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CLIMATE CHANGE HAS BEEF WITH FEDERAL CATTLE GRAZING

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ABSTRACT

Increased emissions of greenhouse gases are causing the Earth's climate to change producing extreme temperatures and dangerous conditions for mankind. Livestock is positioned at a unique juncture of the current and future fight against atmospheric temperature rise. These animals produce the very nutrients a growing world population needs to survive, and the meat they yield plays an important role in all world cultures. Unfortunately, the production of livestock is considered one of the most significant emitters of greenhouse gases, of which cattle is the largest contributor. Therefore, a balance must be struck between livestock production and preservation of the Earth. One way to rebalance this relationship would be to reform the federal cattle grazing permit system.

Federal land in the Western United States contains hundreds of millions of acres and makes up over half the landmass of some states. The Bureau of Land Management and Forestry Service oversee most of the federal land in the West. On this land, these agencies operate grazing

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programs in which they allow private ranchers to apply for permits to graze cattle on the lands for a fee. The fee is based on an archaic formula that has not been updated in decades and is based on outdated economics of cattle grazing. As a result, the permit fee is far below market value, and the government operates the cattle grazing programs at a deficit of tens of millions of dollars annually.

The subsidizing of cattle grazing on land owned by the American people, which directly exacerbates climate change, is wrong. Action should be taken to redress the impacts on the climate and the costs to the federal government. Modernizing the permit fee can be accomplished by a two-fold change. First, the minimum rate has to be raised to make certain the government is at least getting close to a fair price. This avenue was pursued but ultimately not accomplished in the Obama Administration. Second, the permits should be auctioned to the public for a price in excess of the minimum rate, and the permit length shortened to allow more frequent fee adjustment through auctions. Additionally, the increased revenue resulting from these changes should be allocated to efforts to mitigate cattle production's effect on climate change.

INTRODUCTION

“Few can be cattlemen,”¹ is certainly a true statement, but the effects of cattle impact us all. Increasing emissions of greenhouse gases are causing the Earth's climate to change, producing extreme temperatures and dangerous conditions for mankind. Livestock sit at a unique juncture of the current and future fight against atmospheric temperature rise. These animals produce the very nutrients a growing world population needs to survive, and they often hold significant roles in various cultures.² Unfortunately, cattle in particular emit dangerous greenhouse gases³ that will need to be curbed to slow global warming and its perilous effects.

¹ Proud Cattle Men (@proud cattlemen), INSTAGRAM, <https://www.instagram.com/proud cattlemen/> (last visited Nov. 2, 2020).

² Atli Arnarson, *Beef 101: Nutrition Facts and Health Effects*, HEALTHLINE (Apr. 4, 2019), [The 'Splainer: What Makes the Cow Sacred to Hindus?, WASH. POST \(Nov. 5, 2015\), \[https://www.washingtonpost.com/national/religion/the-splainer-what-makes-the-cow-sacred-to-hindus/2015/11/05/acdde3e2-840c-11e5-8bd2-680fff868306_story.html\]\(https://www.washingtonpost.com/national/religion/the-splainer-what-makes-the-cow-sacred-to-hindus/2015/11/05/acdde3e2-840c-11e5-8bd2-680fff868306_story.html\).](https://www.healthline.com/nutrition/foods/beef#:~:text=Red%20Meat%20Is%20Very%20Nutritious&text=Vitamin%20B3%20(niacin)%3A%2025,better%20than%20iron%20from%20plants)

³ Veerasamy Sejian et al., *Global Warming: Role of Livestock*, in CLIMATE CHANGE IMPACT ON LIVESTOCK: ADAPTATION AND MITIGATION 141, 151 (Veerasamy Sejian et al.

People often look at the vastness of the American West and wonder, “who owns all this land?” Generally, the answer is the federal government, and thus the American people. To benefit food production, utilize natural resources, and provide employment, the federal government allows private citizens to graze cattle on much of this land by granting grazing permits.⁴ These permits typically allot ranchers a certain number of cattle to graze on specific plots of federal land in exchange for a fee paid to the government.⁵ This is a fair enough premise. But the government has run the program at a loss of tens of millions of dollars for decades.⁶ Running the program at a loss would potentially be acceptable under different circumstances, but when this same cattle production contributes to the heating of the planet and destruction of federal land, it must be improved.

The federal government must stop running its grazing program at a huge financial loss by increasing the base fee to graze the land. In addition, when grazing permits reach their renewal stage, they should be put up for auction on the open market so they can be sold for a rate reflecting their value. The money received in excess of the base permit fee would then go to an Environmental Protection Agency (EPA) fund that partners with the private sector to reduce greenhouse gas emissions.

This paper will begin with a brief discussion of livestock’s particular impact on global warming. Next, it will describe the development of federal regulations for cattle grazing on public lands and the current regulatory scheme. The paper will then explain why the current regulations, specifically the PRIA formula, are failing miserably. It will propose a relatively straight-forward solution, the B.E.E.F. system, which addresses both the fee receipts deficit and the impact of cattle grazing on climate change. The paper labels this solution the *Bettering Environments and Economies Fund* (B.E.E.F.) system. Lastly, there will be a discussion of potential issues and arguments against the B.E.E.F. system.

I. IMPACT OF CATTLE ON CLIMATE CHANGE

The scientific community is nearly unanimous in the viewpoint that the Earth’s atmosphere is warming, causing a myriad of negative impacts

eds., 2015); M. Melissa Rojas-Downing et al., *Climate Change and Livestock: Impacts, Adaptation, and Mitigation*, 16 CLIMATE RISK MGMT. 145, 152 (2017).

⁴ See *infra* Section III.

⁵ See *infra* Section III.B.1.

⁶ See *infra* Section IV.B.

to society.⁷ The scientific community also agrees that human behavior is contributing to rising temperatures through the emission of greenhouse gases (GHGs) and other actions like deforestation.⁸ Since the year 1750, human activity has increased atmospheric levels of the GHGs carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O).⁹ From 1880-2012, on average, the land and ocean surface temperatures have risen 0.85 degrees Celsius.¹⁰ In fact, climate models suggest global surface temperatures are already 0.5 degrees Celsius (0.9 degrees Fahrenheit) warmer than the 1986-2005 average global surface temperature, indicating an exponential rate of warming.¹¹ “It is extremely likely that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in greenhouse gas concentrations and other anthropogenic forcings together.”¹² An increase of 2 degrees Celsius above pre-industrial average global temperature is the customary marker (though partially politically calculated) of when the impacts of climate change will be disastrous.¹³ These disastrous results include: increased weather related mortality; extreme floods, droughts, and wildfires; increased human displacement and poverty; food production difficulties; and ecosystem failures.¹⁴

The global raising of livestock is a significant factor in the emission of greenhouse gases and contributes more GHG emissions than the entire transportation industry.¹⁵ “A major study by the United Nations Food and

⁷ *Scientific Consensus: Earth's Climate is Warming*, NASA, <https://climate.nasa.gov/scientific-consensus/> (last visited May 12, 2021).

⁸ *Id.*

⁹ Thomas Stocker et al., Intergovernmental Panel on Climate Change, *Summary for Policy Makers*, in CLIMATE CHANGE 2013: THE PHYSICAL SCIENCE BASIS 3, 11 (Thomas Stocker et al. eds., 2013).

¹⁰ *Id.* at 5.

¹¹ Rebecca Lindsey & LuAnn Dahlman, *Climate Change: Global Temperature*, NAT'L OCEANIC & ATMOSPHERIC ADMIN. (Mar. 15, 2021), <https://www.climate.gov/news-features/understanding-climate/climate-change-global-temperature#:~:text=By%202020%2C%20modelm%20project%20that,emissions%20pat hway%20th%20world%20follows>.

¹² Stocker, *supra* note 9, at 17.

¹³ *Why 2 Degrees Celsius Is Climate Change's Magic Number*, PBS (Dec. 2, 2015), <https://www.pbs.org/newshour/show/why-2-degrees-celsius-is-climate-changes-magic-number> (Additionally, the 2 degrees Celsius number was chosen by political bodies as a number that would be convenient to enable collective action. Though it matches up with some estimations of the appropriate goal, the number is not solely science based.)

¹⁴ Christopher B. Field et al., Intergovernmental Panel on Climate Change, *Summary for Policymakers*, in CLIMATE CHANGE 2014: IMPACTS, ADAPTATION AND VULNERABILITY 1, 6-7 (Christopher Field et al eds., 2014).

¹⁵ Rojas-Downing et al., *supra* note 3, at 152.

Agriculture Organization (FAO) concluded that livestock production is ‘one of the top two or three most significant contributors to the most serious environmental problems, at every scale from to local to global,’ and it is a ‘major stressor on many ecosystems and the planet as a whole.’¹⁶ Livestock production accounts for about 14.5% of total greenhouse gas emissions.¹⁷ Methane and nitrous oxide are the two most significant greenhouse gases released from livestock production.¹⁸ Methane’s effect on global temperature rise is 28 times that of CO₂. Nitrous oxide is even more potent as its effect on global temperature rise is 265 times that of CO₂.¹⁹ Emissions from livestock constitute 44% of the global anthropogenic emissions of methane and 53% of the emissions of nitrous oxide.²⁰ Livestock GHG emissions come from enteric fermentation (the digestive process of breaking down the plant’s biomass), respiration, excretions, manure application, production of feed crops, and processing of products.²¹ The United States is responsible for the fourth largest amount of methane emissions globally.²²

Cattle is responsible for a majority of global livestock GHG emission, contributing 65% of the sector’s emissions.²³ Cattle raised for beef specifically are responsible for 45% of the entire livestock sector’s GHG emissions.²⁴ A majority of these emissions come from enteric fermentation.²⁵ The gaseous waste from this process is mainly removed from the body through eructation.²⁶ Of all livestock, beef production releases the highest emission rate per unit of product, at 300 CO₂

¹⁶ Debra L. Donahue, *Trampling the Public Trust*, 37 B.C. ENVTL. AFF. L. REV. 257, 293 (2010).

¹⁷ Giampiero Grossi et al., *Livestock and Climate Change: Impact of Livestock on Climate and Mitigation Strategies*, 9 ANIMAL FRONTIERS 69, 69 (2019).

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ Rojas-Downing et al., *supra* note 3, at 151.

²¹ *Id.* at 152.

²² *Id.* at 154.

²³ *Key Facts and Findings*, FOOD AND AGRIC. ORG. OF THE UNITED NATIONS, <http://www.fao.org/news/story/en/item/197623/icode/> (last visited Nov. 3, 2020).

²⁴ Grossi et al., *supra* note 17, at 70.

²⁵ Higher quality forage results in lower methane emissions because it is more easily digestible. *Id.*

²⁶ *Id.*

equivalents²⁷ per kilogram of protein produced.²⁸ Meanwhile, chicken and pork products produce less than 100 CO₂ equivalents per kilogram.²⁹

In addition to cattle's impact on climate change, global warming will have an impact on cattle. A decrease in natural water in these regions, an expected result of climate change, will result in a decrease in forage, further straining the land.³⁰ Even the plants that are able to grow will have increased lignin and cell wall components which will reduce the digestibility and decrease nutrient availability for cattle.³¹ Other expected impacts of global warming on cattle include increased water demands, decreases in body mass, decreased reproduction rates, and higher mortality rates.³²

While demand for livestock products is expected to increase 100% by midcentury, climate change will affect competition for natural resources, biodiversity loss, heat stress, and quality of feed and forage.³³ The focus of this paper is on direct GHG emissions, but livestock also have other negative impacts on the environment like land use change and degradation, air and water pollution, and biodiversity destruction.³⁴ Experts agree that any comprehensive solution to climate change must address livestock production.³⁵

II. FEDERAL CATTLE GRAZING REGULATORY STRUCTURE

Federal regulation of cattle grazing in the West covers sixteen states: Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, New Mexico, Nevada, North Dakota, Oklahoma, Oregon, South Dakota, Utah,

²⁷ "A carbon dioxide equivalent or CO₂ equivalent, abbreviated as CO₂-eq is a metric measure used to compare the emissions from various greenhouse gases on the basis of their global-warming potential (GWP), by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential." *Glossary: Carbon Dioxide Equivalent*, EUROSTAT STATISTICS EXPLAINED (Mar. 9, 2017), https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Carbon_dioxide_equivalent#:~:text=A%20carbon%20dioxide%20equivalent%20or,with%20the%20same%20global%20warming.

²⁸ *Key Facts and Findings*, *supra* note 23.

²⁹ *Id.*

³⁰ Hillary M. Hoffmann, *Demand Management, Climate Change, and the Livestock Grazing Crisis in the Great Basin*, 6 GEO. WASH. J. ENERGY & ENVTL. L. 14, 21 (2016).

³¹ Rojas-Downing et al., *supra* note 3, at 147.

³² *Id.*

³³ *Id.* at 146.

³⁴ *Id.* at 151.

³⁵ Donahue, *supra* note 16, at 260 (citing U.N. Found. & Sigma Xi, *Confronting Climate Change: Avoiding the Unmanageable and Managing the Unavoidable* 95 AM. SCIENTIST 1, 69-70 (2007)).

Washington, and Wyoming.³⁶ Federal lands make up a large portion of many of these states. On the extreme end in Nevada, federal land exceeds 80% of the entire land in the state.³⁷ Other states that are largely comprised of federal land include Utah (63.1%), Idaho (61.9%), Oregon (52.3%), and Wyoming (46.7%).³⁸

A. *Statutory Provisions*

1. *Before regulation*

Cattle grazing on federal land has not always been regulated. The industry grew immediately following the Civil War, but it mostly consisted of nomadic herders moving unrestricted across the land.³⁹ In 1862, Congress passed the Homestead Act which opened federal land to ownership by anyone who settled and cultivated it.⁴⁰ This and other laws distributing federal lands increased competition for public land, and ranchers began fencing off the areas of public land on which they generally grazed.⁴¹ Tensions reached their peak in the 1880s and 1890s with “range wars” between cattle and sheep ranchers.⁴² The first attempt by Congress at addressing range problems was the Unlawful Inclosures Act of 1885.⁴³ This Act prohibited the fencing off of public lands to limit private claims for public land made without color of title.⁴⁴ However, the law’s impact on conflicts between ranchers was minimal because it did not address the underlying issue; there was not enough water and forage for the quantity of grazing livestock.⁴⁵ By 1897, the federal government had recognized grazing as a legitimate use of Western federal lands.⁴⁶ In 1905, the Forest Service (FS) established a public policy for National Forests to allow grazing so long as it did not negatively impact forest

³⁶ CHRISTINE GLASER, CHUCK ROMANIELLO & KARYN MOSKOWITZ, *COST AND CONSEQUENCES: THE REAL PRICE OF LIVESTOCK GRAZING ON AMERICA’S PUBLIC LANDS* 9 (2015) [hereinafter “GLASER”].

³⁷ CONG. RSCH. SERV., R42346, *FEDERAL LAND OWNERSHIP: OVERVIEW AND DATA* 8 (2020).

³⁸ *Id.* at 7-8.

³⁹ GLASER, *supra* note 36, at 7.

⁴⁰ Hoffmann, *supra* note 30, at 19.

⁴¹ GLASER, *supra* note 36, at 7.

⁴² Hoffmann, *supra* note 30, at 20.

⁴³ *Id.*

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ *Why Does the Forest Service Permit Livestock Grazing on National Forest System Lands?*, U.S. FOREST SERV., <https://www.fs.fed.us/rangeland-management/grazing/allowgrazing.shtml> (last visited May 11, 2021).

conservation.⁴⁷ This regulation had limited impact and overuse continued to deteriorate the land.⁴⁸

2. *Taylor Land Grazing Act*

The first major effort at sweeping regulation to curb the destruction of Western lands was the Taylor Grazing Act of 1934.⁴⁹ The stated goal of this law was to “stop injury to the public grazing lands by preventing overgrazing and soil deterioration, to provide for their orderly use, improvement, and development, to stabilize the livestock industry dependent upon the public range, and for other purposes.”⁵⁰ The Act gave the Secretary of the Interior the responsibility to regulate cattle grazing on 80 million acres of unreserved federal land.⁵¹ The Secretary was to organize grazing districts and issue permits to ranchers.⁵² It created a preference that the permits be granted to persons “within or near” the grazing district, and it set the permit duration at 10 years.⁵³ The Act allowed for ranchers to make alterations to their permitted lands that were necessary for grazing livestock.⁵⁴ It also provided for 25% of the fee to be used by the Secretary for “the construction, purchase, or maintenance of range improvements” and for 50% of the fee to be given to the State in which the district was located.⁵⁵

This Act had its desired impact: implementation of the Act resulted in overall livestock reduction and elimination of nomadic herds.⁵⁶ It also set in place the tenets that still make up the backbone of current regulations. In 1946, the Grazing Service (the division of the Interior handling grazing responsibilities) merged with the General Land Office to form the Bureau of Land Management (BLM) within the Department of the Interior.⁵⁷

⁴⁷ *Id.*

⁴⁸ GLASER, *supra* note 36, at 7.

⁴⁹ See *Taylor Grazing Act*, THE LIVING NEW DEAL, <https://livingnewdeal.org/glossary/taylor-grazing-act-1935/> (last visited May 11, 2021).

⁵⁰ Taylor Grazing Act of 1934, Pub. L. No. 73-482, 48 Stat. 1269, 1269 (1934) (prior to 1936 amendment).

⁵¹ *Id.*

⁵² *Id.* at 1270.

⁵³ *Id.* at 1271.

⁵⁴ *Id.*

⁵⁵ *Id.* at 1273.

⁵⁶ GLASER, *supra* note 36, at 7.

⁵⁷ *Id.*

3. *Granger-Thye Act and the Federal Land Policy and Management Act (FLPMA)*

The Granger-Thye Act of 1950 brought the Forest Service cattle grazing regulations in line with BLM regulations by creating a similar grazing permit and fee structure. It also authorized land improvement from funds generated by grazing fees and set permit durations at a maximum of ten years.⁵⁸

The Federal Land Policy and Management Act became law in 1976 and governs how the BLM manages its lands. The Act requires that “the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition.”⁵⁹ Moreover, the Act requires the Secretary of Agriculture and the Secretary of the Interior establish a fee for the grazing permits under their control that is equitable to the rancher and the United States.⁶⁰ Of that fee, 50% is used for “range rehabilitation, protection, and improvements” because the federal lands were “deteriorating in quality.”⁶¹ Of that 50%, half is put into projects taking place where the money was derived and the other half is distributed to other projects determined by the relevant Secretary.⁶² Importantly, the law also grants priority of renewal to the rancher currently holding the permit if they and the land are in good standing.⁶³ This is still the law the BLM operates under in 2021.

4. *Public Rangelands Improvement Act (PRIA)*

Another significant law impacting federal cattle grazing permits today is the Public Rangelands Improvement Act of 1978 (PRIA). In enacting PRIA, Congress recognized that “vast segments of public rangelands are ... in an unsatisfactory condition.”⁶⁴ The government determined that overgrazing “may ultimately lead to unpredictable and undesirable long-term local and regional climatic and economic

⁵⁸ *Laws, Regulations, and Policies*, U.S. FOREST SERV., <https://www.fs.fed.us/rangeland-management/aboutus/lawsregs.shtml> (last visited May 11, 2021).

⁵⁹ 43 U.S.C. § 1701(a)(8).

⁶⁰ 43 U.S.C. § 1751(b).

⁶¹ 43 U.S.C. § 1751(b).

⁶² *Id.*

⁶³ 43 U.S.C. § 1752(c).

⁶⁴ Hoffmann, *supra* note 30, at 21.

changes.”⁶⁵ One way PRIA addressed the overgrazing was making changes in management policies to resolve conflicting legal demands on ranchers and improve cooperation among the relevant government agencies.⁶⁶ The most important aspect of PRIA, for the purposes of this paper, was the establishment of a formula that automatically set grazing fees for the lands managed by the BLM and FS. The fee is calculated to determine the economic value of the land to the rancher, and will be discussed in greater detail in the following section. The calculation determined the grazing fee should be \$1.23 per AUM⁶⁷ for the years 1979-1985.⁶⁸ The calculation did not provide for regional variation; all the regulated land in the 16 states covered by PRIA would operate under the same permit fee. The fee was not allowed to increase by more than 25% from the previous year.⁶⁹

When the trial period of the PRIA formula ended, President Ronald Reagan signed Executive Order 12548.⁷⁰ The Order made the PRIA formula the permanent method for calculating the grazing permit fee but, importantly, set a minimum fee of \$1.35 despite any calculation results below that total.⁷¹ It also kept the cap of a 25% annual fee increase.⁷² This is the current system that determines BLM and FS grazing fees.

5. *National Environmental Policy Act (NEPA)*

In 1970, the National Environmental Policy Act (NEPA) was enacted to “to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man.”⁷³ It requires government agencies to consider the environmental impacts of their proposed actions that “significantly affect[] the quality of the human environment.”⁷⁴ NEPA is significant to federal regulation of cattle grazing because the issuance of a federal grazing permit generally triggers the NEPA process.⁷⁵

⁶⁵ *Id.*

⁶⁶ Jimmy Carter, Public Rangelands Improvement Act of 1978 - Statement on Signing H.R. 10587 into Law - October 27, 1978, 1978 Pub. Paper 1875 (1978).

⁶⁷ *See infra* Section B.1. (explaining the standardized unit).

⁶⁸ 43 U.S.C. § 1905.

⁶⁹ *Id.*

⁷⁰ Exec. Order No. 12548, 3 C.F.R. 188 (1986).

⁷¹ GLASER, *supra* note 36, at 8.

⁷² *Id.*

⁷³ 42 U.S.C. § 4321.

⁷⁴ 42 U.S.C. § 4332(C).

⁷⁵ GLASER, *supra* note 36, at 7.

NEPA imposes what many ranchers consider an “onerous process” that requires a good deal of time and effort.⁷⁶ At a minimum, to have their permit renewed, ranchers will generally have to create a document called an Environmental Assessment (EA).⁷⁷ If their conduct will clearly have “significant impacts” on the environment, the rancher will be required to engage in the more complex Environmental Impact Statement (EIS) process.⁷⁸ The EA process requires the applicant to consider and report “[p]erceived environmental consequences of proposed actions and a range of alternatives.”⁷⁹ It typically begins with a Proposed Action document produced by the rancher.⁸⁰ This document begins with the “grazing history and . . . management of the last ten years.”⁸¹ The applicant and agency (FS or BLM) will also gather data to identify the improvements or needs of the land and the corresponding desired conditions.⁸² Then the relevant government agency will prepare the EA.⁸³

Next, the applicant will work with the agency on issue identification and scoping. Scoping is the process of receiving public commentary on the proposed plan and is required for all FS applications.⁸⁴ For the BLM, only major proposed actions require public scoping.⁸⁵ During scoping, the agency circulates documents from the applicant that include: a recitation of issues of concern; description of the allotment; past project successes and failures; mitigating factors; monitoring data; goals; environmental impacts, and more.⁸⁶ Based on resulting comments, the applicant will help develop alternative plans with less environmental impact and analyze the effects of the new plans, though they are not required to adopt the alternatives.⁸⁷

Finally, the agency will issue a Decision Notice (for the FS) or a Decision Record (for BLM) with a determination of a “Finding of No

⁷⁶ Todd Neeley, *Proposed NEPA Change Lauded by Ranchers*, Progressive Farmer (Jan. 9, 2020), <https://www.dtnpf.com/agriculture/web/ag/news/world-policy/article/2020/01/09/trump-proposal-said-speed-approval>.

⁷⁷ *National Environmental Policy Act Review Process*, EPA (Sept. 17, 2020), <https://www.epa.gov/nepa/national-environmental-policy-act-review-process>.

⁷⁸ *See id.*

⁷⁹ JIM SPRINKLE ET AL., NEPA FOR RANCHERS 1, <https://extension.arizona.edu/sites/extension.arizona.edu/files/attachment/gila-nepa-for-ranchers.pdf> (*last visited* May 12, 2021).

⁸⁰ *Id.* at 19.

⁸¹ *Id.* at 2.

⁸² *Id.* at 2-3.

⁸³ *Id.*

⁸⁴ *Id.* at 5.

⁸⁵ *Id.* Scoping is required for all FS proposed actions including EAs. *Id.*

⁸⁶ *Id.* at 5-6.

⁸⁷ *See id.*

Significant Impact” if the agency finds that the permit will have no significant impact on the environment.⁸⁸ A finding that the permit will have a “significant impact” requires undergoing the Environmental Impact Statement process.⁸⁹ After the conclusion of one of these processes, the permit applicant can implement the planned actions but they still need to monitor their actions because “mistakes, new information, changed conditions, or unanticipated effects” may require alteration of the plan.⁹⁰ In 2020, the Trump Administration shortened the NEPA review length as it applies to federal cattle grazing.⁹¹ Ranchers have long felt such a complex system is not appropriate for their conduct and this adjustment is unlikely to change their outlook.⁹²

B. *Federal Management*

1. *Bureau of Land Management and Forestry Service*

The Forest Service, under the Secretary of Agriculture, and the Bureau of Land Management, under the Secretary of the Interior, are the primary federal entities responsible for managing the federal grazing program. The BLM manages 154.1 million acres of land that is available for cattle grazing.⁹³ Most of the BLM’s land consists of arid and semi-arid land that was not claimed during the disposition of most Western land through the Homestead Act and related laws.⁹⁴ The FS manages an additional 93 million acres of cattle grazing lands⁹⁵ on U.S. forestlands and National Grasslands. The FS organizes its data based on geographic regions, the largest of which is the Intermountain Region (Nevada, Utah and Idaho) containing 24,107,000 acres of federal grazing land.⁹⁶ BLM

⁸⁸ *Id.* at 12.

⁸⁹ *Id.*

⁹⁰ *Id.*

⁹¹ Jeff Brady, *Trump Overhauls Key Environmental Law to Speed Up Pipelines and Other Projects*, NPR (July 15, 2020), <https://www.npr.org/2020/07/15/891190100/trump-overhauls-key-environmental-law-to-speed-up-pipelines-and-other-projects>.

⁹² See Carol Ryan Dumas, *Ranchers Welcome NEPA Modernization*, CAP. PRESS (Jan. 15, 2020), https://www.capitalpress.com/ag_sectors/livestock/ranchers-welcome-nepa-modernization/article_97d55592-37b4-11ea-b008-6fdaeb808287.html.

⁹³ CAROL HARDY VINCENT, CONG. RSCH. SERV., RS21232, *GRAZING FEES: OVERVIEW AND ISSUES 1* (2019) [hereinafter *GRAZING FEES*].

⁹⁴ Brian L. Frank, *Cows in Hot Water: Regulation of Livestock Grazing Through the Federal Clean Water Act*, 35 SANTA CLARA L. REV. 1269, 1278 (1995).

⁹⁵ *GRAZING FEES*, *supra* note 93, at 1.

⁹⁶ GLASER, *supra* note 36, at 9-11.

and FS lands are also generally available for purposes other than grazing because both agencies are multiple-use agencies.⁹⁷

The permitting systems of the FS and the BLM are similar. Both agencies divide their lands into allotments of widely varying sizes.⁹⁸ The BLM requires permit applicants to own or control a base property that is “capable of serving as a base of operation for livestock use of public lands within a grazing district.”⁹⁹ The FS generally requires base property as well.¹⁰⁰ Permits are generally for a duration of ten years with non-competitive renewal.¹⁰¹ The permit holder does not obtain title to the land they are grazing.¹⁰²

Permits are issued for a certain number of cattle determined by the particular allotment’s Animal Unit Month (AUM) capacity. An AUM is a “standardized unit of measurement of the amount of forage necessary for the complete sustenance of one animal unit for a period of 1 month.”¹⁰³ In practice, one AUM means “the use of public lands by one cow and her calf, one horse, or five sheep or goats for a month.”¹⁰⁴ So one hundred acres of lush ranching land will have a higher AUM number permitted than one hundred barren acres.¹⁰⁵

The BLM issued 17,886 grazing permits and leases in 2017 which resulted in 8,820,617 AUMs grazing that year.¹⁰⁶ From 2002-2013, the BLM averaged 8,359,496 AUMs grazing its land.¹⁰⁷ The four states with the most BLM grazing lands are Nevada (39,331,000 acres), Utah (19,321,000 acres), Wyoming (15,917,000 acres), and New Mexico (11,533,000).¹⁰⁸

⁹⁷ *Id.* at 6; see BLM’s “Multiple Use Mandate” – *What Does That Even Mean?*, Bureau of Land Mgmt. (Mar. 9, 2016), <https://www.blm.gov/or/districts/burns/newsroom/files/multipleuse.pdf>.

⁹⁸ GLASER, *supra* note 36, at 8.

⁹⁹ 43 C.F.R. § 4110.2-1(a)(1) (2021). Base property may also be “contiguous land, or, when no applicant owns or controls contiguous land, noncontiguous land that is capable of being used in conjunction with a livestock operation which would utilize public lands outside a grazing district.” *Id.* § 4110.2-1(a)(2).

¹⁰⁰ *How Do I Get a Grazing Permit?*, U.S. FOREST SERV., <https://www.fs.fed.us/rangeland-management/grazing/permits.shtml> (last visited Nov. 3, 2020).

¹⁰¹ GLASER, *supra* note 36, at 8.

¹⁰² *Id.*

¹⁰³ *Id.* at 8 n.2.

¹⁰⁴ *Id.*

¹⁰⁵ “The land area needed to produce an AUM will differ considerably depending on soil productivity and precipitation.” *Id.* at 12.

¹⁰⁶ GRAZING FEES, *supra* note 93, at 1.

¹⁰⁷ GLASER, *supra* note 36, at 12.

¹⁰⁸ *Id.* at 36 (numbers based on 2004 data).

In 2017, the FS had 6,146 active permits and 6,803,425 AUMs grazing.¹⁰⁹ The average number of AUMs grazing FS land from 2002-2013 was 6,335,542.¹¹⁰ Together with BLM AUMs, the two agencies managed over 15.6 million AUMs grazing on federal lands in 2017.¹¹¹

Other federal agencies also manage grazing lands, for example the National Park Service, the Department of Defense, and the U.S. Fish and Wildlife Service.¹¹² Altogether these agencies manage less than five million acres with less than one million AUMs.¹¹³ Because the impact these agencies have on national meat and greenhouse gas production is relatively insignificant, they are not covered in detail in this paper.

The BLM and FS vary in how they distribute the revenue from the permit fee. Both put the greater of 50% of fee revenue or \$10 million into a Range Betterment Fund (RBF)¹¹⁴ in the Treasury.¹¹⁵ The grazing fees are deposited separately and are subject to appropriations.¹¹⁶ The RBF is used for rehabilitation and improvement projects like fence construction, weed control, reseeding, and water development.¹¹⁷ But, the other 50% is where the two agencies vary. The FS gives the Treasury the remaining 50%, half of which the Treasury retains for itself and half of which is distributed to the states under a revenue-sharing agreement which is ultimately passed to local governments.¹¹⁸ On the other hand, the BLM only returns 12.5% of the collected fee to the states for lands within grazing districts; the remaining amount goes to the US Treasury.¹¹⁹ When the land is outside of a grazing district, the BLM gives the states 50% of the collected fee.¹²⁰

The permits issued by the agencies set out terms and conditions for use of the land such as the time period in which grazing is acceptable.¹²¹

¹⁰⁹ GRAZING FEES, *supra* note 93, at 2.

¹¹⁰ GLASER, *supra* note 36, at 14.

¹¹¹ GRAZING FEES, *supra* note 93, at 1-2.

¹¹² GLASER, *supra* note 36, at 12.

¹¹³ U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-05-869, LIVESTOCK GRAZING: FEDERAL EXPENDITURES AND RECEIPTS VARY, DEPENDING ON THE AGENCY AND THE PURPOSE OF THE FEE CHARGED 17 tbl.2 (2005), *available at* <http://www.gao.gov/products/GAO-05-869>.

¹¹⁴ Referred to as a Range Improvement Fund by the BLM and Range Betterment Fund by Forest Service.

¹¹⁵ GRAZING FEES, *supra* note 93, at 4.

¹¹⁶ *Id.*

¹¹⁷ *Id.*

¹¹⁸ *Id.* at 5.

¹¹⁹ *Id.*

¹²⁰ *Id.*

¹²¹ GLASER, *supra* note 36, at 12.

III. FAILURES OF THE CURRENT REGULATORY SCHEME

A. *An Archaic Formula*

As discussed above, the permit fee per AUM that applies to BLM and FS land is set according to the calculation of the PRIA formula.¹²² Before this formula became law, the BLM and the FS tried to charge fees that would either cover their costs for operating the program or were market-based.¹²³ The introduction of the PRIA formula was not intended to be a shift away from the goal of recovering costs associated with operating the programs. The PRIA formula was intended to “reflect[] annual changes in the costs of production” and the economic value of the land.¹²⁴ It may have succeeded in serving that purpose at one point in its 54 year existence, but it does not anymore.¹²⁵

The PRIA fee is determined by “three factors based on costs in western states of (1) the rental charge for pasturing cattle on private rangelands [FVI], (2) the sales price of beef cattle [BCPI], and (3) the cost of livestock production [PPI].”¹²⁶ The formula is as follows:¹²⁷

$$CF = \$1.23 \times \frac{FVI + BCPI - PPI}{100}$$

The base year fee for forage in 1966 was \$1.23, which was determined by the cost difference of cattle production on private versus public lands for that year, not including grazing fees.¹²⁸ Forage Value Index (FVI) is based on private rates for cattle grazing on non-irrigated land in the West as published by the USDA’s National Agricultural Statistics Service (NASS).¹²⁹

Before 1973, FVI was often the sole consideration in determining grazing fees.¹³⁰ But that year the American National Cattleman’s Association proposed a new formula that would take into account

¹²² See *supra* Section II.A.4. The FS Grasslands use a different, but similar formula that results in a similar number to the PRIA formula. See 36 C.F.R. § 222.51 (2021).

¹²³ GLASER, *supra* note 36, at 19-20.

¹²⁴ 43 U.S.C. §§ 1901(a)(5), 1905.

¹²⁵ U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 113, at 50-51.

¹²⁶ CAROL HARDY VINCENT, CONG. RSCH. SERV., RS21232, GRAZING FEES: OVERVIEW AND ISSUES 3 (2012).

¹²⁷ GLASER, *supra* note 36, at 22.

¹²⁸ *Id.*

¹²⁹ *Id.* at 23.

¹³⁰ L. ALLEN TORELL ET AL., AN EVALUATION OF THE PRIA GRAZING FEE FORMULA, 3 tbl.1 (2001), available at <https://core.ac.uk/download/pdf/6551231.pdf>.

ranchers' ability to pay fees.¹³¹ This innovation was the first introduction of the Beef Cattle Price Index (BCPI) and the Prices Paid Index (PPI).¹³² The BCPI is determined by calculating the weighted average of the annual beef sales price in the West the prior year.¹³³ The PPI is based on various categories of livestock production costs as published by the USDA's NASS.¹³⁴

The addition of PPI and BCPI to the PRIA formula did not make it more accurately reflect annual forage values.¹³⁵ The problem with PPI is that it has almost always been a larger number than BCPI.¹³⁶ As a result, a negative BCPI-PPI value is added to FVI. Because FVI is constantly decreasing naturally, the resulting fee cannot increase at a similar rate to private fees.¹³⁷ If the base fee is being multiplied by a rate that is already below that of the private fee on comparable land, it statistically cannot keep up. Adding these two components to the fee formula "ruined the predictive ability of the formula."¹³⁸ For example, if the BCPI-PPI factors had not been added, the fee for the year 2000 would have been \$3.94/AUM.¹³⁹ Instead, for fee year 2000 the minimum fee of \$1.35 was charged because the formula calculated a \$1.12 fee.¹⁴⁰ In the extreme, from fee years 2009-2011 the PRIA formula calculated a negative permit fee value.¹⁴¹ From 2000-2013, the minimum legal fee was charged in all but four years.¹⁴² For example, in 2013 FVI was 507, BCPI was 548, and PPI was 994.¹⁴³ This large PPI value resulted in a \$0.75 calculated PRIA fee.¹⁴⁴

For the last 15 years, BLM and FS grazing fees have been lower than other federal, private, and state grazing fees.¹⁴⁵ State grazing fees have wide variation but stay far above the PRIA fee.¹⁴⁶ In 2013, Arizona charged \$2.28/AUM, the lowest Western state fee, while Texas charged

¹³¹ *Id.*

¹³² *Id.*

¹³³ GLASER, *supra* note 36, at 23.

¹³⁴ *Id.*

¹³⁵ TORELL ET AL., *supra* note 130, at 4.

¹³⁶ *See* GLASER, *supra* note 36, at 25.

¹³⁷ *Id.* at 23.

¹³⁸ *Torell*, at 4.

¹³⁹ *Id.*

¹⁴⁰ GLASER, *supra* note 36, at 25.

¹⁴¹ *Id.*

¹⁴² *See id.*

¹⁴³ *Id.*

¹⁴⁴ *Id.*

¹⁴⁵ GRAZING FEES, *supra* note 93, at 8.

¹⁴⁶ *See generally* GLASER, *supra* note 36, at 29.

the top fee of \$65-\$150/AUM.¹⁴⁷ There is no reason to believe these state lands are inherently far better for cattle grazing than federal lands in the same regions.¹⁴⁸ For private lands in 2017, the 16 Western states had an average AUM fee of \$23.40.¹⁴⁹ Oklahoma had the lowest average at \$11.50/AUM and Nebraska had the highest average at \$39.00/AUM.¹⁵⁰ Private fees are determined by supply and demand principles with factors such as quality of forage, water availability, and grazing infrastructure.¹⁵¹ These fees dwarf the fee being charged for cattle to graze on over 95% of federal lands in the West.¹⁵² Additionally, these large variations in fees from state to state show the irrationality of the BLM and FS charging the same fee for a permit in every state. The same variables in the land that impact the value of permits on private lands impact the value of federal land grazing permits, even if it is not reflected in the permit price.¹⁵³ For example, private rates for non-irrigated lands in Colorado range from \$3.72 to \$38 per AUM.¹⁵⁴

At its inception in 1966, the \$1.23 base fee was about one-third of the private grazing fee.¹⁵⁵ When the PRIA formula went into effect, it was about 24% of the cost of grazing on private lands.¹⁵⁶ From 2000-2012, the highest ratio of federal to private fee was in 2004, when private fees averaged 12.26% of the cost to graze on federal land.¹⁵⁷ The low during that period was in 2013 when the fee only represented 6.72% of the private fee.¹⁵⁸

If the BCPI-PPI factors had not been added to the PRIA fee calculation, the grazing fee would be about \$6 today, nearly four and a half times the minimum rate being charged.¹⁵⁹ This fee would still be

¹⁴⁷ *Id.* Texas is not in the West and is an outlier with the next highest rate being Nebraska at up to \$39. *Id.*

¹⁴⁸ *See infra* Section V (rebutting claims that there is an understanding of the superiority of private land).

¹⁴⁹ GRAZING FEES, *supra* note 93, at 8.

¹⁵⁰ *Id.*

¹⁵¹ GLASER, *supra* note 36, at 24.

¹⁵² *See* U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 113, at 16-17 (the federal grazing lands not regulated by the FS or BLM make up less than 5% of the total).

¹⁵³ "Livestock operator costs are . . . not uniform on BLM and USFS land." GLASER, *supra* note 36, at 24.

¹⁵⁴ *Id.* at 27.

¹⁵⁵ *Id.* at 23.

¹⁵⁶ *Id.* at 24.

¹⁵⁷ *See id.* at 25.

¹⁵⁸ *Id.* at 24.

¹⁵⁹ *See id.* at 23.

approximately a third of the usual private grazing fee, just as it was intended to be when PRIA was first conceived.¹⁶⁰

Other federal agencies with public lands that permit cattle grazing have different fee structures. In 2004, when PRIA was \$1.43, the National Park Service charged an average of \$4.30 and the U.S. Fish and Wildlife Service had an average fee of \$11.24.¹⁶¹ Some agencies use a competitive bidding process while others set the fee based on the average prevailing rate for the particular area.¹⁶² Even the FS, on FS lands in the Eastern U.S., uses market-based methods to determine the grazing fee.¹⁶³ Similarly, six states award permits for state lands to the highest bidder and another six states determine their fee based on the relevant market prices.¹⁶⁴

B. *Federal Subsidy for Private Grazing*

“[I]t is generally recognized that [] the federal government does not receive a market price for its permits.”¹⁶⁵ While not receiving a full return of value on the program expenditures may occasionally be acceptable to taxpayers, the federal government loses tens of millions of dollars each year operating the cattle grazing program. The PRIA formula has prevented the BLM and FS from charging reasonable permit fees, and as a result, inflation-adjusted receipts they have collected from the fees have steadily declined for decades. In 2002, the agencies collected \$27.6 million dollars in permit fees adjusted for 2014 dollar value.¹⁶⁶ In 2014, the agencies collected only \$18.5 million.¹⁶⁷ If the agencies had charged the private market rate for non-irrigated land from 2002-2012, they would have collected \$261 million *annually*.¹⁶⁸ Instead, by charging a ridiculously low fee, the most the two agencies collected combined in any year over that same period was less than \$28 million.¹⁶⁹ As explained above, only about a quarter of that money is returned to the Federal Treasury, and the rest is directed to land rehabilitation and local governments.

¹⁶⁰ *See id.*

¹⁶¹ *Id.* at 28.

¹⁶² *Id.*

¹⁶³ *Id.*

¹⁶⁴ *Id.*

¹⁶⁵ *See* U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 113, at 49-50.

¹⁶⁶ GLASER, *supra* note 36, at 15.

¹⁶⁷ *Id.*

¹⁶⁸ *Id.* at 19.

¹⁶⁹ *Id.* at 15.

It is very costly to the federal government, and thus the U.S. taxpayer, to run these federal grazing programs. Congress appropriates tens of millions of dollars each year in excess of the money collected through fees, to both agencies in order to operate these programs.¹⁷⁰ In 2014, the direct grazing appropriation (which includes RBF funds and the general management program) for the FS was \$58,356,000 and for the BLM was \$85,280,000, a total of \$143.6 million.¹⁷¹ The agencies collected \$18.5 million in fees, so receipts amounted to only 13% of the appropriations.¹⁷² From 2002-2014, the highest percent of receipts to appropriations was 18% and the lowest was 9%.¹⁷³

The PRIA formula-created deficit means the federal subsidy to the BLM and the FS for livestock grazing programs has been over \$120 million annually for the years 2002-2014.¹⁷⁴ To be clear, this loss is attributable to a decline in grazing fees, *not* in the number of grazing cattle, which has been stable over the time period.¹⁷⁵ To cover the cost of direct appropriations to the BLM and FS programs in 2012, the permit fee would have needed to be \$10.25, but the actual fee charged was \$1.35.¹⁷⁶ These numbers are based on direct costs of the specific grazing permit programs only. In addition, other government agencies carry out 34 related programs that benefit the permit holders directly or remediate damage from their operations.¹⁷⁷ Examples are federal programs to kill native predators and remove federally protected horses during times of drought.¹⁷⁸

Federal cattle grazing is so extensively subsidized by the government that one can see why livestock ranching on public lands is often referred to as “welfare ranching.”¹⁷⁹ Each permit-holding rancher has received an

¹⁷⁰ *See id.* at 16.

¹⁷¹ *Id.*

¹⁷² *Id.* at 17.

¹⁷³ *Id.*

¹⁷⁴ *Id.*

¹⁷⁵ In fact, both agencies saw slight increases in the amount of grazing from the years 2002-2016. BLM saw a 5.2% increase in AUMs, and FS has a 1.1% increase in the amount of AUMs grazing over that time. CAROLE HARDY VINCENT, CONG. RSCH. SERV., R44932, STATISTICS ON LIVESTOCK GRAZING ON FEDERAL LANDS: FY2002 TO FY2016, (2017) at 8.

¹⁷⁶ GLASER, *supra* note 36, at 19.

¹⁷⁷ Vickery Eckhoff, *The Real Price and Consequences of Livestock Grazing on America’s Public Lands*, Western Watershed Project (Feb. 12, 2015), <https://www.westernwatersheds.org/sustainable-cowboys-welfare-ranchers-american-west/>.

¹⁷⁸ *Id.*

¹⁷⁹ Robert H. Smith, *Livestock Production: The Unsustainable Environmental and Economic Effects of an Industry Out of Control*, 4 BUFF. ENV’T L.J. 45, 73.

annual subsidy of about \$24,000, all so that they can pay less to graze a cow for a month than one might pay for a single canned meal for their pet.¹⁸⁰ It is no wonder that this minority of ranchers is so loud in their opposition to innovations in the system.

C. *A Few Ranchers Benefit, We All Pay*

The current regulatory scheme is not only illogically based on a strict, number-driven calculus, but it is inequitable to ranchers writ large and the American public. The notion of a Western cattle rancher is romantic, but it is a fallacy. Most public land is grazed by only a few permit holders. Of all federal grazing land, 50% is controlled by less than 5% of the nation's ranchers, leaving only the remaining half of the land to potentially be occupied by the traditional notion of a Western cattle rancher.¹⁸¹ But it is not. One study concluded that half of permit holders are hobby ranchers that are not dependent on their ranching income and may be using it primarily as a tax write-off.¹⁸² Moreover, many permit holders are not small-town ranchers, but Fortune 500 companies and billionaires.¹⁸³ Examples of such permit holders are Texaco, Anheuser-Busch, John Hancock, and Bill Hewlett and David Packard (of Hewlett-Packard).¹⁸⁴ The idea of a ranch that has been passed down through the family for generations is also a delusion; most permit holders have not been in business for more than a generation.¹⁸⁵

Even if the romanticized version of Western ranching were reality, the cost of subsidized federal grazing would outweigh the social benefit. As other industries become obsolete through modernization, it is doubtful that a majority of Americans will desire to spend millions of taxpayer dollars to prop up an ineffective system that destroys the unique, beautiful land they indirectly own. Generally, the actions we permit to destroy the environment are profitable or beyond government regulation. For example, the federal government has permitted oil exploration and drilling on its property to the detriment of the lands, but

¹⁸⁰ Eckhoff, *supra* note 177.

¹⁸¹ Smith, *supra* note 179, at 80; *see also* Smith, *supra* note 179 (“1992 report by the General Accounting Office, a research arm of Congress, found that 16 percent of BLM permit holders have 76 percent of the grazing rights.”).

¹⁸² Raymond B. Wrabley Jr., *Cowboy Capitalism or Welfare Ranching? The Public Lands Grazing Policies of the Bush Administration*, 29 PUB. LAND & RESOURCES L. REV. 85, 99 (2008); Debra L. Donahue, *Western Grazing: The Capture of Grass, Ground, and Government*, 35 ENVTL. L. 721, 730 (2005) [Hereinafter “*Western Grazing*”].

¹⁸³ Wrabley Jr., *supra* note 182, at 98.

¹⁸⁴ *Id.*

¹⁸⁵ *Western Grazing*, *supra* note 182, at 730.

“[t]he amount of annual revenue that Federal mineral development provides to the U.S. Treasury is second only to that provided by the Internal Revenue Service.”¹⁸⁶ Federal cattle grazing is neither unregulatable nor profitable.¹⁸⁷ Cattle ranching in the West is not fundamentally dishonorable, but given the damage it does to the environment, grazing on public lands at an additional cost to the taxpayer is wrong.

IV. A MARKET BASED SYSTEM WITH A RAISED FLOOR

A. *Prior Proposals*

It has been recognized for decades that the system is broken. Attempts at improvements have been made in the past. During the 104th Congress (1995-96), a bill was passed by the Senate that would have changed the permit fee.¹⁸⁸ The formula proposed under that bill would have removed operating costs and private permit rates from the equation and instead only considered the gross value of the production of beef.¹⁸⁹ It would have increased the fee by about \$0.50 per AUM. Unfortunately, it did not become law.¹⁹⁰ In the following Congress (1997-98), the House of Representatives passed a similar bill to change the formula to be based on a twelve-year average of beef production costs and revenues.¹⁹¹ It also failed to become law. Since the 105th Congress, there has not been a bill passed in either chamber affecting the PRIA formula fee.¹⁹²

Recent presidential administrations have taken up efforts to change the fee and permit system without success. The Clinton Administration proposed a change that would have increased the base fee to \$3.96 per AUM and adjusted the rate based on annual FVI changes.¹⁹³ The amendment to the law was included in an Interior Department spending bill which was met by a “fierce western Republican filibuster.”¹⁹⁴

¹⁸⁶ *About Oil and Gas*, U.S. DEP’T. OF THE INTERIOR, BUREAU OF LAND MGMT., <https://www.blm.gov/programs/energy-and-minerals/oil-and-gas/about> (last visited May 11, 2021).

¹⁸⁷ Even completely ending the public land grazing permit system would only result in elimination of less than 20,000 low-wage jobs. *See Western Grazing*, *supra* note 182, at 728.

¹⁸⁸ GRAZING FEES, *supra* note 93, at 6.

¹⁸⁹ *Id.*

¹⁹⁰ *Id.*

¹⁹¹ *Id.*

¹⁹² *Id.*

¹⁹³ *Id.* at 6-7; Wrabley Jr., *supra* note 182, at 94.

¹⁹⁴ Frank, *supra* note 94, at 1286.

Although the Administration did eventually get a federal land grazing bill passed into law, congressional objections prevented an increase to permit fees.¹⁹⁵ The subsequent Bush Administration proposed ending the depositing of 50% of BLM receipts into the RBF, and instead depositing them in the General Fund of the U.S. Treasury.¹⁹⁶ This would not have changed the fee charged but would have decreased the losses of operating the program. It also did not become law.

The most recent attempt at fee change occurred in the Obama Administration. The Interior Secretary Sally Jewell proposed the addition of an administrative fee per AUM that would be phased in to reach a \$2.50 fee per AUM in 2017.¹⁹⁷ Given the 8,820,617 AUMs authorized that year, this fee would have generated over \$22 million more in receipts for the BLM alone. Though receipts would not have reached anywhere near the cost of operating the program, this change would have increased revenue from grazers by 148%.¹⁹⁸ Because the administrative fee is separate from the AUM permit fee, it would not have violated the statutory restriction that the permit fee cannot increase more than 25% annually.¹⁹⁹ The proposal faced harsh opposition from the cattle industry and never became law.²⁰⁰

The Trump Administration's changes were not fee-based but instead focused on "flexibility" for ranchers.²⁰¹ A 2017 agency initiative's goal was "to improve BLM's management of grazing on public lands by offering livestock operators greater flexibility to more readily respond to changing on-the-ground conditions, such as drought or wildfire."²⁰² The BLM currently has changes to administrative provisions pending that would "overhaul grazing regulations for public lands."²⁰³ The changes

¹⁹⁵ CAROL HARDY VINCENT, CONG. RSCH. SERV., RL21232, GRAZING FEES: AN OVERVIEW AND CURRENT ISSUES (2005).

¹⁹⁶ GRAZING FEES, *supra* note 93, at 7.

¹⁹⁷ Tay Wiles, *Will Public-lands Ranchers Pay More for Grazing?*, High Country News (Mar. 25, 2015), <https://www.hcn.org/articles/obama-s-trying-to-hike-grazing-fees>.

¹⁹⁸ *Id.*

¹⁹⁹ *Id.*

²⁰⁰ See Beltway Beef, *Obama's Budget Proposes to Increase Federal Lands Grazing Fee*, BEEF MAG. (Feb. 15, 2012), <https://www.beefmagazine.com/regulation/obama-s-budget-proposes-increase-federal-lands-grazing-fee>.

²⁰¹ Bureau of Land Mgmt., *Programs: Natural Resources: Rangelands and Grazing: Livestock Grazing: Outcome Based Grazing*, <https://www.blm.gov/programs/natural-resources/rangelands-and-grazing/livestock-grazing> (last visited Nov. 4, 2020).

²⁰² *Id.*

²⁰³ EELP Staff, *Public Lands Grazing Rules*, ENV'T AND ENERGY L. PROGRAM (Jan. 15, 2017), <https://eelp.law.harvard.edu/2017/12/public-lands-grazing-rule/> (last visited Jan. 14, 2021).

mostly addresses NEPA and the permitting process, and do not change the fee formula.²⁰⁴

The Biden Administration has promised to make addressing climate change a central focus of federal policy.²⁰⁵ As evidenced by Executive Order 14009, issued days into the new presidency, the climate plan will include changes to the management of federal lands.²⁰⁶ It appears likely the Biden Administration will renew the efforts of the Obama Administration to create a more equitable federal cattle grazing program.

B. *Improved Solution and the B.E.E.F.*

Cattle production on public lands is contributing to the warming of the environment and the federal government is not only allowing it, but subsidizing it. Mandating even a small decrease in the number of cattle raised on public lands would be highly controversial and is unlikely to have a significant impact on decreasing global GHG emissions. Instead, if the government collects receipts for grazing comparable to those charged on state and private lands, it could decrease the inequitable subsidy, as well as redistribute money to mitigate the GHG impact of cattle on public lands.

The PRIA fee is the reason the BLM and FS federal cattle grazing programs run at huge deficits. But America is not committed to this future, and the federal grazing fee should be brought in line with the principles it was created under and operate similar to typical lessors. Modernizing the permit fee can be accomplished by a two-fold change. First, the minimum rate has to be raised to make certain the government receives a fairer price. Second, the permits should then be auctioned to the public for a price in excess of the minimum rate, and the permit length should be altered to allow more frequent fee adjustment through auctions. Additionally, the increased revenue resulting from these changes should be allocated to efforts to mitigate cattle production's effect on climate change.

²⁰⁴ See Notice of Intent to Prepare an Environmental Impact Statement for the Proposed Revision of Grazing Regulations for Public Lands, 85 Fed. Reg. 3410 (Jan. 21, 2020).

²⁰⁵ *The Biden Plan for a Clean Energy Revolution and Environmental Justice*, <https://joebiden.com/climate-plan/> (last visited May 11, 2021).

²⁰⁶ “It is the policy of my Administration to lead the Nation's effort to combat the climate crisis by example—specifically, by aligning the management of Federal procurement and real property, public lands and waters, and financial programs to support robust climate action.” Executive Office of the President, *Tackling the Climate Crisis at Home and Abroad* (Feb. 1, 2021), <https://www.federalregister.gov/documents/2021/02/01/2021-02177/tackling-the-climate-crisis-at-home-and-abroad>.

1. *Minimum fee as a floor*

There is no one correct way to determine the minimum fee. It can be determined by: (1) a flat rate (increasing with inflation); (2) a formula similar to PRIA; or (3) adding an administrative fee onto the current rate (as proposed by the Obama Administration). The flat fee could take the cost back to its origins by being set at one-third the cost of the average private rates in the year it is adopted. It should change annually to account for inflation. This plan would have resulted in a \$6.69 fee for 2012.²⁰⁷ But over time, this method runs into the problem that the number may no longer be close to the future market difference of private and public lands. It also puts the fee above the market rate for some federal lands that have little grazing value.

A simple formula based on principles similar to the flat fee could be more responsive to the market. Just removing BCPI and PPI from the PRIA formula would make the calculation much more in line with private markets because PVI serves that purpose alone.²⁰⁸ But the 1.23 multiplier in PRIA no longer has any factual basis. Since it was based on market conditions in the 1960's, there is no reason to keep it. Instead, a formula based purely on FVI is the simplest way to have the floor rate track the market.

The third way, the proposal by the Obama Administration, is to keep the PRIA formula and add an administrative cost onto the permit fee. This solution is simple and could be done without passing a law through Congress. It is debatable what the additional fee should be, but something similar to the Obama plan in the \$3.00 range could be palatable to ranchers. This may require frequent changes to track the market and could be removed by any subsequent administration.

When looking at the cost per AUM now, a proposal to increase the fee up to six times the current rate (proposal 1) may seem extreme. In reality, other federal agencies and state agencies have charged, and continue to charge, rates in excess of \$10 per AUM.²⁰⁹ And when compared to private grazing rates, the new floor fee is still minuscule. As explained above, around a \$7.00 AUM fee still only serves the purpose of bringing the fee to 1/3 the private fee, which was considered equitable in the past.

²⁰⁷ See GLASER, *supra* note 36, at 25.

²⁰⁸ See TORELL ET. AL., *supra* note 130, at 4.

²⁰⁹ GLASER, *supra* note 36, at 29.

2. *Market-based mechanisms as a ceiling*

The real innovation in this plan comes with the return to market based principles.²¹⁰ As described in Section *IV-A*, the quality of the land and resulting permit value varies widely state to state and even within a state. Instead of mandating a set permit price, markets should govern the price in excess of the floor rate. First of all, permits will not be issued for ten-year periods. To keep the markets active and competitive, the permit length should be shortened to six years. The next item to change is the automatic renewal preference for permit holders. The agency must instead put the permit rights up for a competitive auction at renewal time. This is an approach the federal government applies to allocation of multiple types of permits. For example, the federal government auctions both sulfur pollution allowances²¹¹ and wireless spectrum licenses²¹² in a competitive, public bidding process.

The agency will physically post information about an upcoming auction of the permit in relevant places, as well as in an online marketplace that they create. This will take place about one year prior to the renewal date in order to give time for multiple bids, as well as time for people to enter the market if they need to purchase property in the area as usually required by the agencies. This could have the additional positive impact of increasing land value in areas with highly sought-after grazing land. The auction will not be blind because knowledge of competing bids would increase transparency and increase fairness. At the end of the bidding period, the current permit holder will be given the option to outbid the current highest bid. It will benefit all parties to leave in place some preference for the permit holder and continuity, without automatically allowing them the permit at next-to-nothing. If a rancher over-extends themselves with their bid and goes bankrupt during their permit term, the permit will go back up for auction.

The market-based approach allows the agency to charge a fair fee for the land. We know this system can work because it has already worked with other federal and state agencies.²¹³ Even the FS already uses “market-based methods for determining fees in the eastern national forest

²¹⁰ This is not the first paper to advocate for a market-based approach, but as explained below the purpose is not just to increase government receipts. See TORELL ET AL., *supra* note 130, at 6.

²¹¹ Gabriel Chan, Robert Stavins, Robert Stowe & Richard Sweeney, *The SO2 Allowance-Trading System and the Clean Air Act Amendments of 1990: Reflections on 20 Years of Policy Innovation*, 65 Nat'l Tax J. 419, 432-33 (2012).

²¹² Fed. Comm'n Comm'n, *About Auctions* (Aug. 9, 2006), <https://www.fcc.gov/auctions/about-auctions>.

²¹³ See *infra* Section IV.A.

lands.”²¹⁴ The federal government should not be leasing public land at the same rate in California as it does in Arizona, when privately-leased lands average permit rates are for \$19.50/AUM in California and \$9.00/AUM in Arizona. A fee determined by the market considers regional variations in the quality of federal land. It also allows variation from adjacent properties. If one permit allocation has extensive natural water access and the neighboring property does not, it is equitable for the former to pay a higher rate.

3. *Allocation of revenue to climate mitigation*

The purpose of the increased base fee is to decrease the financial loss at which the program is operating. Moreover, the market-based auction serves an additional purpose: the B.E.E.F. Every cent charged in excess of the base permit rate should be collected and deposited into a fund that serves to mitigate the impact of cattle production on climate change. The *Bettering Environments and Economies Fund* (B.E.E.F.) will be separate from the RBF and serve a different purpose. The RBF assists in rehabilitating grazed lands; this will likely have some positive environmental impact, but the B.E.E.F. will have the specific purpose of mitigating GHG emissions. The B.E.E.F. will be used as those operating the fund see fit, whether that be partnerships with the private sector to reduce emissions²¹⁵ or creating carbon sinks.²¹⁶ Instead of keeping the fund within the agency collecting the receipts and having two funds operated by agencies with other primary focuses (BLM and FS), the money could be redistributed to a new Division in the EPA with the relevant expertise and connections to the proper private entities to do the work.

The PRIA fee is only currently in effect through an executive order, so any administration could raise the base permit fee. But to accomplish the auction system, there would have to be congressional changes to the statutes controlling the BLM and FS. As climate change becomes a top

²¹⁴ GLASER, *supra* note 36, at 28.

²¹⁵ For example, the government could enter partnerships to fund research into artificial carbon sequestration technology. David Chandler, *MIT Engineers Develop a New Way to Remove Carbon Dioxide from Air*, MIT NEWS (Oct. 24, 2019), <https://news.mit.edu/2019/mit-engineers-develop-new-way-remove-carbon-dioxide-air-1025>.

²¹⁶ The fund could be used to replant forests on public lands to offset the GHG emissions. See Michael Jenkins, Rupert Edwards & Genevieve Bennett, *How to Rebuild Global Carbon Sinks*, FOREST TRENDS: VIEWPOINTS (Mar. 7 2019), <https://www.forest-trends.org/blog/rebuild-carbon-sinks/>.

issue for many voters²¹⁷ and politicians, changes such as this may receive broader support than attempts at change in past decades.

These proposed improvements taken together greatly improve the challenging political position the government is in. No rancher is being forced to shut down; if ranchers run a profitable operation and are willing to pay as much as their neighbor for their permits, then they can ranch as long as they want. The raised floor could substantially decrease the amount the U.S. taxpayer is subsidizing cattle grazing on land they indirectly own. And the B.E.E.F. can help address the negative climate externalities of cattle production.

V. ADDRESSING POTENTIAL ISSUES

The primary argument for keeping the permit fee at such a low value compared to private rates is that the private leases provide higher quality land and amenities so that it is, in fact, equivalent to federal lease prices. But, “there is no general agreement about the comparability of private and public land forage.”²¹⁸ Advantages of private lands may include the ability to sublease, watering, fencing, and other services provided by the land owner.²¹⁹ Still, it seems highly unlikely that private forage and services are regularly 20 times more valuable than the public land forage. This paper is not advocating that they charge the same rate per AUM, just that they better reflect their market value. If the public land forage was agreed to be worth 1/3 of private forage fifty years ago, how can it be on average worth less than 1/10 the value now? Because no one knows with certainty the comparative value of land across the board, it is logical to allow the market to decide. Cattle ranching in the West must be able to turn a profit at a higher permit cost than the current permit rate, or the private leases on those adjacent lands would not exist.

In the past, federal agencies have argued that an auction system would be disruptive to the permittee and community stability.²²⁰ That is not necessarily true and should not be the primary concern. Studies have shown that the loss of a federal grazing permit would not result in most ranchers selling their lands; they would instead usually try to adjust their operations.²²¹ Moreover, allowing the current permit holder the

²¹⁷ Alec Tyson, *How Important is Climate change to Voters in the 2020 Election?*, PEW RESEARCH CTR. (Oct. 6, 2020), <https://www.pewresearch.org/fact-tank/2020/10/06/how-important-is-climate-change-to-voters-in-the-2020-election/>.

²¹⁸ TORELL ET AL., *supra* note 130, at 5.

²¹⁹ GRAZING FEES, *supra* note 93, at 9.

²²⁰ TORELL ET AL., *supra* note 130, at 5.

²²¹ *Western Grazing*, *supra* note 182, at 729.

opportunity to match the highest bid will decrease disruption and allow continuity. The only ranchers potentially displaced would be those that cannot run their cattle operation as efficiently as other ranchers that could afford to outbid them. Western cattle ranching should be subject to the same market forces as every other industry. Even if some individuals are unfortunately priced out of the market, it is not clear that this would result in a net decrease in AUMs grazing.²²² Where ranchers were surviving on government-subsidized permits, their operations were not economically sound. Much of the West is not fit for raising cattle, and there are insufficient economic or virtuous reasons to force it to be used as such.²²³ The disruption of Western ranching life is a negative externality of climate change, but hopefully other laws aimed at climate change will provide funding to reeducate, retool, or relocate those that cannot afford their permits.

The agencies have also posited that the scattered and isolated nature of some lands makes it unlikely there will be a competitive bidding system.²²⁴ This issue is resolved by keeping a permit rate floor instead of using a pure auction, because even if only one rancher wants the land, it will lease for a higher and more reasonable rate than it currently is. Even if the auction might fail for some properties, that does not mean it will not often succeed.²²⁵ Relatedly, some may argue bidding will not actually be open to an entire market of people, but only a handful of neighbors because of agency requirements that permit holders have adjacent land to the permitted land to serve as a base property. This may be the case, and it is acceptable if the auction does not always have a plethora of bidders.²²⁶ But times when a permit is being auctioned at a price significantly below its market value may result in entrepreneurial ranchers purchasing a base property to get access to the permit opportunity. Accordingly, a piece of property's proximity or access to federally permitted land should increase property values.²²⁷

Others may argue an auction system along with the permit length decrease puts more strain on the agencies' administrations which are already backlogged.²²⁸ Normally that may be correct, but there is a fix for

²²² GRAZING FEES, *supra* note 93, at 7.

²²³ See Smith, *supra* note 179, at 73.

²²⁴ TORELL ET AL., *supra* note 130, at 6.

²²⁵ See *id.*

²²⁶ Land with access to BLM grazing land is already sold at premium. See GRAZING FEES, *supra* note 93, at 9.

²²⁷ *Id.* (noting that "the capitalized value of grazing permits typically is reflected in higher purchase prices that federal permit holders pay for their ranches.").

²²⁸ See *generally id.* at 11 (showing, for example, a backlog of 7000 permit renewals in 2017).

that as well. The removal of NEPA requirements for federal grazing permits would greatly speed up the review process.²²⁹ NEPA serves to force consideration of the impact of government actions on the global climate. If the B.E.E.F. is serving to mitigate the emission of GHG of cattle grazing on federal lands while the RBF and other programs address other environmental impacts, there are few net negative environmental harms to be considered.²³⁰ Cattle production would still harm the lands and water systems, but the RBF fund already serves to remedy those impacts. As a result, and to appease ranchers, permit applicants should no longer be required to complete NEPA Environmental Assessment.²³¹ There are other examples of certain government actions being exempted from NEPA review,²³² so this is not a revolutionary concept. In fact, the Department of Energy Office of Environment, Health, Safety and Security recently published a document listing NEPA categorical exclusions for 79 government agencies.²³³ For example, the BLM has a categorical exclusion for the “[i]ssuance of future interest leases under the Mineral Leasing Act for Acquired Lands where the subject lands are already in production.”²³⁴ Though the exact impact of B.E.E.F. is unclear and mitigation is not an exact 1:1 science, providing a categorical NEPA exclusion in exchange for implementation of the B.E.E.F. system is a fairly equitable trade. Even though ranchers would welcome the NEPA exclusion, it is probable they will argue this is not sufficient compensation for increased permit cost. As a result, enacting such a change in the law would be challenging because the food animal industry

²²⁹ *See id.* at 12.

²³⁰ It seems unlikely that the RBF is returning the lands to an entirely pre-cattle condition, but there is a lack of available information on the success or failures of RBF rehabilitation efforts. As the B.E.E.F. solution, including its proposed NEPA exclusion, is premised on the presumption that the RBF is rehabilitating these lands, it will be assumed that the RBF is generally meeting the goals of rehabilitating the rangelands. If not, further appropriations to the RBF may be required.

²³¹ The law already provides that “[t]he issuance of a grazing permit or lease by the Secretary [of the Interior] concerned may be categorically excluded from the requirement to prepare an environmental assessment or an environmental impact statement” under certain circumstances when applying for a BLM permit. Carl Levin and Howard P. “Buck” McKeon National Defense Authorization Act for Fiscal Year 2015, Pub. L. No. 113-291, 128 Stat. 3791 (2015).

²³² It is called a categorical exclusion when a government action is not required to complete a NEPA review.

²³³ *Categorical Exclusions*, COUNCIL ON ENV’T QUALITY, <https://ceq.doe.gov/nepa-practice/categorical-exclusions.html> (last visited Nov. 4, 2020).

²³⁴ *Id.*

is one of the largest monetary contributors to federal political candidates and has a powerful lobbying influence.²³⁵

One might point out that cattle ranching on Western federal lands only accounts for about 3% of American's cattle production, so the impact of the improvements from the B.E.E.F. system may not alter the course of global warming.²³⁶ That may be true, but the change is still important due to the unique qualities of the problem. Because this ranching is taking place on land owned by U.S. citizens, while being subsidized by U.S. taxpayers, ranchers should be accountable for the destruction of the globe even if its impact is limited. The B.E.E.F. system is a compromise to others that have argued that grazing on Western federal lands should end all together.²³⁷

It must be acknowledged that the subsidies to cattle production largely benefit the American consumer by lowering the cost of beef they purchase. But as explained above, the cattle produced on federal lands makes up a small portion of American consumption and therefore is not likely to alter the beef market if it becomes slightly more expensive to produce. The subsidies that generally make beef significantly less expensive are the subsidies to the farms that produce feed for cattle which is then sold to ranchers at low prices.²³⁸ Slightly raising production prices for federal land permit holders would have no impact on the cost of producing cattle through feed lots.

Finally, it would be naive to think these logical improvements, that would garner popular public support, would not be controversial. If the failures of multiple Congresses and Administrations to address the issue are not sufficient proof, the Cliven Bundy saga is demonstrative. Cliven Bundy grazed federal lands for decades without a permit, arguing that the land belonged to Nevada, and that his ancestors used the land before the federal government claimed it.²³⁹ In 2014, after the BLM exhausted all administrative solutions, federal agents attempted to seize his cattle.²⁴⁰ They were met by a militia of hundreds of armed protestors and the agents were forced to give up on their attempts when the situation was

²³⁵ See *Agribusiness*, OPEN SECRETS,

<https://www.opensecrets.org/industries/indus.php?Ind=A> (last visited Nov. 4, 2020).

²³⁶ Wrabley Jr., *supra* note 182, at 98; *Western Grazing*, *supra* note 182, at 728 (“only two percent of U.S. beef cattle production is attributable to public lands...”).

²³⁷ GRAZING FEES, *supra* note 93, at 7; see generally Donahue, *supra* note 16, at 260-61.

²³⁸ Christina Sewell, Essay, *Removing the Meat Subsidy: Our Cognitive Dissonance Around Animal Agriculture*, 73 COLUM. J. OF INT’L AFF. (Feb. 11, 2020)

<https://jia.sipa.columbia.edu/removing-meat-subsidy-our-cognitive-dissonance-around-animal-agriculture>.

²³⁹ GRAZING FEES, *supra* note 93, at 7.

²⁴⁰ *Id.*

close to violence.²⁴¹ Criminal charges from this episode are still being litigated.²⁴² This story illustrates that there will be vocal opposition to permit fee increases, but it does not represent the majority of ranchers nor does it represent what is best for the globe.

CONCLUSION

The BLM and the FS programs that regulate federal cattle grazing in the Western United States are broken and inequitable. Operating under a misguided permit fee formula created nearly five decades ago, the agencies lose tens of millions of dollars annually running their grazing programs. All the while, cattle are damaging the land and waterways of the West that belong to the American people. Moreover, the cattle are releasing significant quantities of potent GHGs, increasing the rate by which the Earth is warming which will only further complicate cattle production and human life.

Americans need not be resolute to this bleak future. As the battle against climate change rages on and potentially turns the corner toward more collective action, cattle production will have its time under the microscope.²⁴³ The B.E.E.F. system is an increase in the floor permit rate, coupled with a return to market-based fee principles by auctioning the permit rights. This is a straightforward change and compromise that will decrease government subsidies and mitigate GHG emissions, while allowing ranchers to utilize the land for a fraction of the cost of private permits

²⁴¹ *Controversy Over Nevada Rancher Cliven Bundy, Explained*, VOX (May 14, 2015, 10:23 AM) <https://www.vox.com/2014/8/14/18080508/nevada-rancher-cliven-bundy-explained>.

²⁴² Kirk Siegler, *Cliven Bundy Armed Standoff Case Going Back to Court*, NPR (May 29, 2020, 6:13 AM) <https://www.npr.org/2020/05/29/863906893/cliven-bundy-armed-standoff-case-going-back-to-court>.

²⁴³ A provision of the Green New Deal already addresses livestock production saying the mobilization effort will require “working collaboratively with farmers and ranchers in the United States to remove pollution and greenhouse gas emissions from the agricultural sector as much as is technologically feasible, including— (i) by supporting family farming; (ii) by investing in sustainable farming and land use practices that increase soil health; and (iii) by building a more sustainable food system that ensures universal access to healthy food.” Recognizing the Duty of the Federal Government to Create a Green New Deal, H.R. 109, 116th Cong. § 2 (2019).