agency charged with helping private landowners solve natural resource concerns, NRCS created WLFW as its premier approach for delivering targeted and watershed-scale actions that proactively conserve America's working lands. Fueled by the Farm Bill, this proven paradigm implements existing NRCS programs across whole landscapes to restore productive agricultural lands, maximizing their benefits for people and wildlife.

On western grazing lands, WLFW exemplifies how to efficiently focus resources to yield the most effective conservation outcomes. As part of WLFW, the Sage Grouse Initiative (SGI) and Lesser Prairie-Chicken Initiative (LPCI) have proven popular with western ranchers. To date, 2,154 producers have partnered up to conserve or enhance 7.5 million acres of grazing lands, an acreage the size of Maryland, benefiting hundreds of rural communities and wildlife resources.

The U.S. Fish and Wildlife Service (FWS) recognized the value of private landowners' conservation efforts through WLFW as a factor in their decision not to list sage-grouse under the Endangered Species Act (ESA). Rancher participation in SGI remains high post-listing decision because WLFW provides win-win solutions that are 'good for the bird and good for the herd.' This winning recipe has been replicated across the country for Montana's fluvial arctic grayling, Louisiana black bear, New England cottontail and successful restoration of the Oregon Chub. Thanks to WLFW all of these species are now recovering, and ESA regulation was removed or deemed unnecessary as a result of proactive conservation.

As an independent, third-party science advisor to USDA, I help NRCS maximize returns on the Federal Farm Bill investments made with private ranchers. SGI Science fills two roles: (1) develop spatial targeting tools that help practitioners pinpoint where to invest in watershed-scale conservation, and (2) quantify outcomes of resulting conservation practices to assess their effectiveness and adaptively improve delivery. The Conservation Effects Assessment Project (CEAP)—a multi-partner effort led by NRCS—has been working since 2002 to quantify effects of conservation practices and programs, improve the science base for managing agricultural landscapes, and translate science into practices that benefit environmental quality. The CEAP was a critical piece of SGI from the start and continues to play an integral role in funding and distribution of science-based tools and information across western grazing lands.

Across sage-grouse range to date, we have used science to critically evaluate the targeting and effectiveness of prescribed grazing, invasive woodland removal, conservation easements, wet meadow and riparian restoration, and fence collision risk to wildlife. Findings are cataloged in 37 peer-reviewed publications within the scientific literature. Three of these publications evaluating prescribed grazing provide new scientific evidence that further supports the importance of ranching in sage-grouse conservation. This previously unknown information fills the void identified in recent reviews: "This paucity of information highlights a need for more research that directly measures the effects of livestock grazing on grouse"

(Dettenmaier et al. 2017); “We lack empirical data describing the relationship of grazing to sage-grouse . . .” (Connelly 2014); and “empirical evidence supporting direct effects of livestock herbivory on sage-grouse habitat is lacking” (Beck and Mitchell 2000).

Maintaining 7 inches of grass height as hiding cover has been a prevailing management strategy for these ground nesting birds. But new findings that challenge this long-held tenet suggest that biased field methods are often to blame for incorrectly identifying grass height as a driver of nest success. Common practice for a generation of scientists, including myself, was to measure grass height around nests directly following nest hatch or failure without regard to timing of data collection. Field biologists typically delay data collection until nest fate is known for fear of nest abandonment by the incubating female. Scrutiny by Dan Gibson and colleagues at University of Nevada-Reno reveal that allowing nest fate to dictate timing of data collection introduces bias into analyses because hatched nests are measured later than failed nests, giving spring grasses more time to grow (Gibson et al. 2015).

Soon after, SGI scientists replicated the Gibson et al. (2015) study, and after correcting for this bias, median grass heights at hatched and failed nests were nearly identical, within the thickness of a penny of one another (0.05 inches) across re-analyzed data sets from Montana, Wyoming and Utah (Smith et al. 2018a). The implication for grazing management is that grass height may not be as crucial to nest success as previously thought. Moving forward, future studies should adjust methods to ensure unbiased grass height measures at predicted hatch date, and management guidelines that include grass height as an indicator of nesting habitat quality may need to be revisited.

SGI scientists also have assembled a complete database for the 51 sage-grouse studies for which published estimates of vegetation structure and nest survival are available. Preliminary analyses of these data suggest that nest survival is unrelated to grass height across the entire species range. Instead, sagebrush cover is a better predictor of hatching success. Despite a lack of evidence to support its nest concealing properties, grass height across the 51 studies averages 7.3 inches, which may explain the origin of a 7-inch grass height requirement in public policy. This ongoing analysis will include similar inquiries into the role of grass height in brood survival, although less data is available for this vital rate.

Additionally, SGI scientists partnered with Montana Fish, Wildlife and Parks to conduct what is to date the most rigorous and long-term evaluation of livestock grazing and sage-grouse (Smith et al. 2018b,c). In its 8th year, this study in central Montana is evaluating how rotational grazing systems affect nesting habitat quality. From 2010–12, 10 ranches voluntarily enrolled in SGI rotational grazing systems; individually planned systems each adhere to NRCS Montana Prescribed Grazing standards and the following criteria designed to benefit sage-grouse: utilization rates  $\leq 50$  percent of current year’s growth, duration of grazing  $\leq 45$  days, and timing of grazing changed by at least 20 days each year. Nine of 10 landowners also voluntarily rested 20 percent of their nesting habitat from grazing for  $\geq 15$  months on an annually rotating basis. We compared SGI-enrolled ranches to  $>20$  non-enrolled operations. Non-SGI lands encompassed a variety of grazing systems of which most were managed less intensively under season-long grazing or slower rotations through larger pastures, usually without annual changes in season of use.

Findings from this evaluation show that nest survival was similar between SGI-enrolled versus non-enrolled ranches, and long-term nest success was consistent with that of a stable population. Resting pastures from grazing did not increase nest survival. Rotational systems and rest had negligible effects on grass heights which were within a half-inch of each other on SGI-versus non-enrolled ranches. Neither livestock presence nor indices of utilization were related to nest site selection or survival. Females instead selected nest sites based on abundance of sagebrush cover and distance from roads, whereas nest failure was driven primarily by severe weather.

In the same study area, Dr. Hayes Goosey, Rangeland Entomologist at Montana State University, is evaluating whether grazing affects sage-grouse food abundance by comparing insect numbers in rotationally grazed areas to those with no livestock grazing for over a decade. Greater abundance of insect foods preferred by sage-grouse chicks in grazed areas suggests that periodic disturbance by livestock may increase food availability to growing young (Hayes Goosey, personal communication, 5 July 2018).

Taken together, new science does not support increased nest survival from rotational grazing systems or pasture rest. The need for tall grass as hiding cover throughout the range of sage-grouse may be overemphasized in public land grazing management guidelines and policy. A variety of locally appropriate grazing strategies that promote native perennial plant communities resilient to drought, exotic

annual grass invasion, and wildfire may provide high quality grouse habitat. Management should instead focus on conserving areas of adequate shrub cover and preventing accumulation of roads and other human features that further fragment the remaining habitat provided by intact ranching operations.

As an example of adaptive management at its best, the NRCS is using outcomes from 8 years of scientific inquiry to modify their approach to grazing management. Under their 528 Prescribed Grazing specifications, NRCS will no longer promote alterations in grazing plans to increase herbaceous hiding cover for nesting sage-grouse. NRCS offices also will no longer offer a higher incentive payment to landowners who elect to rest or defer a portion of enrolled acreage for this purpose. Because grazing management still matters for a host of ecological reasons, NRCS will continue implementing grazing plans that help keep ranchers profitable and productive, and the agency remains open to new and proven ways to reduce persistent threats to grouse through sustainable grazing.

Decision makers find themselves at a crossroads in grazing management and sagebrush conservation. One path embraces the inherent variability of western rangelands, thus expanding decision-space by supporting adaptation to local circumstances. This approach recognizes ranchers as part of the solution, who if given flexibility, may prove a valuable partner in crafting innovative solutions to the most vexing threats facing ranching and grouse. The other path implements a uniform grass height stipulation, or some other overly specific metric, that lacks the scientific backing suggestive of success. The latter, commonly referred to as ‘precisionism’ in the conservation sciences (Hiers et al. 2016), is strongly cautioned against. Such specificity has inadvertently homogenized habitats for other at-risk species by suppressing the system’s natural variability.

The historic range of sage-grouse has been reduced by half as grazing lands succumb to higher intensity land uses. Not all threats are created equal (Figure 1), and time lost arguing about grazing is better spent doubling down on the most large-scale pervasive threats that reduce usable space for ranching and wildlife. In the Great Basin, this means reducing frequency and severity of wildfire, and restoring affected watersheds at risk of invasion by cheatgrass and other exotic annuals. It also means ratcheting up mechanical removal of invading juniper trees, a practice known to increase water retention on grazing lands that space-starved grouse are quick to recolonize following restoration. East of the Rockies, common threats include subdivision, energy extraction and cropland cultivation. Keeping ranchers ranching is top priority because a single square mile of grazing land converted into new cropland negatively impacts sage-grouse in a landscape 12 times that size (Smith et al. 2016).

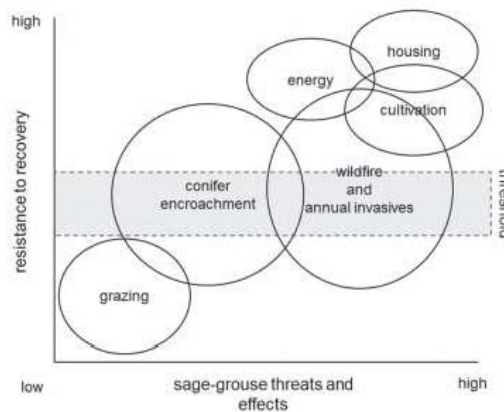
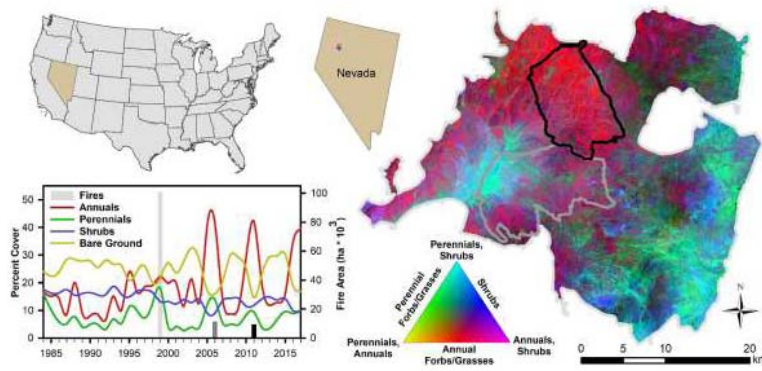


Figure 1. Sage grouse face a number of threats across their range, varying in the severity of their impact on populations (horizontal axis) and their reversibility (vertical axis). Impacts from livestock grazing are generally localized, minor, and reversible relative to those of cropland cultivation, energy development, housing, or invasion by exotic annuals or pinyon-juniper woodlands.



In closing, partners desire new tools that enable conservation to be applied at scales that match these large-scale threats. To meet this need, WLFW and University of Montana have merged machine learning and cloud-based computing with remote sensing and field data to provide the first-ever annual percent cover maps of rangeland plant types for U.S. grazing lands through time (1984 to 2017). Through an unprecedented blend of time, space, and scale, this new technology, dubbed the Rangeland Analysis Platform (RAP) will empower any user to visualize impacts of drought on perennial forage, evaluate effectiveness of cheatgrass treatments over time, identify areas in need of restoration following wildfire, and so much more (Figure 2). Powered by Google's Earth Engine, this mapping technology will be delivered to partners via a free online tool planned to launch September 2018 (<https://rangelands.app>).



**Figure 2.** Bottom left is trends in annual percent cover of annual forbs/grasses, perennial forbs/grasses, shrubs and bare ground (1984–2017) in an area being invaded by cheatgrass. Bars denote Dun Glenn fire and subsequent smaller fires within original fire perimeter. Image to right is a single year of the remotely sensed data for Dun Glenn and subsequent fires. Triangle indicates colors corresponding to a continuum of plant functional type percentages on the remotely sensed image.

Thank you for the opportunity to comment.

#### SCIENTIFIC LITERATURE CITED IN TESTIMONY

- Beck, J.L., and D.L. Mitchell. 2000. Influences of livestock grazing on sage grouse habitat. *Wildlife Society Bulletin* 28:993–1002.
- Connelly, J. 2014. Federal agency responses to greater sage-grouse and the ESA: Getting nowhere fast. *Northwest Science* 88:61–64.
- Dettenmaier, S.J., et al. 2017. Effects of livestock grazing on rangeland biodiversity: A meta-analysis of grouse populations. *Ecology and Evolution* 7:7620–7627.
- Hiers, J.K., et al. 2016. The precision problem in conservation and restoration. *Trends in Ecology and Evolution* 31:820–830.
- Smith, J.T., et al. 2016. Reducing cultivation risk for at-risk species: Predicting outcomes of conservation easements for sage-grouse. *Biological Conservation* 201:10–19.
- Smith, J.T., et al. 18a. Phenology largely explains taller grass at successful nests in greater sage-grouse. *Ecology and Evolution* 8:356–364.
- Smith, J.T., et al. 2018b. Effects of rotational grazing management on nesting greater sage-grouse. *Journal of Wildlife Management* 82:103–112.
- Smith, J.T., et al. 2018c. Effects of livestock grazing on nesting sage-grouse in central Montana. *Journal of Wildlife Management*: In-Press.

Mr. MCCLINTOCK. Great. Thank you very much, Dr. Naugle. Our next witness is Mr. Erik Molvar. He is the Executive Director of the Western Watersheds Project from Laramie, Wyoming.

**STATEMENT OF ERIK MOLVAR, EXECUTIVE DIRECTOR,  
WESTERN WATERSHEDS PROJECT, LARAMIE, WYOMING**

Mr. MOLVAR. Thank you, Chairman McClintock, Minority Ranking Member Tsongas, and members of the Committee. My name is Erik Molvar. I have the distinct honor to be the Executive Director of Western Watersheds Project, one of the West's most effective conservation groups. Our mission is to protect and restore western watersheds and wildlife across public lands.

I am also, by training, a scientist. And my scientific publications are in the predation risk to herbivores and also in herbivore effects to their ecosystems.

I would like to point out, for the benefit of the Committee, that the livestock grazing industry's effects on public lands are not only not universally positive, as might have been presented earlier in this testimony before the Committee, but indeed have many negative effects on many different resources on public lands.

I want to talk first about the fact that, according to a Public Employees for Environmental Responsibility study in 2012, some 40 percent of public lands are not meeting the Federal rangeland health standards. These are basic minimal standards for the health of the rangelands that almost half of our public lands permittees are not meeting, as a target. This is an indicator that these problems are widespread.

What does that mean, in terms of the actual resources on our public lands? Well, certainly, one of the most important impacts of livestock grazing are impacts to native fishes. Cattle were evolved in the boggy forests of Northern Europe. They are ill-suited and maladapted to the arid Western rangelands that you find in our western states.

Consequently, when you put them out on the public lands in these arid areas, they tend to concentrate in streamside riparian areas and heavily graze the vegetation along streamsides, denude the banks of the streams, and wallow in the streams themselves. This leads to a number of problems.

First, it causes the breakdown of stream banks. And when the stream banks break down, the profile of the stream turns from deep and narrow to wide and shallow. That means warmer water temperatures.

Second, the livestock denude the grass and the shrubs from beside the stream banks that are important to shade the stream and keep them cool.

Finally, when they are wallowing in the streams, livestock actually trample the redds, or the nests of salmon, steelhead, and trout, and kill the eggs.

So, these are major problems for cold-water fishes that are native to the western United States, and a significant ecological impact that is very widespread in its nature. You can look at the number of endangered or threatened runs or populations of trout and salmon in the West to see that livestock grazing is having a significant negative effect on our fish fauna.

Second, you have livestock impacts on the native ungulates. And, of course, cattle graze very heavily in western rangelands. And the BLM typically has a 50/50 mix of livestock to native wildlife, in terms of allocation for forage. So, if the cattle are taking off 50 percent of the grass on public lands, that means only 50 percent is left for wildlife, for insects, for elk, for deer, even for rabbits and mice. And when you take all of these different consumers of native grasses down, you don't have enough grass left for the grass to survive from year to year.

Consequently, what we are doing on our western rangelands is we are converting them from the native perennial bunch grasses that Dr. Naugle talked about being so important to sage-grouse, and you are converting that to non-native invasive weeds such as cheatgrass. Cheatgrass is the scourge of the West, and is the cause of many of the wildfire problems that we see today. And livestock grazing is the single most important mediator of that.

Livestock grazing tramples the biological soil crusts that are the natural defenses of the land against cheatgrass, and livestock grazing takes out the native perennial bunch grasses that, when they are mature and healthy, are the appropriate competitors to cheatgrass, and can exclude cheatgrass.

In areas that don't have any livestock grazing for long periods of time, like the Dugway Proving Ground in Utah, not only do you not have cheatgrass, but when you do an experiment, as was done recently to try to introduce cheatgrass, you can't get it to grow because the native healthy ecosystems have a natural immunity to it.

With a heavy grazing of livestock, what we see is that we are converting our native perennial rangelands to weedy invasive annual species that have little ecological value and poor habitat values for wildlife.

Thank you very much.

[The prepared statement of Mr. Molvar follows:]

PREPARED STATEMENT OF ERIK MOLVAR, EXECUTIVE DIRECTOR, WESTERN WATERSHEDS PROJECT

My name is Erik Molvar, and I am Executive Director of Western Watersheds Project (WWP), a non-profit conservation group that advocates for the protection and restoration of wildlife and watersheds throughout the western United States. WWP specializes in solving environmental problems caused by livestock grazing on public lands.

I hold a Master of Science in Wildlife Management from the University of Alaska Fairbanks, where I studied moose behavior and ecology as part of the Institute for Arctic Biology. I published my scientific findings in a number of peer-reviewed journals, including studies on moose foraging behavior and the influence of moose foraging on willows and on ecosystem dynamics. In addition, I am author or editor-in-chief of 17 books that focus on western public lands. Prior to becoming a professional conservationist, I worked seasonally for the U.S. Forest Service and for the U.S. Army Corps of Engineers surveying stream habitats for salmon and steelhead in northern Idaho and barging juvenile salmon and steelhead down the Snake and Columbia Rivers to get them past dams that otherwise obstruct their passage.

THE IMPACTS OF LIVESTOCK GRAZING ON WESTERN PUBLIC LANDS

The grazing of domestic livestock on Federal grazing leases represents the most widespread cause of environmental impacts on western public lands. While oil and gas development garners the greatest amount of media attention, as it represents a spectacular environmental train wreck, livestock grazing is like a slow and invisible cancer that is insidiously and inexorably killing native ecosystems over vast areas.

In an analysis of Bureau of Land Management (BLM) Land Health Assessments, Public Employees for Environmental Responsibility (PEER) found that as of 2012 more than 40 percent of BLM livestock grazing allotments were failing to meet rangeland health standards.<sup>1</sup> In the wake of this analysis, BLM began to combine grazing leases “not meeting, but moving toward” rangeland health standards with those actually meeting land health standards, frustrating the public’s ability to discern the degree to which BLM-managed livestock grazing on public lands is causing environmental problems.

It is also notable that the BLM’s own conclusions are sometimes biased to hide land health problems. For example, in WWP’s Duck Creek (Utah) allotment appeal, after more than 200 hours of expert testimony the Office of Hearings and Appeals ruled that BLM’s determination that this allotment was meeting land-health standards was in fact false. While Utah appears to be mostly meeting land health standards according to PEER’s review of BLM’s data, having traveled extensively through Utah, I have found that land health and vegetation condition in Utah is worse in comparison with other western states, not better.

#### IMPACTS TO NATIVE FISHES

Native wildlife species (such as bison and elk) are adapted to the arid steppes, deserts, and grasslands of the western United States, but cattle evolved in lush, high-rainfall environments in northern Europe and are poorly adapted to arid environments. As a consequence, cattle concentrate along streamside (or “riparian”) habitats, and livestock-induced damage disproportionately falls within these highly sensitive and ecologically important areas. On the Great Plains, 77 percent of bird species depend on riparian habitats for a key part of their life cycles.<sup>2</sup> In desert environments, free-flowing springs and streams take on even greater importance.

Livestock grazing along streambanks denudes the tall grass and shrubs that otherwise overhang and shade free-flowing streams that support trout and salmon. At the same time, streambank trampling by livestock breaks down streambanks, causing deep, narrow stream channels to degrade into wide, shallow riffles. Both of these factor into the loss of instream cover that trout and salmon require to hide from and escape their natural predators. In addition, the conversion of deep, narrow, shaded streams to wide, shallow streams exposed to the sun has the effect of raising water temperatures.

Native coldwater fishes (i.e., trout, salmon, and steelhead) take the brunt of these impacts, and livestock grazing represents the single greatest impact on salmonid habitats across much of the West. Trout and salmon require cold, clear waters. Water temperatures above 80 °F can be fatal to trout and salmon, and to the extent that livestock impacts to streams result in higher water temperatures, these can extirpate trout and salmon populations.

The concentration of cattle along streamside habitats results not only in streambank collapse but in radically accelerated bankside erosion. This raises the amount of suspended silt in streams, interfering with the ability of trout and salmon, which are visual predators, to feed on insects and smaller fishes. All trout and salmon spawn in depressions (called “redds”) that they dig in stream gravels to deposit their eggs. The survival of the eggs is dependent on the free flow of oxygenated water through the gravels, and to the extent that silt from streamside erosion associated from streambank trampling by livestock clogs the interstices between the gravels, trout and salmon eggs are smothered and are unable to survive. This can lead to the failure of entire year-classes of trout and salmon. In addition, cattle wallowing directly in the streamcourse, a common occurrence on hot summer days, trample redds and crush trout and salmon eggs.

Livestock grazing and trampling impacts have contributed to the need to list several species and/or runs of native salmonids under the Endangered Species Act, including the Columbia River spring and fall chinook salmon, Columbia River steelhead, bull trout, and Lahontan cutthroat trout. In addition, stream habitat damage caused by domestic livestock (particularly cattle) is responsible for the decline in Colorado River cutthroat, greenback cutthroat, and Bonneville cutthroat trout, which are likely to become candidates for ESA listing in the future thanks in significant measure to the impacts of domestic livestock. This deterioration of clean, cold stream habitats and loss of native trout and salmon populations has had

<sup>1</sup> <https://www.peer.org/campaigns/public-lands/public-lands-grazing-reform/blm-grazing-data.html>.

<sup>2</sup> Rich 2002. Using breeding land birds in the assessment of western riparian systems. *Wildl. Soc. Bull.* 30: 1126–1139.

serious negative impacts on recreational fishing on western public lands, to the detriment of public enjoyment of these lands.

#### LIVESTOCK GRAZING ON PUBLIC LAND IS A MAJOR CAUSE OF STREAM POLLUTION

Beyond its impacts to native fishes inhabiting streams on public lands, domestic livestock (particularly cattle) are a major cause of fecal coliform contamination in streams on public lands. Cattle have been bred to eat and gain weight at accelerated rates to maximize beef production, and as a result cattle manure (which like all manure is high in *E. coli* bacteria) are large with high bacterial loads. Cattle also concentrate along and wallow in streams, in contrast to native wildlife which range widely to forage, and cattle thereby concentrate their manure along watercourses. Based on WWP water quality sampling, *E. coli* levels in Wyoming streams are commonly 2 to 10 times higher than Clean Water Act standards for human contact. This means that for affected streams, anglers wading in the water, or children playing in the water, are at an elevated risk for *E. coli* poisoning, which is a serious health risk and in some cases can be fatal. The Wyoming Department of Environmental Quality recently downgraded 76 percent of streams from “primary contact” levels of monitoring to “secondary contact” standards, to cut down on Clean Waters Act violations. However, this administrative change does not change the reality that public lands visitors commonly recreate along streams, and continue to be exposed to these high levels of biohazard as a result of cattle defecating in and beside streams.

#### IMPACTS TO SOILS AND VEGETATION COMMUNITIES

Like all herbivores, domestic livestock eat plants, and the heavy intensity of livestock grazing has an impact on vegetation communities. High concentrations of domestic livestock increase soil compaction, erosion, and loss of overall productivity of the land. Stocking rates on public lands as approved by the BLM and Forest Service are typically far too high to maintain healthy, functioning native plant communities and high soil productivity. Frequently, Federal agencies apply a “take half, leave half” principle, and grazing leases commonly allow 50 percent of the annual forage plant production to be removed by livestock grazing. This is a very high intensity of livestock grazing, and fails to account for additional grazing by large native herbivores such as elk and mule deer, grazing by rabbits and even voles (which can be abundant during population surges), and grazing by insects such as grasshoppers and Mormon crickets, which can be substantial during their cyclic population irruptions. Federal agencies may also respond slowly to reduce livestock numbers during drought, which is historically so common that it represents the rule in the arid West rather than the exception, with the result that overgrazing by livestock creates long-term damage to the productivity of the range. Overgrazing exacerbates climate change by depleting the ability of cold desert steppes and grasslands to sequester carbon, by not only decreasing bunchgrass foliage and conversion to cheatgrass, but also by the long-term loss of bunchgrass root biomass.<sup>3</sup>

In the Great Basin and on the Colorado Plateau, and across much of the remainder of the West, biological soil crusts are the key ingredient to soil productivity. Biological soil crusts are critical for the retention of soil moisture, prevent erosion, fix nitrogen (a key plant nutrient) from the atmosphere into the soil where it becomes available to plants, and provide a strong degree of immunity against invasive weeds, particularly cheatgrass. Livestock trample biological soil crusts, with weight loading on hooves and shear forces that make them highly destructive. Once destroyed, soil crusts can take up to 250 years to recover to their natural ecological functions.<sup>4</sup> The Great Basin and Colorado Plateau were not originally inhabited by large herds of bison or other herbivores, and these fragile soil crusts therefore evolved in the absence of widespread trampling. The introduction of cattle and sheep into these areas has resulted in catastrophic impacts to biological soil crusts that desertifies the ecosystem and results in permanent loss of soil and vegetation productivity.

#### LIVESTOCK SPREAD NOXIOUS WEEDS, PARTICULARLY CHEATGRASS

Livestock are the primary means by which invasive weeds, notably cheatgrass, are introduced and spread in native ecosystems. Scientists have traced the invasion of cheatgrass back to contaminated grain shipments from Eurasia, and this non-native weed then spread along railway lines, and from there moved out across the

<sup>3</sup>Meyer 2011. Is climate change mitigation the best use of desert shrublands? Nat. Res. Env. Iss. 17:2.

<sup>4</sup>Belnap 1995. Surface disturbances: Their role in accelerating desertification. Env. Monitor. Assess. 37:39–57.

Great Basin and Columbia Basin with great rapidity, carried by domestic livestock. Livestock overgrazing paves the way for cheatgrass, which specializes in colonizing disturbed habitats, by suppressing or eliminating the two primary defenses that western steppes and grasslands have against cheat: native perennial (multi-year) bunchgrasses, and biological soil crusts. Cheatgrass invasions began in the Great Basin and the Columbia Basin in the 1800s and reached crisis proportions by the 1930s, and the overgrazing that established cheatgrass as a major environmental problem in those years continues today. As a result, cheatgrass is expanding even in high-elevation areas where it has heretofore been scarce.<sup>5</sup>

Native perennial bunchgrasses and biological soil crusts are the key natural defenses against cheatgrass, yet domestic livestock deplete or destroy both defense systems, all the while creating the disturbance that accelerates cheatgrass invasion. Perennial bunchgrasses are preferred forage for both livestock and native wildlife, and are known as “decreasers” because they dwindle early on as grazing intensity increases. Livestock also trample and eliminate biological soil crusts, which under natural conditions retard the germination and seedling establishment of cheatgrass. Once cheatgrass invades the understory of sagebrush habitat types, it accelerates range fire frequency because cheatgrass dies and becomes tinder-dry after an initial few weeks of growth and seed-set. Normal fire-return intervals in basin sagebrush communities averages 196 years, but when cheatgrass takes over fire frequency doubles to every 78 years.<sup>6</sup> The resulting fires entirely eliminate sagebrush (because sagebrush does not stump-sprout), a disaster for sage-grouse and pronghorns, and set the stage for a cheatgrass monoculture by creating a disturbance that colonizing cheatgrass are highly adapted to fill. Importantly, in areas where livestock are absent, cheatgrass is a minor component, and native perennial bunchgrasses remain dominant, fires eliminate the sagebrush but return the area to native perennial bunchgrass instead of cheatgrass monoculture. This illustrates definitively that livestock grazing, not fire, is the key factor spreading cheatgrass infestations. Increasing fire frequency is an after-effect of cheatgrass invasion, not the cause.

At low to no livestock grazing, native grasses and forbs remain dominant, and fire returns the system to native grasses; at moderate levels of livestock grazing, habitats experience a decline in native perennial grasses; with heavy livestock grazing, perennials are replaced by cheatgrass, and fire creates a negative feedback loop, returning the areas to cheatgrass monoculture. Livestock grazing where 50 percent of the annual forage productivity is allocated to livestock would fall into the “heavy” category, whereas grazing levels limited to 25 percent utilization for sage-grouse conservation fall into the “moderate” level of grazing.<sup>7</sup> Thus, even moderate levels of livestock grazing are harmful to native plant communities (and advantageous to cheatgrass).

#### LIVESTOCK ARE A CAUSE OF WIDESPREAD SAGE-GROUSE POPULATION DECLINES

Livestock grazing is a major contributor to the decline of sage-grouse across the western United States. Whereas oil and gas development has received far greater attention as a cause of sage-grouse population crashes in areas such as the Upper Green River Valley and Powder River Basin of Wyoming that have suffered from heavy industrial development, sage-grouse populations in areas with few roads and developments and zero energy and mining activity have also been declining, and livestock grazing is the major human-caused impact in these areas that could possibly be responsible from the deviation of large, healthy sage-grouse populations from their natural abundance that occurred naturally prior to the arrival of Euro-American settlement. Naturalist George Bird Grinnell characterized the original abundance of sage-grouse as follows:

In October, 1886, when camped just below a high bluff on the border of Bates Hole, in Wyoming, I saw great numbers of these birds, just after sunrise, flying over my camp to the little spring which oozed out of the bluff 200 yards away. Looking up from the tent at the edge of the bluff above us, we could see projecting over it the heads of hundreds of the birds, and, as those standing there took flight, others stepped forward to occupy their places. The number of Grouse which flew over the camp reminded me of

<sup>5</sup>Mealor et al. 2012. Postfire downy brome (*Bromus tectorum*) invasion at high elevations in Wyoming. *Inv. Plant Sci. Manage.* 5:427–435.

<sup>6</sup>Balch et al. 2013. Introduced annual grass increases regional fire activity across the arid western USA (1980–2009). *Global Change Biol.* 19:173–183.

<sup>7</sup>McIver et al. 2010. The Sagebrush Steppe Treatment Evaluation Project (SageSTEP): A Test of State- and Transition Theory. USDA Forest Service General Technical Report RMRS-GTR-237, Fort Collins, CO: Rocky Mountain Research Station, 16 pp.

the old time flights of Passenger Pigeons that I used to see when I was a boy. Before long the narrow valley where the water was, was a moving mass of gray. I have no means whatever of estimating the number of birds which I saw, but there must have been thousands of them.<sup>8</sup>

The habitats of both greater and of Gunnison sage-grouse have been degraded by domestic livestock. For example, in the Gunnison Basin, fully two-thirds of livestock grazing allotments are failing to meet land-health standards for rare native species including Gunnison sage-grouse.

The best-understood impact of livestock grazing on sage-grouse is the reduction of grass cover between sagebrush shrubs to levels that unnaturally expose sage-grouse to their natural predators. Across the vast majority of the sage-grouse range, the scientific consensus is that 7 inches of residual grass height must be maintained in breeding and nesting habitats to provide grouse the cover they need to survive.<sup>9</sup> In the Northern Plains, where sagebrush are much sparser and afford less hiding cover, 10.2 inches of residual grass height is required to furnish sufficient hiding cover for grouse.<sup>10</sup>

While maintaining 7 inches of grass height is a habitat objective for livestock grazing in Federal sage-grouse plan amendments, this commitment has been undermined by a failure of BLM and Forest Service to apply it in grazing permit renewals and Annual Operating Instructions (AOIs). In the first year after the final decisions were signed on September 22, 2015 until October 7, 2016, 70 percent of all grazing permits in sage-grouse habitat were rubber-stamped for another 10-year term under their previous terms and conditions, without revision or analysis. The numbers of AUMs reinstated is even higher: 81 percent of all AUM permitted in sage-grouse habitat in the last year were renewed without any analysis and under the existing management regimes without including sage-grouse habitat objectives (including the 7-inch grass height objective). An Instruction Memorandum issued to the Forest Service delays the implementation of sage-grouse habitat objectives in that agency's AOIs, which were to be phase in for the 2018 grazing season under the current sage-grouse plan amendments. Furthermore, this measure is slated to be stripped from the plan amendments under the Draft EIS proposals for Nevada/California, Idaho, and Wyoming. Thus, it appears that Federal sage grouse protections from irresponsible types of livestock grazing are currently being ignored and are slated to be dismantled.

Livestock infrastructure also has major negative impacts on sage-grouse. Fence-posts and corrals offer perches for raptors, and fences are a deadly collision risk for low-flying grouse. One 5-mile stretch of fence in Wyoming killed 146 grouse over a year and a half.<sup>11</sup> Marking barbed-wire fence for visibility reduces deadly grouse collisions only by 57 to 70 percent, allowing 30 to 43 percent of the fatalities of unmarked fences to continue.<sup>12</sup> Considering the vast mileage of barbed-wire fence on western public lands, the overall fatality level is massive.

#### IMPACTS TO BIG GAME HABITATS AND POPULATIONS

Domestic livestock are direct competitors for forage with native wildlife species, and the degree of competitive intensity varies with the degree of dietary overlap. Cattle graze preferentially on grasses, but will also browse shrubs, while domestic sheep graze more on forbs (broadleaf wildflowers and shrubs) and to a lesser degree than cattle on grasses. One cow-calf pair eats a similar amount of forage as two elk or eight mule deer, and therefore would be estimated to displace that number of game animals.<sup>13</sup> Domestic sheep compete most directly with mule deer and pronghorns. I have personally seen a Federal NEPA document declaring that the project area had enough forage to sustain 100 percent of the livestock and 75 percent of the wildlife, a tacit admission that overgrazing was authorized. To the extent that mule deer and elk populations are substantially smaller today than they

<sup>8</sup>Grinnell 1910. American game bird shooting. New York, NY: Forest and Stream Publishing Co., 558 pp.

<sup>9</sup>Hagen et al. 2007. A meta-analysis of greater sage-grouse *Centrocercus urophasianus* nesting and brood-rearing habitats. *Wildlife Biology* 13:42–50.

<sup>10</sup>Kaczor et al. 2011. Nesting success and resource selection of greater sage-grouse. *Studies in Avian Biology* 39:107–118.

<sup>11</sup>Christiansen, T. 2009. Fence Marking to Reduce Greater Sage-grouse (*Centrocercus urophasianus*) Collisions and Mortality near Farson, Wyoming—Summary of Interim Results. WGFD Report, 2 pp.

<sup>12</sup>*Ibid.*; also Van Lanen et al. 2017. Evaluating efficacy of fence markers in reducing greater sage-grouse collisions with fencing. *Biol. Conserv.* 213:70–83.

<sup>13</sup>Ogle and Brazee. 2009. Estimating initial stocking rates. USDA NRCS Tech. Note Range No. 3, 39 pp.

were when Lewis and Clark explored the West, competition with cattle and sheep is a driving factor holding big game populations at unnaturally low levels.

DOMESTIC SHEEP GRAZING ON PUBLIC LANDS CAUSES DEADLY DISEASE OUTBREAKS  
IN BIGHORNS

Domestic sheep are carriers of multiple pathogens that cause catastrophic epidemics and die-offs in bighorn sheep when the two species come into contact with each other. *Mannheimia haemolytica* (formerly called *Pasteurella*) and *Mycoplasma ovipneumoniae* cause a form of deadly pneumonia that can wipe out an entire bighorn sheep herd following a single nose-to-nose contact between domestic sheep and bighorns.<sup>14</sup> This is a relatively high-probability occurrence because the two species express curiosity toward each other when in close proximity. In some cases, bighorn sheep herds have become infected and decimated by domestic sheep diseases, and in other cases state agencies have eliminated thriving bighorn sheep herds to prevent disease transmission in cases where the two species have been allowed to come into contact. Due to this extreme disease transmission risk, domestic sheep should be grazed 15 miles or more away from known occupied bighorn sheep habitat, which accounts for the propensity of young male bighorns to wander in search of mates.

VEGETATION MANIPULATION PROJECTS TO INCREASE CATTLE FORAGE ARE HARMFUL  
TO WILDLIFE

There are many types of vegetation projects to manipulate native vegetation in an attempt to increase forage for domestic livestock, and which have caused significant problems for native wildlife. Some of these projects have been proposed in the name of wildlife habitat improvements, even though scientific support for wildlife habitat values has been scant, or even contradictory.

Juniper removal projects have been proposed for sage-grouse or mule deer habitat improvements. For sage-grouse, projects that remove junipers from sagebrush grasslands in the early stages of juniper expansion, increased habitat values for sage-grouse are achievable. In cases where juniper removal targets mature or old-growth stands, which have little to no grass or shrub understory, the result is more likely to be the creation of a cheatgrass invasion hotspot, due to the propensity of this invasive weed to colonize disturbed areas. This does more harm than good. There is no valid scientific evidence that juniper or pinyon removal benefits mule deer, as this species benefits from the hiding cover aspect of juniper and pinyon woodlands.

Mechanical destruction of sagebrush, and even the use of herbicides such as tebuthiuron, has been advanced as a means to improve sage-grouse habitat. The Deseret Ranch (managed primarily for livestock grazing and trophy elk hunting) initially reported an increasing population of sage-grouse compared to other Rich County grouse populations in response to mechanical removal of sagebrush using a Dixie harrow. This touched off a welter of copycat projects, but subsequently the Deseret Ranch sage-grouse population plummeted compared to surrounding populations, and as it stands now, Rich County sage-grouse populations inside and outside the Deseret Ranch have an overall population decline that is similar. Thus, this practice should be discredited as ineffective. Tebuthiuron treatments in New Mexico and Texas have been associated with declines in the lesser prairie chicken, which currently is on the verge of Endangered Species listing.

Perhaps the most ecologically damaging habitat treatment type is the introduction of non-native species, such as crested wheatgrass or forage kochia, either along fuelbreaks or in large-scale plantings to increase forage for domestic livestock. Large-scale fuelbreak creation of this type threatens to fragment and degrade remaining large tracts of sagebrush that sage-grouse require to survive. Crested wheatgrass is known to invade surrounding habitats from plantings, and completely destroys the habitat value of the land for almost all native wildlife.<sup>15</sup>

LIVESTOCK GRAZING TO COMBAT CHEATGRASS IS COUNTERPRODUCTIVE

Cheatgrass is one of the least desirable forage plants from the standpoint of herbivores (including domestic livestock), so when cattle are released onto a range invaded by cheatgrass, they are likely to concentrate their foraging on remnant native perennial bunchgrasses instead of grazing on the cheatgrass. This further depletes the ability of native grasses to persist and to compete with cheatgrass, and

<sup>14</sup>Schommer and Woolever 2001. A process for finding management solutions to the incompatibility between domestic and bighorn sheep. USDA Forest Service report, 64 pp.

<sup>15</sup>E.g., Reynolds and Trost 1980. The response of native vertebrate populations to crested wheatgrass planting and grazing by sheep. *J. Range Manage.* 33:122–125; Connelly et al. 1991. Sage grouse use of nest sites in southeastern Idaho. *J. Wildl. Manage.* 55:521–524.



further moves the landscape toward an unnaturally fire-prone cheatgrass monoculture. When cheatgrass dries up, it becomes non-nutritious, and their spiny seedheads pierce the mouthparts of herbivores, which avoid it as a forage species. Cheatgrass is green and palatable to livestock for only 2 weeks or so in the spring, yet it is unheard of that BLM land managers limit livestock grazing in a given allotment to such a short window. As a result, even in cases where livestock grazing could reduce the standing crop of cheatgrass (and therefore flammability) in the short term, it actually increases and further entrenches cheatgrass infestations (and therefore fire risk) over the long term.

Long-term rest from livestock grazing offers the best option for returning the land to a healthy and productive state on lands where native perennial grasses remain. On the Dugway military proving grounds in Utah, where livestock have not grazed for 50 years, cheatgrass is almost absent, and experimental introductions failed to establish.<sup>16</sup> The recovery of native vegetation in the Hart Mountain National Wildlife Refuge, closed to livestock grazing in 1991, has been spectacular.<sup>17</sup>

#### LIVESTOCK-DRIVEN WILDLIFE-KILLING PROGRAMS ARE ECOLOGICALLY DESTRUCTIVE AND POINTLESS

The agriculture industry in general, and western public lands ranchers in particular, are notorious for their propensity to kill every species of native wildlife they find inconvenient to their agricultural operations. Federal, state, and county extension programs routinely target native wildlife including predators (notably coyotes, wolves, and bobcats) and rodents (particularly prairie dogs and beavers) that are believed by farmers and ranchers to have a negative effect on their economic bottom line. USDA's Wildlife Services program alone killed more than 2.7 million animals in 2016,<sup>18</sup> more than half of which were native wildlife species, at the behest of the agriculture industry. Among this agency's tally of death were 77,403 coyotes, 3,931 foxes, 535 river otters, and 21,182 beavers—which is significant because beavers are considered a keystone species, ecosystem engineers that create healthy stream and riparian habitats and increased vegetation in the watersheds they inhabit. Any native species are classified by state agencies as 'varmints' with no seasons, bag limits, or reporting requirements for their killing and so there is no way to estimate the number of native wildlife species killed directly by ranchers through shooting and poisoning. Given the strong public interest in maintain healthy populations of native wildlife and healthy functioning ecosystems on public lands, the killing of native wildlife associated with public-lands ranching should be legally forbidden. If private agricultural operations want to impose their livestock on Federal public lands, the least they can do is to run their operations in a way that is compatible with maintaining natural population levels of native wildlife.

#### PUBLIC LANDS LIVESTOCK GRAZING IS A NEGLIGIBLE CONTRIBUTOR TO LOCAL WESTERN ECONOMIES

Far from being an important part of rural western economies, public-lands ranching makes a contribution that, while it may be an important (although usually not the only) source of income for ranchers directly engaged in it, is at the statewide level a rather negligible contributor to jobs and income in western states. Large metropolitan areas are by far and away the overwhelming drivers of western state economies, but even rural counties with little urban development, the economic significance of livestock production is far less than the spatial expanse of lands dedicated to it would suggest. In a 2002 analysis by noted western economist Dr. Thomas M. Power, livestock grazing on Federal lands makes up less than 0.1 percent of the economies of the western states where it occurs.<sup>19</sup>

Harney County, Oregon is fairly representative of a rural western county with no large urban centers. According to Headwaters Economics' Economic Profile System, farming (which includes ranching) makes up only 1 percent of the wage income in Harney County, and the combined sectors of agriculture, forestry, fishing, and hunting made up 8.8 percent of the jobs in Harney County in 2016.

I live in Wyoming, which is often referred to as "the Cowboy State," but in 2017 farming and ranching combined tallied \$617 million, making up only 1.5 percent of

<sup>16</sup> Meyer et al. 2001. Factors mediating cheatgrass invasion in intact salt desert shrubland. Pp. 224–232 in *Shrubland ecosystem genetics and biodiversity: Proceedings, USDA RMRS-P-21*.

<sup>17</sup> Batchelor et al. 2015. Restoration of riparian areas following the removal of cattle in the northwestern Great Basin. *Env. Manage.* 55:930–942.

<sup>18</sup> [https://www.aphis.usda.gov/wildlife\\_damage/pdr/PDR-G\\_Report.php?fy=2016&fld=&fld\\_val=](https://www.aphis.usda.gov/wildlife_damage/pdr/PDR-G_Report.php?fy=2016&fld=&fld_val=)

<sup>19</sup> Power 2001. Taking stock of public lands grazing: An economic analysis. Pp. 263–269 in *Welfare Ranching*, G. Wuerthner and M. Matteson, eds. Washington: Island Press.

the state's Gross Domestic Product.<sup>20</sup> In 2012 it accounted for 4 percent of the state's full- and part-time employment.<sup>21</sup> Meanwhile, six National Park units in Wyoming received almost 7.5 million visitors in 2017, spending an estimated \$882 million in Wyoming.<sup>22</sup> And this excludes Forest Service and BLM lands, which were a major tourism contributor to Wyoming in 2017, particularly due to the total eclipse of the sun, estimated to have produced \$63.4 million by itself according to the Wyoming Department of Tourism. Clearly, public lands are more valuable for public enjoyment than for providing livestock forage.

As of 2015, there were 21,916 permit holders grazing commercial livestock on public lands managed by the BLM and Forest Service. Incorporating NCBA estimates that 40 percent of cattle in western public land states spending some time on Federal public land, there are about 1.75 million cattle using public land, out of a national herd of 90 million, meaning that only 1.9 percent of America's cattle spend any time on western Federal lands.<sup>23</sup> By way of comparison, some 290 million people visit Federal public lands each year across 11 western states, based on aggregated data from Federal agencies.<sup>24</sup> Examining only rural (nonmetropolitan) western counties, the counties with the greatest proportions of protected public lands have shown the greatest economic growth, job growth, and population growth.<sup>25</sup> Thus, if all domestic livestock using western public lands were to magically vanish tomorrow, it would likely be received as an economic crisis by the beef producers directly involved, but at the national scale, consumers would not notice the difference, and the blip in state economies would be lost in the standard-of-error noise.

#### LIVESTOCK LESSEES GRAZE PUBLIC LANDS AT BARGAIN-BASEMENT RATES

Federal agencies have the discretion to lease public lands for private livestock grazing, which is supposed to be managed within the sideboards of multiple-use legal mandates that obligate the BLM and Forest Service to balance commercial uses against public recreation, wildlife habitat conservation, and watershed protection. Grazing on Federal lands is defined by regulation as a privilege, not a right, and holding grazing lease does not convey a property right. Although public-lands ranchers will at times use a grazing permit as collateral against a bank loan, a practice of questionable legality. Instead, holding a Federal grazing permit enters a rancher into a tenant-landlord relationship with the U.S. Government which manages Federal public lands in a trust relationship on behalf of the American people.

On Federal lands leased for livestock grazing, rates are charged per Animal Unit Month (AUM), called a Head Month on Forest Service lands, which is defined as one cow-calf pair or five sheep. Federal grazing fees began at \$1.23 per AUM in 1966, and currently stand at \$1.41 per AUM. Using an inflation calculator, the 1966 grazing rate translates as \$9.66 in 2018 dollars. Meanwhile, the average rate for leasing private pastureland in 16 western states was \$22.60 per head in 2010.<sup>26</sup> In FY 2015, some \$79 million was appropriated to BLM for its rangeland management program, of which \$36.2 million was expended for the administration of livestock grazing on BLM lands; the agency collected \$14.5 million in grazing fees (at \$2.11 per AUM) that same year.<sup>27</sup> As a result, BLM's public lands grazing program ran a deficit in 2015, costing the taxpayers at least \$21.7 million, and arguably \$64.5 million, each year in subsidies to public lands ranchers.

In 2008, as a member of the Laramie City Council, I was appointed as the Council representative to the Monolith Ranch Advisory Committee, and personally tasked as part of the city's team to negotiate grazing lease terms with a private rancher to graze his cattle on the city's Monolith Ranch property. This ranch was purchased

<sup>20</sup> Wyoming Dept. of Administration and Information, Economic Analysis Division, Wyoming GDP Report 2017, [http://eadiv.state.wy.us/i&e/WyoGDP97\\_17.htm](http://eadiv.state.wy.us/i&e/WyoGDP97_17.htm).

<sup>21</sup> Liu, W. 2013. Wyoming Economic and Revenue Trend. Economic Analysis Division, State of Wyoming.

<sup>22</sup> Cullinane et al. 2018. 2017 National Park visitor spending effects: Economic contributions to local communities, states, and the nation. Natural Resource Report NPS/NRSS/EQD/NRR-2018/1616. National Park Service.

<sup>23</sup> The Nature Conservancy 2016. U.S. Beef Supply Chain: Opportunities in fresh water, wildlife habitat, and greenhouse gas reduction.

<sup>24</sup> <http://westernpriorities.org/wp-content/uploads/2018/03/290-Million-Visits-Report.pdf>.

<sup>25</sup> Lorah and Southwick 2003. Environmental protection, population change, and economic development in the rural western United States. *Population and Environment* 24:255-272; Rasker et al. 2013. The effect of protected Federal lands on prosperity in the non-metropolitan West. *Journal of Regional Analysis and Policy* 43:110-122.

<sup>26</sup> Grazing Fees: Overview and Issues. Congressional Research Service Report RS21232, September 29, 2018.

<sup>27</sup> *Ibid.*

for the purpose of perfecting water rights for municipal use. We negotiated a rate of \$14.44 per head-month for summer grazing, which also obligated the rancher to plant and tend crop fields, implement irrigation, and repair or rebuild up to 5 miles of fencing each year. It is my understanding that the city's grazing lease offered more favorable terms to the rancher than the rates charged to lease similar private lands in the Laramie Basin.

It is clear that the \$1.41 per AUM currently charged to public lands grazing lessees is far below fair-market value, and indeed is insufficient even to pay for the cost of administering the program, much less also cover the cost of remediating the damage to public lands caused by excessive or inappropriate livestock grazing on Federal public lands. Private-lands ranchers, who pay taxes on the private lands they graze, are placed at a competitive disadvantage. This is a cruel irony given that private-lands ranchers often are raising livestock in areas with deeper soils and much more abundant rainfall that make them far more ecologically appropriate for cattle. Western public lands are among the most arid and least resilient to livestock grazing damage. These lands are among the least productive places to raise domestic livestock from an economic perspective. Given that livestock grazing interferes with and degrades other uses of the land (including wildlife habitat, watershed protection, and public recreation and enjoyment) that may be substantially more important economically and from a public interest standpoint, running a heavily subsidized public-lands grazing program for the benefit of private ranching interests is a losing proposition for the American people.

PERMIT BUYOUTS OFFER A VERY GENEROUS OPTION TO SOLVE LIVESTOCK-WILDLIFE  
CONFLICTS

Ranching is becoming an increasingly marginal way to make a living, typically requiring one or more unrelated side jobs to maintain a viable income. Ranchers are faced with consolidation in the meat-packing industry, where four corporations control basically all the purchasing of cattle and sheep for meat production and sale. At the same time, drought, which has always been more the rule than the exception west of the 100th longitudinal meridian, brings with it cyclical decreases in water and forage, which are only getting longer and more pronounced with ongoing changes in global climate. When beef prices are low, it is difficult to sustain cattle operations economically, and when drought hits, it is also difficult to prevent ranching operations from cratering from an economic standpoint. It takes a perfect alignment of precipitation and commodity prices to make ranching profitable, and so it should surprise no one that the children of ranching families are increasingly looking to other occupations when they make their career choices.

As a result, family ranches are increasingly run by an aging population, many of whom would like to retire their Federal land allotments, receive a cash distribution from a conservation purchaser, and either retire for good or else trim back their operations to a more manageable private-land operation that they can manage as they age. This is a beneficial outcome for the public, because the removal of livestock gives rangelands a chance to heal and recover, and increase in productivity without the constant grazing pressure of domestic livestock. In conservation, success is often measured by reductions in the losses of natural areas or a slower decline in wildlife populations, so the opportunity to actually increase natural health is a significant one. However, without the assurance that livestock grazing permits bought out and returned to Federal agencies for the benefit of wildlife and habitat restoration won't simply be returned to livestock grazing under a different rancher, it is a poor investment for conservation buyers give substantial money (typically \$250 per AUM) to a grazing lessee to retire a grazing lease. Legislation in the Boulder-White Clouds and Owyhee River wilderness complexes has worked well in stimulating the buy-out of unwanted grazing leases from willing sellers, while requiring permanent closure of these leases for the benefit of livestock and stream health. The Rural Economic Vitalization Act (REVA) would extend this opportunity and option to public lands ranchers nationwide, creating a win-win for conservationists and ranchers without children who want to carry on the family business and who simply would like a golden saddle to ride off into their golden years.

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Mr. McCLINTOCK. Great, thank you. Our final witness is Ms. Stefanie Smallhouse, President of the Arizona Farm Bureau. She comes to us today from Gilbert, Arizona.

Welcome.

**STATEMENT OF STEFANIE SMALLHOUSE, PRESIDENT,  
ARIZONA FARM BUREAU FEDERATION, GILBERT, ARIZONA**

Ms. SMALLHOUSE. Chairman McClintock, Ranking Member Tsongas, and members of the Committee, my name is Stefanie Smallhouse and I am President of the Arizona Farm Bureau Federation. I am presenting this testimony on behalf of the American Farm Bureau, the Nation's largest general farm organization.

America's ranchers appreciate the chance to share information with you about the role we play in strengthening our Nation and providing food security for Americans. The relationship between private lands and government-owned or entrusted lands in western cattle ranching is a very important public-private partnership.

This partnership maintains open space on private, state, and Federal lands through the management of watersheds; encourages capital investments for the benefit of livestock and wildlife on working landscapes; supplies a large workforce to manage and care for the public trust without added expense to the taxpayer; creates economic activity and sustains a tax base for rural communities; and it bolsters our food security through the efficient nutrient conversion of a vast natural resource otherwise unusable for human consumption.

In large part, the American West was settled by farmers and ranchers engaged in livestock production. A significant number of ranching families live in the same place that their ancestors settled in the 19th century, much like my own family. We ranch in southeastern Arizona and my children are the sixth generation to live and work on this ranch. We have been recognized locally and nationally for our conservation ethic, and the sustainability of our practices is very evident in our mere longevity. We also produce a very fine beef product.

The ranch is a working partnership between private, county, state, trust, and Federal lands. The San Pedro River Corridor is an area of heightened environmental awareness for the habitat it provides in an arid southwest environment. In 134 years, we have actually decreased the number of houses in our footprint, while increasing water sources, forage, and open space.

The ranch provides a causeway for wildlife traveling between two mountain ranges. What we refer to as our uplands is primary government-owned or entrusted land. Were it not for our presence along the river, these two upland ranges would exist as solitary and disjunctive areas of habitat.

Private lands are the anchor for millions of Federal and state trust lands, and the assemblage of this relationship results in landscape conservation. Ranchers invest in these lands. We maintain the improvements for everyone's use, and are critical in preventing catastrophic wildfires. Without our water improvements, the 20-year drought in Arizona would have already decimated our local wildlife populations.

The partnership is critical in providing our citizens an abundant and affordable, well-balanced diet. Only 16.5 percent of land in the United States is arable farmland, and the government owns nearly half of the western United States. So, with little land to farm and such a vast area of the country producing cellulose indigestible for

humans, cattle ranching is essential to make efficient use of our resources to feed Americans.

Rural economies are largely dependent upon production industries like agriculture: \$1.2 billion in economic income came from ranching in Arizona, and 6 of our 15 counties depend on ranching as an economic base.

Ranch ecologist Steve Barker has asked the question before—what would it cost the taxpayers of this country to provide the same level of management of public lands that ranchers provide every day? They deter poaching, resource destruction, illegal dumping, and destruction of cultural resources, all while helping and assisting members of the public.

To be brief, there are 3,300 ranches in Arizona who employ a minimum of two people covering 24/7 shifts. Assuming a Federal salary of \$60,000 per employee to replace this presence, the cost to the taxpayer would be a minimum of \$792 million, and likely closer to \$2 billion, considering it would take twice as many employees to cover what we do in rancher hours. This is assuming you could find 13,000 people to live and work in these remote locations, and have the area knowledge and experience that these ranchers have.

The value of this partnership to the American people is at risk. The NEPA process to approve necessary conservation projects has been slowed to the point of complete paralysis in many areas, due to obstruction and threat of litigation from radical environmental groups. NEPA is a necessary analysis, but it was not intended to end grazing in the West. In just one Arizona BLM office, there is currently a backlog of more than 160 projects. These are simple projects, and they are taking 5 to 7 years to gain approval. That is a loss for the American public.

In closing, the existence of cattle ranching in the West is built upon the relationship between the American cattle rancher, like myself, and the public trust, like all of you. Early in the 20th century, it was the rancher who promoted the idea of managed grazing and a permit system to control overgrazing on public lands. In our daily work to produce food for others, we rely on the public to trust our attentions and our stewardship. We do not take this for granted. And in return, we produce safe, nutritious, and affordable food, while conserving landscapes where we work.

A great amount of science, technology, sweat, and heart goes into every acre of land, drop of water, and serving of beef. We trust that our government and the citizenry will support us through these genuine efforts to keep the partnership working for all of us.

Thank you.

[The prepared statement of Ms. Smallhouse follows:]

PREPARED STATEMENT OF STEFANIE SMALLHOUSE, PRESIDENT, ARIZONA FARM  
BUREAU FEDERATION

Chairman McClintock, Ranking Member Hanabusa, and members of the Committee, my name is Stefanie Smallhouse. I am President of the Arizona Farm Bureau Federation and am presenting this testimony on behalf of the American Farm Bureau Federation, the Nation's largest general farm organization. I am honored to be here today to offer testimony to the Committee regarding the Essential Role of Livestock Grazing on Federal Lands and its Importance to Rural America.

Those of us who work in the small percentage of the population producing food and fiber, and the even smaller percentage who produce beef, appreciate the chance to share with you information about the role we play in strengthening our Nation

and providing food security for Americans. I am going to describe the relationship between private lands and government-owned or -entrusted lands within the world of cattle ranching in the West and how this relationship is an important public/private partnership. This partnership maintains open space on private, state and Federal lands through management of watersheds; encourages capital investments for the benefit of livestock and wildlife on working landscapes; supplies a large workforce to manage and care for the public trust without added expense to the taxpayer; creates economic activity and sustains a tax base for rural communities; and bolsters our food security through the efficient nutrient conversion of a vast natural resource otherwise unusable for human consumption.

In large part, the American West was settled by farmers and ranchers engaged in livestock production. When Congress began to regulate livestock grazing on Federal lands, a key component of that regulatory scheme as expressed in the Taylor Grazing Act was the maintenance of the economic stability of the ranching community. Many rural communities throughout the West depend on Federal lands grazing for their economic stability. Ranchers are good stewards of the lands they use. Some of the best wildlife habitat is found on these lands. Federal lands ranchers preserve open space and provide valuable environmental contributions across the West. A significant number of ranching families live in the same places that their ancestors settled in the 19th century.

Drought, wildfire, fluctuating prices and lawsuits have made livestock ranching a much more challenging endeavor in recent years. Fourth and fifth generation ranchers face the loss of their lands. The stability of the ranching community that the Taylor Grazing Act sought to preserve is severely challenged.

My own family ranches in southeastern Arizona. The Carlink Ranch straddles the Lower San Pedro River and operates in the same location it did over 130 years ago. My husband and I are raising the sixth generation to live and work on this cow calf operation. We have been recognized locally and nationally for our conservation ethic and the sustainability of our practices is evident in our longevity. We also produce a very fine beef product!

The ranch itself is a working partnership between private, county, state trust and Federal lands. Our private lands are farmed for irrigated hay and forage crops, which allows us to properly rotate and manage our cattle herd for year-round grazing. The Lower San Pedro River corridor is primarily private and an area of heightened environmental awareness for the habitat it provides in an arid southwest environment. In 134 years, we have actually decreased the number of houses in our footprint, while increasing water sources, forage and open space. Like many other western cattle ranches, the Carlink Ranch provides an open space causeway for wildlife traveling between two mountain ranges. What we refer to as our uplands, is primarily government-owned or -entrusted land. Were it not for our presence along the river these two upland ranges would exist as solitary and disjunctive areas of habitat.

The public-private partnership which exists between ranchers and publicly held grazing lands in the western United States allows us to conserve and efficiently manage the vast natural resources with which we are blessed. Some of the most pristine environments and riparian areas in the West exist on private ranch lands. These lands are the anchor for millions of grazing land acres on Federal and state trust lands. Western ranches tend to be vast in acreage to survive periods of drought, combat creeping development and mitigate for restrictive environmental actions. This requires an assembly of various ownership within one ranch operation; however, the assemblage is managed as one unit regardless of ownership and this is more in line with landscape scale conservation efforts which don't start and stop dependent upon political boundaries. Ranchers invest in working lands infrastructure and maintain that infrastructure for livestock, wildlife, and the public in general. Cattle are an integral part of managing our forests to prevent catastrophic fire and ranchers play an important role in planning for prescribed burning and fire recovery. Grazing management on Federal lands improves watersheds and water infiltration. In Arizona, we are well into a 20-year drought. Without the development and maintenance of the water sources we have for our livestock, wildlife would be without water for most of the year. We have invested a great deal of money in controlling the invasive mesquite tree, which consumes water at an alarming rate and creates a monoculture with little understory vegetation to slow water infiltration.

This partnership benefits the well-being of our citizens and their access to an abundant, affordable and safe source of animal protein for a well-balanced diet. In order to keep that supply abundant and affordable, the production of beef must be efficient. Only about 16.5 percent of land in the United States is arable farmland and used in the production of food, feed and fiber crops; from the remaining undeveloped land we must garner other food sources. Nearly half (47 percent) of the

western United States is owned by the Federal Government and produces cellulose indigestible for humans. The association between cattle ranching and government-owned lands in the western United States is the highest and best use of those lands in assuring a complete and balanced food supply in the United States.

Economic development in many rural communities throughout the West is limited to production industries such as mining, logging and agriculture. In Arizona, the beef industry contributed \$1.2 billion in economic output in 2012 and was considered the economic base in 6 of the 15 counties. Nearly three-quarters of Arizona's total land is managed by grazing (Kerna et al., 2014). Over one-third of all ranches in Arizona include a mixture of two or more government owned lands within the ranch unit and another third consist solely of Federal grazing lands (Ruyle et al., 2000). Generally, ranch lands provide more in tax revenue than they require in services.

Mr. Steve Barker, a range ecologist with a long and respected career in both the public and private sectors, recognized the importance of this relationship several years ago. He asked the question, "What would it cost the taxpayers of this country to provide that same level of management of public lands that ranchers provide every day?" At a minimum, each ranch employs at least two people who are on call for work duty throughout western rangelands 24 hours a day, 7 days a week. These resource managers are a presence in both the widely used recreational areas and the vast remote areas of the western United States. They deter poaching, resource destruction, illegal dumping and destruction of cultural resources, while assisting members of the public in areas where help is hard to find. They generate direct revenue to Federal and state governments through permits and leases for cattle grazing. These land managers provide their own operational equipment, buildings, benefits and administrative necessities. They invest in and maintain range improvements, benefiting livestock, wildlife and the public. Many of these ranchers and their employees have been caretakers of the same resources for their entire lives and often for many generations. They have years of experience and a wealth of knowledge of these environments.

Using Arizona as an example, 85 percent of the state's grazing land, not including tribal lands, is administered by either a Federal agency or state trust land (Ruyle et al., 2000). According to the USDA, in 2012 there were over 3,300 beef cattle ranches in production in Arizona. Given the important relationship between private, Federal and state grazing lands, it's logical to assume most if not all of these ranches are managing Federal and/or state natural resources. State trust land management varies considerably from state to state, but if you were to assume the average salary of a Federal employee to be \$60,000 annually, to replace the ranch workforce would be a minimum increase in Federal spending of \$792 million. This spending would double because the Federal Government would need twice as many employees to cover the 24/7 presence of the rancher. A conservative estimate of the increased taxpayer funding necessary to manage public lands just in Arizona, if ranching were not a permitted use of such lands, would be over \$2 billion and this does not include the additional staff to administer and manage the increased field personnel or the capital investment of the rancher. This is assuming you could find 13,000 people to live and work in remote locations under strained working conditions. The local area knowledge and resource experience would be nearly impossible to replicate.

The value of this partnership to the American people is at risk of being lost to a dysfunctional regulatory system which slows productivity to the point of complete paralysis when confronted by the threat of litigation. The National Environmental Policy Act (NEPA) was a mandate to the Federal Government to consider the effects of their actions, encourage mitigation to reduce negative impacts, and disclose what impacts might result from the action. It was not intended to provide a spring board for special interest groups to file frivolous lawsuits against government agencies for no other reason than to be obstructive, endanger the sustainability of family ranches and earn revenue. This process has veered away from the framework of logical thinking, scientific evidence and partnership planning.

NEPA requires the consideration of the environmental impacts of any major Federal action significantly affecting the quality of the human environment. Compliance with traditional NEPA requirements has placed a tremendous burden on the agencies.

In just one of Arizona's Bureau of Land Management (BLM) Field Offices there is currently a backlog of more than 160 improvement projects. Projects which could be a positive benefit for the land, livestock, wildlife and the public as a whole are sitting inactive in the NEPA process due to the tactics of environmental organizations. Simple fence line and pipeline projects requiring very little NEPA analysis are

taking upwards of 5–7 years to gain approval. During this time, funding assistance for the projects is lost and the greatest losers are the American public.

Responsible grazing is consistent with environmental and conservation goals on the rangeland. While we recognize that NEPA is a Federal requirement, we support modifications to NEPA to expedite the process, make compliance cost effective, recognizing the appropriate role of the permittee in the public involvement process and creating standards that are attainable. It is clear that the current requirements are too much for the agencies to comply with. The large number of allotments and permits, coupled with the dwindling manpower and resources of the agencies, will again inhibit Federal land management agencies from keeping up with their schedule. Congressional oversight of Federal land management grazing programs is required to ensure Federal implementation is effective and efficient. Agencies should focus on cutting red tape so that more time and effort is devoted to on-ground improvements. In addition, greater flexibility should be provided to land managers and permittees, while at the same time improving the conservation of the land. Both Congress and the agencies need to start thinking of how to resolve this problem now. Unless solutions are found, western rangelands and the rural economy will continue to decline.

In closing, the existence of cattle ranching in the West is built upon the important and sometimes strained relationship between the American cattle rancher and the public trust. Early in the 20th century, it was the rancher who promoted the idea of managed grazing and a permit system to control overgrazing on public lands. In our daily work to produce food for others we are dependent upon the public to trust our intentions, our operations and our stewardship. We do not take this trust for granted and strive to better our operations daily. In return we produce safe, nutritious and affordable food while conserving the landscapes where we work and live. A great amount of science, technology, sweat and heart goes into every acre of land, drop of water and serving of beef. We trust that our government and the citizenry will support us through genuine efforts to keep the partnership working for all of us.

#### REFERENCES

Kerna, Ashley, George Frisvold, Russell Tronstad, and Trent Teegerstrom. 2014. "The Contribution of the Beef Industry to the Arizona Economy." Cooperative Extension. Department of Agriculture and Resource Economics. The University of Arizona.

Ruyle, George B., Russell Tronstad, Diane W. Hadley, Philip Heilman, and David A. King. 2000. "Commercial Livestock Operation in Arizona." Livestock Management in the American Southwest: Ecology, Society, and Economics. Ed. R. Jemison and C. Raish. Elsevier Science.

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#### QUESTIONS SUBMITTED FOR THE RECORD BY REP. MCCLINTOCK TO MS. STEFANIE SMALLHOUSE, PRESIDENT, ARIZONA FARM BUREAU FEDERATION

*Question 1. H.R. 2936, the Resilient Federal Forests Act, which was passed by the Committee included a categorical exclusion to expedite bureaucratic environmental reviews for many activities, such as maintenance of water infrastructure to benefit wildlife and livestock and fence modifications to better distribute livestock and improve wildlife habitat. Time and again, we heard how important this CE would be to grazers and land managers alike. However, this common-sense streamlining continued to face opposition from the environmental left.*

*1A. How does red-tape created by Federal laws like NEPA and the ESA impact your family's ability to continue its heritage of responsible grazing on Federal lands?*

Answer. I believe both laws you reference in your question were passed with the good intentions of implementing practical natural resource management and species protection in tandem with production activities. However, much has changed since the 1970s, including monitoring techniques, range management prescriptions, water delivery systems, and the role that radical environmental organizations play in disrupting science based Federal land management decisions. Availability of news tools such as Categorical Exclusions can increase the efficiency in the Federal decision-making process as well as accomplish the goals underlying goals of the environmental law while allowing sustainable livestock production on public lands.

It is necessary in ranching to adjust and improve current production practices and infrastructure to remain efficient, sustainable and competitive. The ranching of



today is very different from that of a century ago. In consideration of riparian areas, unpredictable weather, proactive management of resources, administrative changes in agency offices and labor shortages, land managers must be able to build and maintain fencing and water infrastructure to move and manage cattle efficiently. These practices are done with the intent of conserving the land and water while producing quality beef. As the NEPA process becomes more cumbersome and slow-moving due to litigation, and as the ESA restricts many activities on public lands encumbered with critical habitat areas, it becomes more difficult to move forward with routine ranching activities. Because of the bureaucratic red tape involved with these laws, routine activities can often take 2 or more years for permitting. Under those conditions, staying in business becomes increasingly difficult. Moreover, installation and maintenance of rangeland improvements and new conservation practices can be very expensive and do not pay for themselves. In these cases, ranchers often apply for private, state and Federal funding in the way of cost share and grants to offset the initial investment strain for the rancher. When red tape slows this process down, the funding can be lost which effectively kills the project. When projects don't get built or even maintained, the natural resources suffer, the rancher suffers, and the local economy suffers in the long term.

As a trained wildlife biologist who worked for the Bureau of Land Management in my previous career, I believe wildlife in most instances are perfectly adapted not only to co-exist with grazing and rangeland infrastructure, but absolutely benefit from many rangeland developments. Today, most practices are planned with wildlife use and/or mitigation in mind through required specifications.

*1B. Would streamlining provisions like the one I described that was included in H.R. 2936 be helpful to reducing the red tape faced by grazers and Federal land managers? Would it make it easier and faster to implement smart grazing practices on Federal lands that adapt to the needs of the landscape.*

Answer. Yes, and ranchers are a valuable partner in resource management and rehabilitation following a catastrophic event such as wildfire. In addition to the changes suggested in my previous comments, which also apply to this question, H.R. 2936 would simplify environmental process requirements, reduces project planning times and reduces the cost of implementing forest management projects while still ensuring robust protection of the environment. Farm Bureau policy supports amending current law to provide common-sense relief to the bureaucratic gridlock that has plagued implementation of management decisions on our Nation's forests and rangelands.

The poor health of Federal forests and grasslands threatens wildlife habitat, watersheds, and neighboring non-Federal lands, as well as the vitality of rural communities across the country.

The Resilient Federal Forests Act provides Categorical Exclusions (CEs) under NEPA that will allow needed land management projects to be more quickly prepared, analyzed, and implemented. It will also allow forest recovery projects to proceed more quickly, addressing a dire need created by recent wildfire seasons. Federal land management agencies are experienced with developing management techniques to reduce invasive pests, thin hazardous fuels, create and maintain habitat for species, recover damaged timber and protect water quality. Expediting these projects will efficiently mitigate risk and help maintain critical partnerships with permittees and rural communities.

*1C. How else can Federal laws and regulations be streamlined to better support smart grazing on our public lands?*

Answer. The greatest threat to grazing on public lands is not so much the laws which were enacted with good intent, but how those laws have been hijacked through the use of litigation against the Federal Government by environmental groups. This has paralyzed routine actions involving Federal lands grazing and rangeland management.

The Equal Access to Justice Act: Farmers and ranchers are often targets of activists who seek to drive policy making through litigation. As such, we are very sensitive to how the EAJA functions, and we support reforms to the law to assure that it is not manipulated by legal activists. Farm Bureau policy supports legislation to reform the Equal Access to Justice Act.

Endangered Species Act: For the last 30 years, Congress has been unable to successfully provide meaningful changes to the ESA. In the meantime, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and activist judges have broadened and strengthened the regulatory power of the ESA through rule-making after rulemaking.

It has been nearly 30 years since the last significant amendment to the ESA was signed into law.

Today, the ESA provides “protections” for 1,661 domestic species at a cost to the American taxpayer of roughly \$1.4 billion a year. (FY 2016). However, only 3 percent of species have been successfully recovered and removed from the list since the law was enacted 45 years ago.

ESA modernization is necessary because there are clear shortcomings associated with the upkeep and recovery rate of listed species. Congress intended for the ESA to recover species from the brink of extinction, but the law fails to accomplish its intended purpose by prioritizing species listings over actual recovery and habitat conservation. Unfortunately, the law fails to provide adequate incentives for working lands species conservation and imposes far-reaching regulatory burdens, which restrict agriculture’s ability to produce food, fuel and fiber for consumers here at home and around the world.

For agricultural producers, farm and ranch land is the principal asset used in their business. ESA restrictions are especially harsh for farmers and ranchers because the law can prevent them from making productive use of their primary business asset. Unlike other industries, farmers and ranchers typically live on the land in which they work and operate with a strong focus on both economic and environmental stewardship.

Despite the fact that the ESA was enacted to promote the public good, farmers and ranchers bear the financial brunt of providing food and habitat for listed species through restrictions imposed by the ESA. Society expects that listed species be saved and their habitats protected, but this cost falls on the landowner upon whose property a species is found.

Of course, no one wants to see American wildlife disappear from our landscape, but it is time for common-sense reform that brings farmers and ranchers to the table. I am encouraged by efforts such as those by the Western Governor’s Association to propose meaningful reform to this burdensome regulatory scheme. The legislative package introduced this month by members of the Congressional Western Caucus is similarly a breath of fresh air to American farmers, ranchers, and landowners. By enacting these bills and recommendations into law, the ESA will be modernized to provide clarity and certainty, encourage voluntary conservation, increase local government and stakeholder involvement, and chart a path for real recovery of threatened and endangered species.

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Mr. MCCLINTOCK. Great, thank you very much for your testimony. We will now move to questions by the Committee members, and I will begin.

Mr. Molvar, in your prepared statement you say that livestock grazing is like a slow and invisible cancer that is insidiously and inexorably killing native ecosystems across vast areas. Is your counsel to this Subcommittee to ban cattle grazing outright on the public lands?

Mr. MOLVAR. Chairman, Western Watersheds’ position is that if there is going to be public lands livestock grazing on western public lands, it needs to become compatible with the native ecosystems that are out there.

Mr. MCCLINTOCK. Well, you have basically testified that it is completely incompatible.

Mr. MOLVAR. I am sorry, sir?

Mr. MCCLINTOCK. You have testified it is completely incompatible. Are you advocating banning grazing on public lands in its current form?

Mr. MOLVAR. I have testified that it is causing major ecological problems, and that those ecological problems need to be solved. And if the livestock industry is incapable of solving these problems, then there is a real question of whether the public has an interest of having livestock on those particular public lands where those problems—

Mr. McCLINTOCK. So, you are not going to tell me whether you are going to counsel us to ban it or not.

Mr. MOLVAR. It is not our official position to ban livestock grazing throughout western public lands.

Mr. McCLINTOCK. OK. And in your statement you say that you are the author or editor in chief of 17 books that focus on western public lands. How many of these are peer-reviewed books on wildlife and land management?

Mr. MOLVAR. They are all popular books.

Mr. McCLINTOCK. On hiking, as I understand it.

Mr. MOLVAR. Most of them.

Mr. McCLINTOCK. Dr. Naugle, in your statement you say you are the author of more than 90 papers and 2 books. How many of these are peer-reviewed papers and books on wildlife and land management?

Dr. NAUGLE. All of them. It is the gold standard for science.

Mr. McCLINTOCK. OK. In your view, then, is targeted grazing compatible with wildlife and land conservation?

Dr. NAUGLE. Yes.

Mr. McCLINTOCK. Mr. Molvar tells us that, from his perspective, cattle grazing promotes cheatgrass overpopulation. You have testified exactly the opposite. Would you care to comment on the discrepancies in your two conclusions?

Dr. NAUGLE. I think we are wrapped around the axle on some of the local grazing issues, and I just don't want us to take our eye off the prize of the big threats that are facing us in the West, in terms of wildfire and cheatgrass. We need ranching to help us tackle those.

Mr. McCLINTOCK. So, in your view, targeted grazing is compatible with wildlife and land conservation?

Dr. NAUGLE. Yes, it is an option we are going to need even more as catastrophic wildfire continues to eat up the open space that is available to wildlife and ranching.

Mr. McCLINTOCK. And what environmental benefits have you noted through such practices? Obviously, fire suppression.

Dr. NAUGLE. Fire suppression is one. I will stay in my lane on sage-grouse, since I spent my career on that. And our new science is showing that in grazed pastures compared to idled pastures that haven't been grazed for up to 10 years, Montana State University work is showing that there is actually more food in the form of insects for growing sage-grouse young.

Mr. McCLINTOCK. Would you care to critique Mr. Molvar's analysis of the subject?

Dr. NAUGLE. I wouldn't.

[Laughter.]

Mr. McCLINTOCK. OK. In your testimony, you described the Working Lands for Wildlife program is creating win-win solutions all across the country. You attribute this success to the collaborative approach that pairs ranchers and Federal land management agencies to achieve effective conservation goals.

What is it about this private-public approach that works so well?

Dr. NAUGLE. Working Lands for Wildlife, part of NRCS, works primarily on private lands. But we understand, in our approach, that to keep a rancher ranching, that they also require allotment

renewals on public land. So, we use the strength of the farm bill on private lands, and we also always seek to find compatibility on public land to keep them sustainable and productive.

Mr. McCLINTOCK. Lieutenant Governor Little, I appreciate your remarks about well-intended laws like NEPA and ESA being weaponized by radical groups, groups whose business model basically is, as I said in my opening, sue, settle, and award.

One such group, Advocates of the West, which has represented western watersheds on several frivolous lawsuits, boasts in its annual review that a sizable 31 percent of their entire budget comes from attorney fee awards, a majority of those from judgment funded under the EAGA.

Could you expand on how the actions of these litigious groups are undermining livestock grazing on public lands in your home state?

Mr. LITTLE. Mr. Chairman, they are devastating, particularly when commodity prices are down, cattle and sheep prices are down. They are very disruptive. People's bankers are not very understanding when the security of a year-round operation is jeopardized by a permit renewal or some kind of litigation that means a rancher can not have that year-round operation that they put together for sometimes over 100 years.

So, it is the instability that really creates a problem, not only for the rancher, but the community that is dependent upon that year-round operation.

Mr. McCLINTOCK. Thank you. My time has expired.

Ms. Tsongas.

Ms. TSONGAS. Thank you, Mr. Chairman. I, for one, appreciate that ranching has long supported many western families and lent a unique character to that part of our great country.

And I have respect for it, but at the same time I think we have to balance those economic interests with the multiple use mandate and sustainability of our Federal lands. That is the challenge we face over and over again on this Committee.

Mr. Molvar, the Rural Economic Vitalization Act would authorize voluntary grazing permit retirement and buy-out financed by private parties. This is one possible policy solution that creates an economic incentive to decrease the ecological impact of grazing on Federal lands. In your opinion, how would the buy-out of unwanted grazing leases from willing sellers benefit public lands ranchers nationwide?

Mr. MOLVAR. Mr. Chairman and Representative Tsongas, the Rural Economic Vitalization Act would authorize permits that are bought out for conservation purposes to be permanently closed, thereby giving conservation purchasers the assurance that their purchases will be a good investment in the future of the lands in question, and will actually remove the cattle for the long term.

In environmental conservation, for the most part, we are now fighting a fighting retreat as human footprints expand and wild places and native ecosystems shrink and species head toward extinction. When you actually retire a grazing permit, and the livestock are removed, that means the grasses get to recover, the wildlife get to have their full measure of forage, the habitats go back

toward a native state, and you lose the invasive species like cheat-grass over time.

So, nature actually has a chance to heal, and you can move the environment in a positive direction. It is rare in conservation to be able to move the environment in a positive direction. For the most part, we are basically trying to fight as hard as we can to hold on to what few wild areas we have left.

Ms. TSONGAS. And we have to remember this Act does talk about willing sellers.

Lieutenant Governor Little, as a rancher whose family has been long in that field, do you see a program like this offering an option to those families who have been invested in ranching for decades, if not longer, but who want to retire from that field? Do you see this as a way forward for some family ranchers?

Mr. LITTLE. We would never advocate for the wholesale buy-out. There might be instances where, in small areas, it can be used. But for the most part, if you permanently retire livestock, you have lost that tool. And more importantly, if you close off an allotment, the rancher retires, moves away, everybody that supports the rancher moves away. We have lost that initial attack that we have for fires, for noxious weeds, for other rascallions that may be out there on the public land doing whatever it might be. So, the loss of that tool, the downside versus the upside, should be measured very, very carefully wherever it is looked at.

There are instances where some small changes to allotment will make a great difference in whatever prescribed landscape the public decides they want to have there. But the loss of livestock as a tool is a catastrophic move that the public needs to be very careful about implementing.

Ms. TSONGAS. But do you see any benefit to the family ranchers themselves, who are just trying to find a way out which provides them with some financial security?

Mr. LITTLE. Well, if the alternative is a closure of their allotment, there are some instances where it might be. But for the most part, it should never, ever be the first choice. It should be the last choice because there are some resources so critical, it happens all the time in the development field.

But remember, the unintended consequence of that permit being retired. What happens to that private ground that is adjacent to it? And what happens to the total public good of having that intact ranching community that Dr. Naugle talked about as far as sage-grouse habitat, wildlife habitat, being able to manage these ecosystems to where you are generating the right kind of winter feed for the ungulates?

The total consequences of it are more often negative than they are positive.

Ms. TSONGAS. Thank you. I would love to have this bill come forward from our robust discussion. But, I have lost my time.

Mr. MCCLINTOCK. Thank you.

Ms. TSONGAS. Thank you.

Mr. MCCLINTOCK. Mr. Westerman.

Mr. WESTERMAN. Thank you, Mr. Chairman, and thank you to the witnesses today.

Ms. Smallhouse, in your testimony, you have talked about how important grazing and ranching are for rural Arizonians. I am from Arkansas. We have about 5.6 million acres of private and public lands that are set aside for grazing. I know that is a small number compared to out West. We measure our cattle farms in acres, and you measure your ranches in sections.

Nevertheless, it is very important to our state's economy. Beef cattle actually make up half of all the farms in Arkansas, and that economic value is not only felt across the 4th District that I represent, but all across the state.

As a young man, I was in the Future Farmers of America. I remember learning the creed, and the line in it sticks in my mind that says, "I know the joys and discomforts of agricultural life." I actually had one of these small cattle farms at one time and it made me joyful and brought me some discomfort. I was happy when I got those cows, had a lot of discomfort when we had drought and there was no grass for them to graze, when predators killed my calves. And then I was very happy when I sold my herd to my friend. But I understand the challenges that ranchers and cattle farmers face.

Ninety-seven percent of our farms in Arkansas are small family farms. When the Federal Government makes it harder to ranch, they are typically the ones that lose out. What impact do Federal regulations have on our rural families all across the country?

Ms. SMALLHOUSE. Well, any time you make someone's job more difficult it has a negative impact and costs you money out of not only your pocket, but your ability to produce for the country.

We have the Endangered Species Act, as to what was referred to before. This is something that is a very serious issue for folks ranching in the western United States. Sixty percent of habitat is on private lands, and those Federal lands tie those private lands and keep them into open space. So, any time you have an endangered species designation on your property, it restricts what you can do. The Federal Government manages species that are even candidate species for endangerment, and also continues to manage in the same way once they have been de-listed for about 5 to 7 years. So, it could be a pretty binding regulation if you find yourself in that situation.

That is sort of what leads to our NEPA delays, and how long it is taking for very simple projects that have no impact upon endangered species or the health of the environment. It is taking them so long to get through.

When it takes you 5 to 7 years to get a conservation practice on the ground, and you have funding available to you through the NRCS programs—we have ranchers who have lost \$150,000 in cost share, so they were willing to invest another half of that of their own money. That is a loss to the American public and management of the public lands, but it is also an income loss to that rancher, and makes it more difficult for them to stay on the land.

Mr. WESTERMAN. And even though we have seen farm incomes shrinking significantly over the past decade, grazing still provides steady family wages in many places across the Nation. Some of our anti-grazing opponents argue that seasonal recreation jobs like

guiding and working in an outfitter can serve as a replacement for grazing.

Given not only your background as a rancher, but your experience living and working in the West, do you believe this to be true? And can these seasonal jobs really replace ranching?

Ms. SMALLHOUSE. Representative Westerman, can you repeat the question?

Mr. WESTERMAN. Do you think that seasonal and recreational jobs could replace ranching in the West? Could they provide those steady family incomes, like ranching does?

Ms. SMALLHOUSE. For the rancher?

Mr. WESTERMAN. Right.

Ms. SMALLHOUSE. Absolutely not. I think that you are looking at seasonal jobs. That is a seasonal job. I have to eat every day. I don't know, some people may be able to eat seasonally, but my family needs to eat every day.

Mr. WESTERMAN. Thank you and, Mr. Chairman, I yield back.

Mr. MCCLINTOCK. Mr. Gallego.

Mr. GALLEGO. Thank you, Mr. Chair. Thank you all for being here.

Mr. Molvar, grazing on Federal land is highly subsidized, and costs American taxpayers millions of dollars every year. Both the Forest Service and BLM spend much more on administering the grazing program than they receive in the actual grazing fees.

In your opinion, would there be significant economic impact to rural western economies if Federal grazing fees were adjusted to a level that would at least allow the Forest Service and BLM to break even, in terms of the administration of the program?

Mr. MOLVAR. Representative Gallego, certainly the current grazing rate of \$1.41 per animal unit month is far less than the \$22.60 in those same western states that private grazers pay to lease private grazing lands.

And I would like to point out, when I was on the City Council of Laramie, Wyoming, I was on the Ranch Advisory Committee, and I negotiated a private grazing lease with our lessee. That grazing rate that we negotiated was \$14.44 an animal unit month for summer grazing, and that included that the permittee had to pay out of his pocket to fix or replace 5 miles of barbed wire fence every year and plant and tend the city's crops that were irrigated on the Monolith Ranch.

So, the idea that the Federal Government is allowing private livestock to graze on public land for this pittance of \$1.41 an animal unit month, instead of charging fair market value, even as it runs these giant deficits at taxpayer expense, means that the U.S. taxpayers are funding huge subsidies to the livestock industries for the privilege of having cattle to graze on their public lands, to reduce the fish populations that they want to fish for, to reduce the elk and deer populations that they want to hunt for, and to degrade the health of the land, overall, where they want to camp and recreate.

And when you get right down to it, when you look at the pluses and minuses in the economics, what you find is that the vast majority of the American public cannot see the benefit of paying to have this private use on public land with these kinds of impacts.

Mr. GALLEGO. When was the last time the fee did increase?

Mr. MOLVAR. Well, most recently the fee decreased. I believe it was \$2.11, and then it went down to about \$1.83, and then it went down to \$1.41. We are talking about \$1.41 compared to 1978, when they started the program, it was \$1.35. So, it is \$.06 more than it was in 1978. If you do the inflation calculator, you find that the grazing fee, just by pure inflation, ought to be at least \$9.00 an animal unit month.

And importantly, Representative Westerman talked about his private land's livestock grazers. They are paying the full market value. They are paying the taxes on the lands where they graze. They are competing, in some measure, with these public lands grazers that, in fact, make up only 1.9 percent of the beef produced in the United States.

So, why are we so vastly subsidizing these 22,000 ranching families in the West to produce a product that makes up 1.9 percent of America's beef at the cost of all of these land health problems and all of this public recreation benefit? It just does not make a great deal of sense.

Mr. GALLEGO. Kind of sticking on this subject matter, in 2016 there was a report by the GAO on authorized grazing, and they found that the Forest Service and BLM could not accurately report unauthorized grazing figures because, according to agency officials, the agencies prefer to handle most incidents informally with a telephone call and not to actually record anything. And further, the penalties assessed by the Forest Service when unauthorized grazing occurs are so low that it doesn't act as a deterrent.

Knowing the Federal program is already operating on a deficit and the charge rates are far below market value, would you agree that it is time for the agencies to strengthen their internal controls relating to tracking and mitigating unauthorized grazing, as well as raising the penalties and actually enforcing the penalties to a level that provides an actual meaningful deterrent to those illegal grazers?

Mr. MOLVAR. It is absolutely true that illegal grazing on Federal public lands is far more widespread than is reported. The BLM range management officials are thinly stretched, understaffed, and they are stuck in their offices, so they are not out on the land to see these grazing trespasses that are chronic.

Cliven Bundy is the most famous grazing trespasser, but he is certainly far from the only one. Western Watersheds Project, in our field work, sees this all the time. And it is far past time for the United States to start operating its public lands grazing program with some kind of accountability, so that grazing permittees that are actually grazing more cattle than they are allowed, or grazing in places where the cattle are not permitted to be, are held to account. And ultimately, if they have several violations, they ought to lose their permit.

Mr. GALLEGO. I yield back.

Mr. MCCLINTOCK. Chairman Bishop.

Mr. BISHOP. Thank you. I appreciate the opportunity of being here and listening to the testimony. I would also like to tell Mr. Westerman when you sold your cattle, that is not isolated. It is the same thing as the two greatest days in the life of anyone who owns



a boat—when he bought it and when he sold it. So, it is the same thing.

[Laughter.]

Mr. WESTERMAN. Been there, too.

Mr. BISHOP. Yes. Doctor, can I ask you a simple question? Because you mentioned sage-grouse, and I have a passing interest in that issue.

[Laughter.]

Mr. BISHOP. But I appreciate the data that you are giving us, because the conventional wisdom, especially the old Fish and Wildlife management's conventional wisdom, was that grass height and elevation of the land were the two key factors. You are saying that there are other factors that could be successful in making sure that habitat takes place?

Dr. NAUGLE. Yes. A centerpiece of science is to continually test assumptions. And with our new grass height evaluation, we found that a generation of scientists, myself included, have been measuring this the wrong way.

I will go biological on you for a minute. We have always feared, as scientists, of approaching a nest from an incubating female, for fear that she would abandon the nest. So, if you have a nest that fails early, perhaps it is predated, it takes a couple more weeks for the other nest that is successful to hatch young. So, that gives those spring grasses a lot longer to grow.

Well, we go to those nests that fail, and we wait until they hatch, so that the incubating female doesn't leave, and we have artificially created this relationship of grass height to nest success. When we go and remove that bias by establishing a common time frame for all the nests, there is no difference in grass height. That is that thickness of a penny. So, we are kind of wrapped around the axle of this precisionism concept, where kind of a one-size-fits-all right now on that land policy—

Mr. BISHOP. So, what you are telling me is there is an old science that has been assumptions and there is some new science that is challenging those assumptions all the time.

Dr. NAUGLE. Yes, sir.

Mr. BISHOP. Governor Little, or Lieutenant—well, Governor Little.

[Laughter.]

Mr. LITTLE. I answer to both.

Mr. BISHOP. OK. The state of Idaho has a habitat plan. They have been required to do it. Does your habitat plan take into account these changes in scientific basis? Does it do it far sooner than the Fish and Wildlife Service back here in Washington does?

Mr. LITTLE. Any good resource plan is adaptive. And there isn't hardly any piece of real estate that doesn't have different nuances. And that is the beauty of having these big issues addressed at the state and local level, where the scientists and the resource managers on the ground go out and look in each and every one.

But time and time again, what we have discovered in Idaho is the two biggest threats to sage-grouse are invasive species and fire. And if you don't address those two big challenges, the nuances—

Mr. BISHOP. And you are saying grazing can help on the fire suppression at the same time?

Mr. LITTLE. Absolutely. For fuel management, most important is initial attack. The fact that the agencies continue to consolidate their firefighters and the ranchers are dispersed, and it is that initial attack where it saves you, the people that have to write the checks for these fires, saves you an enormous amount of money by having that initial attack by those ranchers who are out on the ground.

Mr. BISHOP. So, the fact that, under past DOI policies, AUMs have been declining and decreasing in the United States actually harms in this process. It harms in causing more fires, it harms actually not having the habitat for these endangered species.

And you didn't even talk about ravens, another endangered species that eats the endangered species. And try to tell me which endangered species is actually the more important there.

I have one last question to ask you, because I am running out of time and there are so many issues that you all brought up here, some of them good, some of them really comedic.

However, it has been brought up about how people are willing to pay more money for private property for grazing than they are on BLM land. I can understand that, because private property is better for grazing than BLM land. Is there some logic to that?

Mr. LITTLE. Well, Mr. Chairman, if you had a map of the West, my ancestors, when they came here, they homesteaded all the water. Unfortunately, this Committee's jurisdiction is over a lot of dry ground. It is rocky and steep, and it doesn't have access.

Mr. BISHOP. You mean like Dugway, which is actually a bombing range? I am sorry you can't grow cheatgrass there.

Mr. LITTLE. So, it is the fact that these ranchers are put together with that private ground, where the water is, and—

Mr. BISHOP. I am over time, so I am going to cut you off. I apologize for that.

Let me ask one last question, though, maybe to Mr. Westerman.

While you were grazing cattle did you actually have 170 lawsuits brought against you, like BLM does?

Mr. WESTERMAN. Not even one lawsuit.

Mr. BISHOP. OK, fine.

Mr. MCCLINTOCK. Mr. Pearce.

Mr. PEARCE. Thank you, Mr. Chairman.

Ms. Smallhouse, we have the Federal agencies that oversee grazing in New Mexico right next door to you. I suspect they are similar DNA when you deal with the agencies. And we had the Forest Service kick 17 ranchers off their historic allotments, saying that the grass wasn't high enough. Mr. Molvar mentioned the grass height as being a key.

So, we asked for their science. They responded by sending us a picture of an orange bucket turned upside down, a 5-gallon bucket turned upside down, and said it is not as high on the bucket as it is supposed to be.

Do you ever run into that kind of science, when you are dealing with the agencies in Arizona?

Ms. SMALLHOUSE. Unfortunately, yes, that is the case. I haven't heard of anything close to an orange bucket, but I think that ranchers, one of the roles they fill on these permits, is actually going out and running range transects. So, the information that

they are gaining on their allotments is valid and useful scientific information that otherwise, I guess, we would just be getting from an orange bucket.

Mr. PEARCE. Yes. So, what we did is actually engage the scientists at New Mexico State, which the government didn't bother doing. And they actually said the grass is probably higher than it had ever been historically, so all 17 ranchers got the opportunity to reinstate their claim there.

You have heard Mr. Molvar's testimony, that grazing on Federal lands is a gift, it is less than maybe one-twentieth of the cost. It is just rainbow stew out there. The ranchers are willing to come and just take advantage of it.

Now, in western New Mexico, where we have most of the public lands, we are actually seeing the ranchers on public lands decrease. So, the animal units are actually decreasing across the West since we have no Federal land and we don't have a tax base because they were only able to tax the property, they are not able to tax the land. So, our counties are simply going broke out in the West.

Are you finding that ranchers are standing in line to get access to these Federal lands with this rainbow stew that Mr. Molvar points out is available at such cut-rate prices? Are you finding a different thing than I am finding in New Mexico, Ms. Smallhouse?

Ms. SMALLHOUSE. I think that ranchers do what they do because they love their job. I certainly didn't fly in a private jet here. So, the subsidization that is being talked about, you have to remember that the price of beef is nearly the same as it was 20 years ago. So, to talk about grazing permit prices and how they need to increase with inflation, well, that would mean that you would be paying a lot more for your pair of boots and the steak that is on your plate.

Ranchers are price takers, we are not price makers. And the American public has shown that they support safety nets for agriculture since we passed the first farm bill, because it is food security. So, I think it is very important to recognize that when you talk about the struggles and the permit costs for Federal lands.

Mr. PEARCE. Mr. Naugle, you heard Mr. Molvar's testimony that actually the cheatgrasses are probably responsible for a lot of the fires, that they burn more easily.

I grew up in New Mexico, and we have had Bermuda grass, we have had bluegrass, we had grama grass, we had Johnson grass. And every single bit of it, when it is dry, when I dropped a match into it, would be within 5 to 50 acres to 100 acres within the flash of an eye. Do you find scientific merit in the idea that cheatgrass, the proliferation of that across the West is the reason we are burning our forests down?

Dr. NAUGLE. Cheatgrass grows earlier in the spring. It cheats, it takes advantage, and then it dries and cures and becomes rapidly flammable.

Mr. PEARCE. Other grasses are not? They are not rapidly flammable when they dry?

Dr. NAUGLE. They are, but cheatgrass out-competes perennials. The perennials are the deep-rooted component of the native system that is more resistant and resilient to fire and would be preferable, from a wildlife—

Mr. PEARCE. Because our scientists in New Mexico show us that 100 years ago, when we didn't have the number of trees per acre that we do now, that actually we had grasslands, and I suspect it wasn't cheatgrass back then, and that, instead of forest fires, we actually had grass fires. And they would burn all the grass in an area, regardless of what kind it was, but we didn't have the destruction to our watersheds that we have now, because now the Forest Service management allows the trees to proliferate.

So, if we are really concerned about the watersheds in the West, we would have a balanced thinning program in our forest, to where we wouldn't burn everything, and then the next rain, the resulting mudslides into the creeks, into the watersheds are destroying all the fish, all the wildlife in the West.

You can take a look at Bonita Lake in New Mexico to see exactly what happens there. It was the water source for Alamogordo and Holloman Air Force Base. It used to be 75 feet deep. After one fire and then the next rain it has 50 feet of fill, killed all the fish. It is not usable for water any more. So, that is the destruction of the watersheds.

I don't think the grazing or cows is destroying the watersheds nearly as much, Mr. Chairman, as the fires across the West. I would yield back my time. Thank you, Mr. Chairman.

Mr. McCLINTOCK. Mr. Thompson.

Mr. THOMPSON. Thank you, Chairman. Thanks, members of the panel, for being here.

Ms. Smallhouse, thank you for coming to testify before the Subcommittee. The Resilient Federal Forest Act, which was passed by the Committee, included a categorical exclusion to expedite bureaucratic environmental reviews for many activities, such as the maintenance of water infrastructure, livestock, and fence modifications. These CEs would improve wildlife habitats and better distribute livestock.

Time and again, we hear how important this CE would be to grazers and land managers. However, this common-sense streamlining continues to face opposition from the environmental left.

How does the Federal red tape like NEPA and the Endangered Species Act impact your family's ability to continue its heritage of responsible grazing on Federal lands?

Ms. SMALLHOUSE. Chairman McClintock, Representative Thompson, I appreciate that question.

The fact is that we have tried to make this process more common sense in areas of conservation improvements, so that ranchers can take advantage of good times when they can implement these practices, and for the benefit of endangered species, as you mentioned. All of these things benefit the species that are out there.

The categorical exclusions continue to be an issue in the fact that if a permit gets renewed through more of a streamlined process, there can be no changes to the permit. There can be no new improvements. You can only maintain what was already there. And, like any business, you want to invest in your business, you want to make it better. It becomes more and more difficult, the harder it gets to do these things.

It was mentioned earlier that BLM employees are strapped and in their offices too much, and not able to go out and manage. And

I would argue that is because they are doing too much paperwork related to lawsuits. That is not helpful to getting conservation practices out on the ground.

Mr. THOMPSON. Some people portray categorical exclusions, when we debate those, we incorporate those into legislation, they portray that as the fact that we just totally ignore environmental concerns. I want to get your opinion. Is that true? Or are we just talking about addressing those environmental concerns in a more streamlined, efficient manner?

Ms. SMALLHOUSE. It is about addressing them in a more streamlined, efficient manner.

If you have a fence line and you need to go out and fix it, the environmental impact is going to be absolutely minimal. And NEPA was created in such a way that you could recognize those processes which have very minimal environmental impact and be able to utilize the law efficiently. But when you are under the threat of litigation constantly, you can't even do that.

Mr. THOMPSON. Thank you.

Governor Little, thank you for being here. The Western Watersheds Project has been an active litigant against seeking to halt grazing in the name of sage-grouse protection. However, it seems that their litigation track record is inconsistent with its goals.

In one such instance, the USDA APHIS wildlife services completed a full NEPA analysis and made a final decision to approve targeted and scientifically supported predator control of ravens in those areas where the bird was found to be significantly harming sage-grouse populations by destroying the eggs and attacking the chicks.

As a resident and elected official of the state of Idaho, a state that has taken a leadership role in promoting sage-grouse species recovery, how would you characterize the threat that the ravens and similar predators pose to sensitive sage-grouse populations?

Mr. LITTLE. Well, if you are going to manage these things, which we absolutely need to, manage the resource, manage the critical wildlife species, there is no question that sage-grouse falls into that category.

We need to go back and look at the genesis of both the Endangered Species Act and NEPA, and that is to restore the species and not to allow these super laws to overlap and cause a disruption on what we should be doing—not only the disruption and not managing and, obviously, logically, that ravens, compared to the desert tortoise, where that was an issue in an earlier life that I had, or today in sage-grouse—that we don't allow these fine points of litigation to get in the way of what the big goal is, and that is to restore these species.

We have had a few court rulings recently where they said, look, there has been a consensus by the community. The public has had their input in the NEPA, and the court has ruled that this is within the authority of the agency to do this. We just need to accelerate that going forward to where we are doing the right thing to actively manage these species and not be frozen in time in just doing nothing, because it is not good.

And the worst thing is what a terrible waste of the Federal agencies and the land manager's time it is, instead of getting along with active management.

Mr. THOMPSON. Thank you.

Thank you, Chairman.

Mr. McCLINTOCK. Mr. Tipton.

Mr. TIPTON. Thank you, Mr. Chairman. Very interesting discussion.

I would like, Lieutenant Governor Little and Ms. Smallhouse, if you would expand a little bit more in terms of the benefits of grazing, if you agree with that, in terms of being able to deal with wildfire.

I come out of Colorado. We have several significant fires that are burning right now: the 416 Fire near Durango, Colorado; the Spring Creek Fire, which is now the second-largest fire in Colorado history, over 107,000 acres; and the Lake Christine Fire near Basalt, Colorado.

In terms of being able to actively manage some of those lands, and to be able to have the grazing, how important is that? Because as I have looked through our areas, they are mostly watershed, as a matter of fact, is being impacted in the 416 Fire, and going to have some long-term economic impacts.

When we are looking at feed for wildlife, when we are looking at impacts on our water, when we are looking at the impacts, actually, to endangered fish in the streams, once that area burns, how important is it to be able to use that tool in the toolbox of having responsible ranchers graze?

Ms. SMALLHOUSE. Chairman McClintock, Representative Tipton, the grazing of forest land, it is about much more than even just wildland forests. It is about overgrowth. Overgrowth causes catastrophic wildfires, as you have suggested. It also creates less percolation into the ground for our watersheds. This is something we are extremely concerned about in Arizona, as I know you are in Colorado, as well, in the Colorado River Watershed.

So, grazing management offers the opportunity to manage the understory, manage those watersheds so that we get maximum water infiltration, and also break up these monolithic forest stands that we have that lead to these catastrophic wildfires.

I don't know who said it, but someone said nature makes for a poor gardener. Nature burns the forest to the ground, and it takes 100 years to get it back. It is imperative that we have ranchers out there managing for the public's best interests.

Mr. TIPTON. All right. Governor Little?

Mr. LITTLE. Well, big ecosystems require specific management. And whether by litigation edict or by over-arching rules from the Potomac River, you just don't get it done. These ecosystems evolved over years, and there are places where we need to really work. And the biggest threat right now is fire.

My ancestors had a history of being fire introducers, and then my ancestors' ancestors, the tribes, that was part of what they did. They utilized fire in certain instances. But today we have a whole different situation to where we have to be in front of these big, catastrophic fires because of the big changing effect that a hot fire will have, and that is initial attack and fuels management.

And the livestock industry is a key component of both of those aspects, initial attack, and we know what field we have the cattle in, and our rotation. We can say, from a fire standpoint, when we are there with a manager that says you need to get up this road to get in front of this fire, because that is a rested field, and that is the important part, we know that we have fuels controlled in another area. So, being a part of the solution when we have a fire is something ranchers do.

Mr. TIPTON. Thank you for those comments. I am pretty much a firm believer that some of the best custodians of our public lands happen to be our ranchers and what they are able to contribute, putting in stock ponds that wildlife can drink out of, and taking care of invasive weeds that come in. And I appreciate that work.

Mr. Naugle, I would like you to speak a little bit more. We have sage-grouse as an issue in our district. We have actually found some ways to be able to reinvigorate the species through science. It has worked in Colorado, but it is going to take a collaborative process at the local level, working with local ranchers and farmers, to be able to actually reinvigorate that species.

Would you speak to the importance of having that local commitment, given that we have a different type of geography in a lot of our areas that the species are in?

Dr. NAUGLE. Heterogeneity across the sage-grouse range is enormous. And through USDA's Working Lands for Wildlife and doing the outcome-based evaluations for NRCS, being part of those teams, I see that every time that you have some of those local folks that understand that variability you always come out with a better outcome that is more durable.

Mr. TIPTON. Great, thank you.

My time is expired, Mr. Chairman.

Mr. MCCLINTOCK. Mr. Gianforte.

Mr. GIANFORTE. Thank you, Mr. Chairman, for calling this hearing on this important topic, and for the experts we have at the panel today.

Montana has a rich history of ranching and grazing, which extends back before our statehood. Many of our ranchers are fourth, fifth, and sixth generation families that know the land, have worked through extreme drought, heavy flooding, and varying seasons. Our ranchers have been stewards of the land because their livelihoods have depended on it.

The only constant has been an increasing Federal presence in their lives. Over 30 percent of Montana's land is federally owned, including large swaths of central and eastern Montana, the base of our grazing community. It is important to have agencies that work with, not against, our ranch families to accomplish rangewide goals.

I have heard from many ranchers in Montana that complying with Federal regulations can threaten their very viability. The experience of over 100 years of working the land, combined with new data from work like that of Dr. Naugle's, can create a collaboration that keeps the land in production, as well as improving critical habitat for species like the sage-grouse.

My questions are for you, Doctor. It is great to have you here. Thank you for making the trip out. You have really made it your

life's work to study the nexus of ranching, grasslands, and sage-grouse. And in your testimony you highlight some of the misrepresentations surrounding sage-grouse studies, specifically the 7-inch grass height rule.

After groups tried to use a study which you were a participant in to shut down public grazing, you responded appropriately that overgrazing was not the problem, but we could still use more information. Could you elaborate a little bit on some of the other factors that contribute to the success or decline of sage-grouse?

Dr. NAUGLE. The range of sage-grouse from its historic range has been cut in half. And I have a hierarchy in my mind, and grazing is one of those compatible land uses that, if you can have ranchers on the team, to get that local durability, compared to these big and over-arching, vexing issues like catastrophic wildfire, cheatgrass, invading pinyon-juniper—where we live in eastern Montana, the biggest one is when we lose ranchers to farming. We published a paper 2 years ago that showed that every time 1 square mile of big and intact grazing lands gets cultivated into a wheat field, it affects sage-grouse on a landscape 12 times that size. So, when we do voluntary conservation easements, apply other NRCS farm bill practices, they have to match that tremendously large scale at which sage-grouse and ranchers view the landscape.

Mr. GIANFORTE. How can our ranchers help improve the landscape habitat through volunteer programs?

Dr. NAUGLE. We sat down with the Fish and Wildlife Service and we have conditioned these practices with NRCS, so that they are good for grouse and good for ranching. So, it is that win-win solution. If they decide to come in, and that is their family's decision, we can offer, through NRCS, a set of practices that we know will be good for grouse and we know will help their bottom line and their sustainability.

Mr. GIANFORTE. OK, and as it warms up, we have had some discussion here about wildfires. And that is certainly where our concern turns, particularly in Montana.

Have you done any research on grazing and landscape resiliency to fire? What can you share with us?

Dr. NAUGLE. Again, back to the deep-rooted perennials that are resistant to fire, resilient, and then, when we do have a fire, the ability to have budgets to go ahead and get in fast and spray pre-emergent herbicides and seed those areas to try to get a jump on cheatgrass so that they remain native and intact.

Mr. GIANFORTE. Have you done any research on the effect of grazing and its interaction with wildfires?

Dr. NAUGLE. Not personally, I have not.

Mr. GIANFORTE. OK. Does grazing reduce fuel loads?

Dr. NAUGLE. Yes, there is new work. It is not mine, but it shows that it is not necessarily the shrubs that always carry the fire, but it is the herbaceous vegetation between the shrubs. So, if you graze periodically and keep fire loads in check, you may still have a fire, but it may be a few thousand acres, and not a million.

Mr. GIANFORTE. And you say there is scientific research on the interaction between grazing and wildfires and fuel loads that you might be able to point us to?

Dr. NAUGLE. Yes.



Mr. GIANFORTE. OK. Thank you, I yield back.

Mr. McCLINTOCK. Mr. Curtis.

Mr. CURTIS. Thank you, Mr. Chairman. I also would like to express my appreciation to those who have come to testify today.

If I could start with Ms. Smallhouse, you represent the Farm Bureau. If your work in Arizona is anything like the Farm Bureau in Utah, your state is lucky to have you, and the influence of the Farm Bureau in Utah is very important.

I represent a number of counties that have up to 92 percent Federal land. There really is no legitimate option for private land in these situations, as you can well imagine. These counties are also struggling. We have double-digit unemployment in many of these counties. And I am wondering if you can comment about the importance of grazing on economic development in our rural counties and rural parts of our states.

Ms. SMALLHOUSE. Chairman McClintock, Representative Curtis, thank you for the question. Living in a rural area of Arizona, I experience firsthand how difficult it is for these local economies to keep going. There are a lot of areas, especially in these areas that are heavily public lands, there is very limited opportunity for economic development. Most of the economic development that can keep these communities going are the opportunities that exist on those public lands.

Now, there are several opportunities. There is recreation, there is sportsman's use, and there is basically grazing. The recreation and the sportsman's use would be very difficult to continue without grazing there as a base use on those lands. So, not only by removing grazing from these public lands and these rural areas are you impacting the rancher and that part of the rural economy, but you are also stripping away the potential for further economic development through those other uses.

Mr. CURTIS. Is it fair to say that, as a general rule, these prices that are set for grazing, that nobody is really getting rich in these rural communities off these prices?

Ms. SMALLHOUSE. Well, I think you can tell by the amount of people going out of the ranching business that that is not the case. We certainly don't have people, as was said before, rushing to the BLM office to pick up these permits. It is something that you do because you love, and you love the land, and you want to manage.

Mr. CURTIS. Thank you. I am working on some public lands bills and you might have well experienced the controversy that comes with public lands bills. What do you think is the best way to resolve the conflicts that come surrounding these Federal lands that we have?

Ms. SMALLHOUSE. I actually think that the conflicts are very specific, narrow, and targeted. I think the general public supports our use of public lands. I think the general public is very supportive of agriculture, in general.

I think what we have is groups of environmental organizations who have discovered how to use environmental laws like the Endangered Species Act and NEPA as a tool, like a bat, over our heads. And that is not what those laws were intended for. I think that if we had a laser focus on how to address the misuse of NEPA

and ESA, then that would be very helpful in keeping these programs efficient and effective.

Mr. CURTIS. Is it fair to say that these ranchers often feel villainized and that they are made out to be the bad guys through this environmental process that you described?

Ms. SMALLHOUSE. As was mentioned earlier, I certainly don't think being referred to as a cancer is a compliment.

Mr. CURTIS. Good point.

Dr. Naugle, a lot of my ranchers are concerned about the decreased amount of grazing that is allowed on Federal lands. It brings a lot of uncertainty to their lives, and they see a pattern of fewer and fewer animals on the land. Are there potential benefits to increasing grazing in certain areas?

Dr. NAUGLE. I can speak to the compatibility of grazing and wildlife conservation. There are two new studies that are not mine, the first one is actually from the University of Idaho that shows a higher sage-grouse nest survival in grazed versus idled pastures. And then they are also looking at insect abundance, and finding that periodic grazing by livestock increases food abundance. And, of course, that is in a dryer system farther west than in the Rocky Mountains, where I do most of my work.

Mr. CURTIS. Very well, thank you.

Mr. Chairman, I yield my time.

Mr. MCCLINTOCK. Mr. LaMalfa.

Mr. LAMALFA. Thank you, Mr. Chairman, for allowing me to sit in today on the Committee.

Panelists, thank you for coming here today. Obviously, it is a tough issue when you have the enviros versus the people out there being stewards of the land. What I looked at is that if we did not have grazing on these western lands—and I would like to toss this first to you, Dr. Naugle, what would it look like in the West, if we did not have this, as far as fire suppression and things you mentioned there with the rotation of the landscape?

If this was completely cut off, like Mr. Molvar would like to see happen with very little to no grazing on these western lands, as a management tool, as well as whatever economics people might, what would that look like in 20 years?

Dr. NAUGLE. Heterogeneity is enormous. I would caution myself against ever making a sweeping general statement, but I believe some ecological sites would have the potential to grow more vegetation. Sites that are already over-run with cheatgrass would become more flammable. And I don't think anybody would disagree that, from a grouse perspective, our next biggest issue is catastrophic wildfire that is most vexing.

Mr. LAMALFA. Indeed. Anecdotally, I can show you photographs here of grazed management areas where a wildfire burned right up to the fence line where the grazing stops, and they were able to get a handle on the fire, obviously, at that point.

Ms. Smallhouse, what would you have to offer on that thought? What would our western lands look like if we didn't have this as a tool?

Ms. SMALLHOUSE. I think it is very difficult to ask questions like that, because questions like that tend to assume that everywhere surrounding those lands looks like it did 200 years ago. In order

for us to not have a human presence on these watersheds, we would not be able to exist. And I think that sometimes the argument is presented by environmental organizations that we can manage our lands as if that were the case, and it is not.

So, I think it just depends on where you are at. Like Dr. Naugle stated, it just depends on where you are at and the management that is taking place. I think there are definitely areas that would have a negative impact from that. And it would not only be on the environment, but it would also be to local economies and just families like my own.

Mr. LAMALFA. Well, environmental groups don't tend to care about local economies, as they are all about every last fish or every last grouse. In my own back yard, for example, we have the Shasta-Trinity Forest and Plumas that have 14 and 22 vacancies for grazing allotments currently. And once those have been allowed to lapse, and then boom, you are into the weaponizing of the NEPA process, which basically puts complete brakes on ever getting back in there, due to the cost, due to the hassle involved in doing that. So, areas like mine suffer with even more wildfire in that situation.

Mr. Molvar, are you a beef user, consumer?

Mr. MOLVAR. Since I joined Western Watersheds Project and I started learning more about the impacts, I eat a lot less beef than I used to. I think hunted native species provides most of my red meat, pronged-horn antelope, specifically.

Mr. LAMALFA. Would you expect 300 million Americans out there that like meat products to be doing that, as well?

Mr. MOLVAR. I would not. But on the other hand, as 98 percent of America's beef is produced from private lands, if the public lands livestock grazing program were to magically disappear tomorrow, which I am not suggesting that it will, that America's beef consumers would not only have just as much beef as before, but they wouldn't even notice a price difference.

Mr. LAMALFA. Wouldn't notice a price difference? I think they would in the West.

Lieutenant Governor Little, what would be the effects in your region, which reminds me a lot of my own Northern California, of the continued effort to weaponize the NEPA process and, in general, run the beef business out of our public lands? Many times they are adjacent to private lands, in which case we see the Federal Government lands are bad neighbors to private lands. You can ask the Hammonds about that.

Mr. LITTLE. There are a lot of ancillary impacts, obviously, and what I alluded to in my testimony about the loss of that infrastructure in those communities. People that go to enjoy the public lands in the West rely on the hospitals, rely on the schools, rely on the commerce that exists there. And if those families are displaced, and it is only seasonal occupants, a lot of those communities will collapse.

Mr. LAMALFA. Indeed, all those people that come from the city and like going hiking in these back woods and all those wonderful outdoor activities would find there is no infrastructure to support them should they get in trouble, right?

Mr. LITTLE. And the fact that the private land that is provided would probably, in many instances, be subdivided if they didn't

have that adjacent permit to operate. The beef industry, particularly in the states that we represent up here, is very dependent upon that critical time period when that livestock is on those public lands. It is that winter range, that summer range that makes the rest of a ranch operate, whether it is a forest permit or a BLM permit, which is an integral part of these ranches that have been built for hundreds of years.

Mr. LAMALFA. Indeed, urban ideology and not having any idea what it is like to operate or live in those rural areas, other than visitation. Thank you, sir.

I yield back, Mr. Chairman.

Mr. MCCLINTOCK. Thank you. I want to thank our witnesses for their expertise and guidance. It has been a very interesting hearing, and their presence here is much appreciated.

We may have some additional questions. If we do, we would ask that you respond to them in writing. Under our Committee Rules, Members would have to submit witness questions within 3 business days following the hearing, and the hearing record will be held open for 10 business days for those responses.

If there is no further business before the Subcommittee, without objection, the Subcommittee stands adjourned.

[Whereupon, at 11:28 a.m., the Subcommittee was adjourned.]

[LIST OF DOCUMENTS SUBMITTED FOR THE RECORD RETAINED IN THE COMMITTEE'S OFFICIAL FILES]

### **Rep. Grijalva Submissions**

- Study entitled “Ecological Impacts of Public Land Grazing in the American West and Why These Impacts Need to be Reduced or Eliminated,” by Roberta L. Beschta and J. Boone Kauffman, Oregon State University, dated July 25, 2018.
- Testimony of the Public Employees for Environmental Responsibility dated July 12, 2018.

