



## I. Introduction

The Bureau of Land Management (BLM) plays a pivotal role in managing extensive public lands allocated for livestock grazing, overseeing approximately 155 million acres of grazing allotments on public lands across the United States. The law requires BLM to assess the land health of these grazing allotments to help the agency make management decisions which achieve and maintain healthy lands.

To better understand the land health on these grazing allotments, we analyzed the rangeland health assessments conducted by BLM from 1997 to 2023. PEER obtained these assessments through a series of Freedom of Information Act (FOIA) requests and lawsuits. BLM's data provides valuable insights into the health of these grazing allotments across various states, highlighting land health trends, challenges, and opportunities.

An interactive map of these land health assessments can be found at [peer.org/mapping-the-range](https://peer.org/mapping-the-range).

## II. Background and Context

BLM administers over 21,000 grazing allotments across western states, covering approximately 155 million acres of public lands. Grazing allotments are evaluated based on "land health standards," which assess the quality and sustainability of rangeland resources, including waterways, habitats, soil, flora, and fauna.

Since 2008, PEER has obtained four separate data sets from BLM through FOIA requests, each containing records from all 21,000 allotments.

Our analysis focuses on several key metrics, including the percentage of allotments meeting land health standards, the causes of range failure (such as livestock grazing or invasive species), the use of environmental assessments when renewing leases, wild horses, and disparities in rangeland health status across states.

## **Highlights**

- **Livestock:** The data show that BLM identifies overgrazing as a primary factor influencing rangeland health, posing significant challenges to ecosystem resilience and biodiversity conservation. Livestock overgrazing is identified in over 37 million acres that are not meeting land health standards.
- **State Specific Variations:** Significant differences in rangeland health and management practices are evident across states, from the high failure rates in Nevada due to overgrazing to the better-reported land health in New Mexico.
- **Need for Agency Change:** We call for an increase in BLM resources and staff, along with improved surveillance and data handling, and heightened transparency. BLM should customize management approaches to reflect the unique conditions of each state and boost funding for research into sustainable grazing and the restoration of rangelands. It is crucial that BLM recognizes the significance of involving the public in the process of renewing grazing permits and implements robust whistleblower protections to maintain integrity in politically and culturally challenging environments.



*BLM Photo*



*BLM Photo*

### III. Rangeland Health Data Overall Trends

A comprehensive analysis of BLM rangeland health data from 1997 to 2023 highlights many of the significant challenges, opportunities, and obligations BLM has in managing public lands for grazing.

**Table 1: 2024 BLM Allotment Statistics (1997-2023 BLM data from FOIA requests)**

STATUS	Public land acres	Percent of all allotments by acreage	Percent of all assessed allotments
ALL STANDARDS MET	57,820,276	38%	50%
NOT MET - LIVESTOCK OVERGRAZING	37,885,522	25%	33%
NOT MET - CAUSE NOT IDENTIFIED	6,966,846	5%	6%
NOT MET - OTHER	11,899,530	8%	10%
UNASSESSED	36,580,713	24%	
OTHER	1,200,667	1%	
TOTAL ACREAGE OF LIVESTOCK ALLLOTMENTS	152,353,554*	100%	
TOTAL ASSESSED LAND	114,572,174		100%
TOTAL FAILING LAND	56,751,898		50%

**Table 2: Rangeland Health Standards Status for All BLM Allotments Through 2023 (%)**

State	All standards met	Not met – livestock	Not met – cause not identified	Not met – other	Determination not complete	Other	Total
AZ	58%	10%	0%	8%	19%	4%	100%
CA	45%	28%	3%	7%	16%	1%	100%
CO	49%	32%	1%	12%	6%	0%	100%
ID	18%	37%	7%	11%	27%	0%	100%
MT	82%	9%	1%	7%	1%	0%	100%
NM	69%	1%	0%	1%	28%	0%	100%
NV	10%	37%	7%	8%	39%	0%	100%
OR	40%	19%	15%	9%	17%	0%	100%
UT	54%	15%	0%	6%	22%	2%	100%
WY	34%	34%	5%	10%	17%	0%	100%
<b>Total</b>	<b>38%</b>	<b>25%</b>	<b>5%</b>	<b>8%</b>	<b>24%</b>	<b>1%</b>	<b>100%</b>

**Number of allotment records has increased:**

In 2020, BLM produced 20,956 records in response to our FOIA request. In 2024, BLM produced 21,079 records in response to a FOIA we sent in 2023. In May 2024, we updated the BLM Rangeland Health Status map and added about 4,000 new records obtained through FOIA. Visit [www.peer.org/mapping-the-range](http://www.peer.org/mapping-the-range) to dive into the data.

**Land Health Standards: BLM’s Responsibility**

BLM has a responsibility to assess the health of grazing allotments and to act if they determine that the allotment is not meeting Land Health Standards.

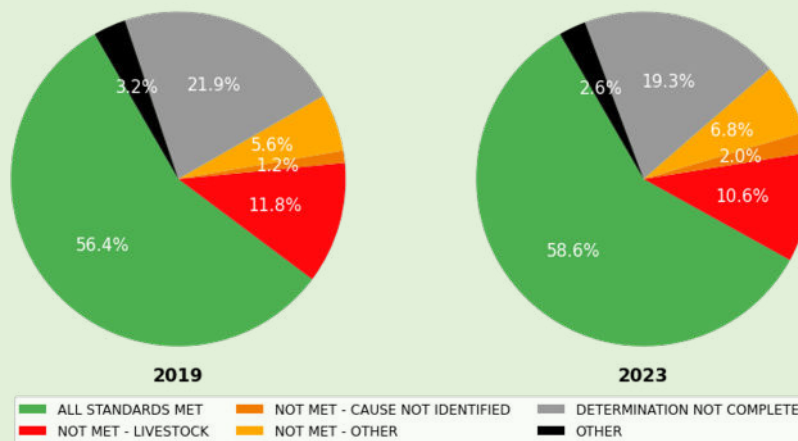
BLM regulations require that:

"If the authorized officer determines through standards assessment and monitoring that existing grazing management practices or levels of grazing use on public lands are significant factors in failing to achieve the standards and conform with the guidelines that are made effective under this section, the authorized officer will, in compliance with applicable laws and with the consultation requirements of this part, formulate, propose, and analyze appropriate action to address the failure to meet standards or to conform to the guidelines.

(i) Parties will execute a documented agreement and/or the authorized officer will issue a final decision on the appropriate action under § 4160.3 as soon as practicable, but not later than 24 months after a determination."

By addressing the identified issues with targeted, data-driven management strategies, BLM can enhance the sustainability and resilience of these vital ecosystems. [43 CFR 4180 2(c)(i)]

**Figure 1: Rangeland Health Standards Status for All Allotments by Records for All States**



**Impacts of livestock, wild horses, and other factors in changes in “Standards Met” and “Not Met”:** Analyzing percentage changes in land health standards that are “met” and “not met” gives us insights into the relative severity of rangeland health challenges across different states and regions. By comparing the data from 1997 through 2018 with the most recent data received in our 2023 FOIA, we can identify areas of improvement or deterioration in rangeland health over time.

**Livestock Impacts:**

Approximately 50% of assessed lands fail to meet health standards, with livestock grazing cited as a significant cause in 33% of the assessed allotments. This highlights the extensive impact of grazing on land health and underscores the need for focused management strategies to mitigate these effects.

**Defining Rangeland Health Standards**

In 1995, formal regulations (43 CFR §4180.1 and 43 CFR §4180.2) defining the minimum rangeland health management requirements, and standards and guidelines for administration of livestock grazing were created to make it clear that maintaining rangeland health must take precedence over land use. These regulations require that livestock grazing practices must ensure that:

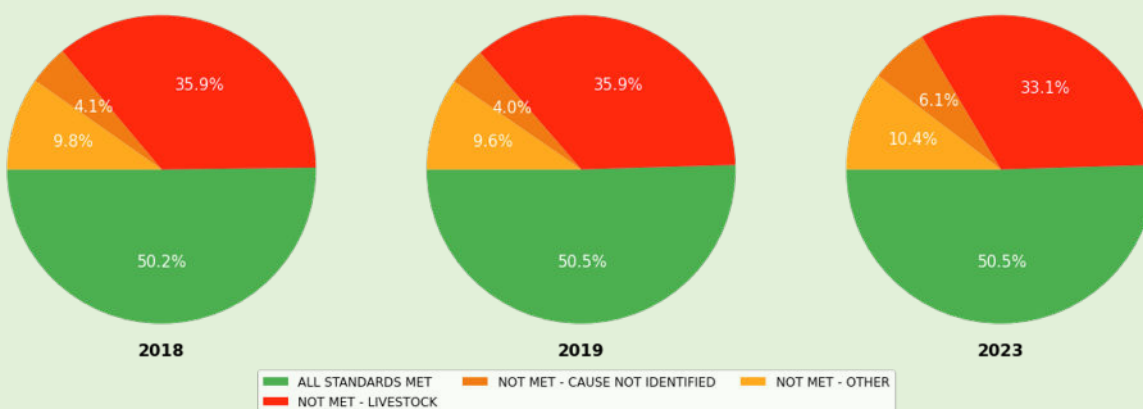
"(a) Watersheds are in, or are making significant progress toward, properly functioning physical condition, including their upland, riparian-wetland, and aquatic components; soil and plant conditions support infiltration, soil moisture storage, and the release of water that are in balance with climate and landform and maintain or improve water quality, water quantity, and timing and duration of flow.

(b) Ecological processes, including the hydrologic cycle, nutrient cycle, and energy flow, are maintained, or there is significant progress toward their attainment, in order to support healthy biotic populations and communities.

(c) Water quality complies with State water quality standards and achieves, or is making significant progress toward achieving, established BLM management objectives such as meeting wildlife needs.

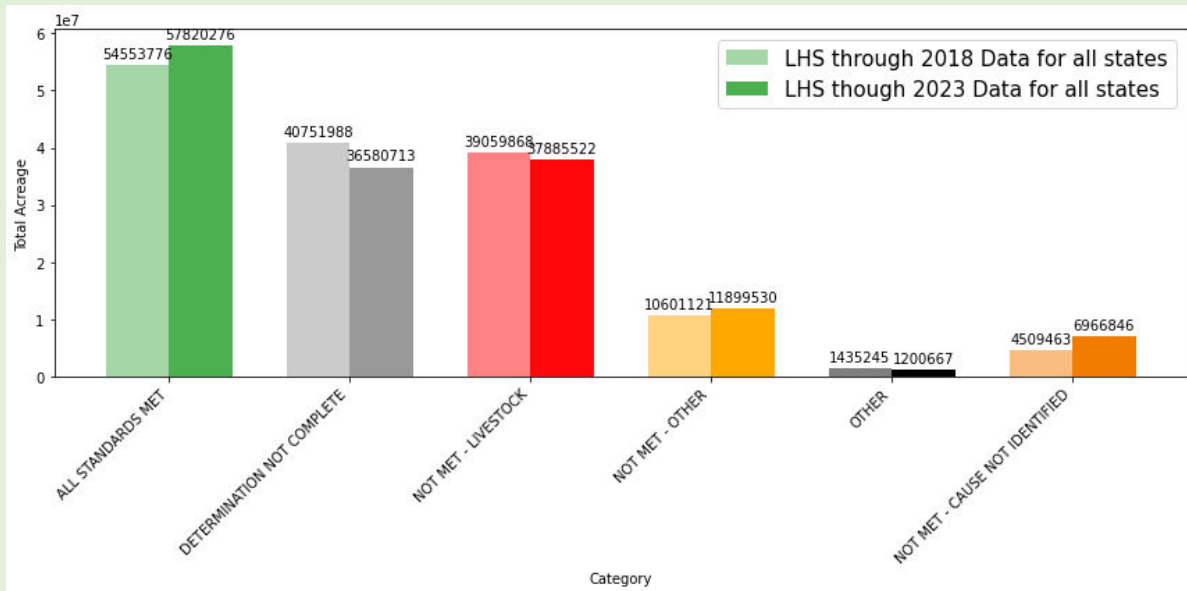
(d) Habitats are, or are making significant progress toward being, restored or maintained for Federal threatened and endangered species, Federal proposed or candidate threatened and endangered species, and other special status species." [60 FR 9969, Feb. 22, 1995, as amended at 71 FR 39508, July 12, 2006]

**Figure 5: Rangeland Health Standards Status for All Assessed Allotments by Acreage for All States**



The percentage of assessed allotments that fail to meet land health standards has not changed between 2018 and 2023. However, the number of allotments that fail due to livestock has decreased slightly (approximately 1.5%), and the number of allotments that fail for “Other” reasons and that fail for “Cause not Identified” has increased.

**Figure 6: Land Health Standards Acreage Through 2018 and 2023 for All States**



**Failing but “Cause Not Identified”:** There was a notable increase in assessed acreage where the cause of not meeting standards was not identified, from 4% in 2018 to 6% in 2023. This suggests a need for improved assessment methodologies or data collection practices to better understand the factors contributing to rangeland degradation.

**Failing Due to “Other” Factors:** In 10% of instances, BLM has determined that causes other than livestock are primarily responsible for allotments not meeting Land Health Standards. These “Other” factors may include wildfires, droughts, invasive species, or wildlife, with “invasive species” or “weeds” being the most frequently cited in the data. There has been an increase in the number of allotments identified as failing due to these alternative causes. This trend underscores the complexity of rangeland health issues.

**“Wild Horses” as a cause:** Wild horses are found across BLM lands, with the largest populations and most Herd Management Areas in Nevada. BLM manages these populations through measures like roundups and removals, claiming that these management techniques are necessary to prevent overgrazing and preserve land health. However, an analysis of BLM data paints a different picture regarding the impact of wild horses compared to livestock.

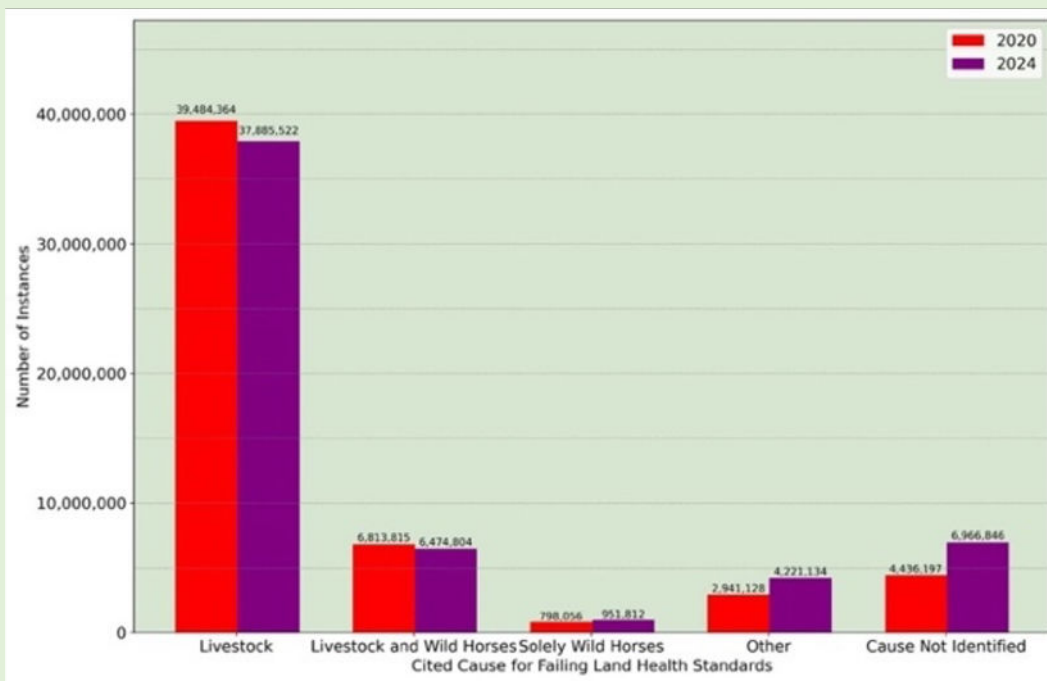


BLM Photo

According to the 2023 data, out of 56,751,898 acres failing land health standards, only 951,812 acres are attributed solely to wild horses. In contrast, livestock are the primary contributors to land degradation on 37,885,522 acres. Additionally, 6,474,804 acres are failing due to a combination of livestock and wild horses. Livestock alone or in conjunction with wild horses far overshadow the impact of wild horses alone.

These figures challenge the rationale behind BLM's policies that prioritize the removal of wild horses and suggest a need for reevaluating management practices to address the predominant causes of land health issues more accurately, particularly those related to livestock grazing.

**Figure 7: Livestock and Wild Horses Cited as the Cause for Failing Land Health Standards, 2020 and 2024**



**Table 3: Wild Horses and Livestock as the Causal Factors for Failing Land Health Standards**

Reason for failure to meet LHS	Allotments (n)	Public Lands (acres)
Not Met due to Livestock & Horses	60	6,474,804
Not Met due Solely to Horses	17	951,812
<b>Total</b>	<b>77</b>	<b>7,426,616</b>

## **FLPMA §402(c)(2): The Grazing Permit Renewal Loophole and its Impacts**

Section §402(c)(2) of the Federal Land Policy and Management Act (FLPMA) permits the Bureau of Land Management (BLM) to renew grazing permits and leases for ten years without conducting an environmental review under the National Environmental Policy Act (NEPA) or evaluating whether the allotment meets Land Health Standards. This provision is commonly referred to as the Loophole because it offers land managers a way to bypass NEPA requirements. BLM is increasingly using this loophole to renew permits without the public comment period, interagency consultation and environmental review provided for in NEPA.

Through FOIA, PEER obtained the most recent data set from 2023 of the livestock grazing permits that were renewed under FLPMA §402(c)(2). Western Watersheds Project (WWP) compared the percentage of Animal Unit Months (AUMs) and grazing allotments reauthorized under the FLPMA's provisions by state and prepared a GIS layer of the data.

States like Nevada (93%), Idaho (85%), and Oregon (88%) show exceedingly high percentages of AUMs authorized under §402(c)(2), indicating a significant use of the regulatory exception to permit more livestock grazing on public lands in these states. Nevada and Idaho not only have high reauthorization rates but also show large increases in allotment percentages from 2021 to 2023 (-9% and -14% respectively), indicating a growing trend of using the exception to support increased livestock grazing.

**Table 4: FLMPA §402(c)(2) Exception Application – provided by WWP**

State	2023	2023	2021	Change
	Livestock AUM %	Allot %	Allot %	Allot %
AZ	84%	81%	76%	-5%
CA	82%	65%	57%	-8%
CO	71%	53%	46%	-7%
ID	85%	89%	75%	-14%
MT	31%	31%	27%	-5%
NM	56%	52%	44%	-9%
NV	93%	93%	84%	-9%
OR	88%	84%	70%	-13%
UT	80%	79%	62%	-17%
WY	72%	67%	68%	0%

### **What is an Animal Unit Month?**

An Animal Unit month, or AUM, is a term to express stocking rates. It is the amount of forage consumed in one month, based on the age, sex and type of livestock.

### **Notable findings by WWP**

- In 2023, 1.9 million AUMs on 1,342 allotments failed land health standards due to livestock and were reauthorized with FLPMA §402(C)(2).
- In 2023, 65 million acres of allotments had failing land health standards, and those lands host 3.7 million AUMs.
- FLPMA §402(c)(2) authorized allotments with failing land health standards include 54m acres and 3.0m AUMs.



Though there may be a varied approach to grazing management across different states, BLM is increasingly avoiding NEPA analysis in favor of permit reauthorization through the loophole. By allowing permit renewals without NEPA review and public comment, the agency might overlook critical issues related to land health. This could lead to the perpetuation of unsustainable grazing practices and further degradation of rangeland health. We question whether efficiency should trump sustainability.

## Variation by State

State-specific analysis of rangeland health data and FLPMA exception data provides valuable insights into regional variations, trends, and outliers, informing targeted interventions and management strategies to address local challenges and promote ecosystem resilience. By understanding the drivers of land degradation, leveraging best practices, and fostering stakeholder collaboration, states can work towards achieving sustainable rangeland management practices that balance ecological conservation, livestock production, and socio-economic well-being. Continued monitoring, evaluation, and adaptive management are essential for maintaining healthy rangeland ecosystems and ensuring their long-term sustainability for future generations.

**Table 5: Rangeland Health Standards Status for All BLM Allotments Through 2023 (Acreage)**

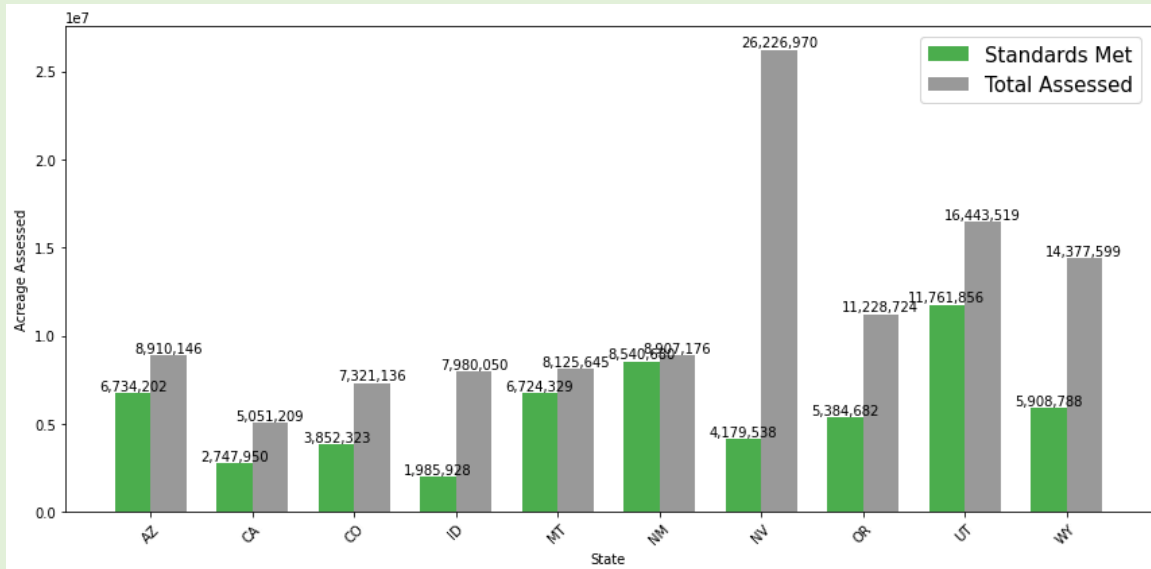
State	All standards met	Not met – livestock	Not met – cause not identified	Not met – other	Determination not complete	Other	Total
AZ	6,734,202	1,201,542	44,347	930,055	2,203,973	488,369	11,602,488
CA	2,747,950	1,720,519	157,325	425,415	977,996	91,193	6,120,398
CO	3,852,323	2,480,331	53,557	934,925	480,583	15,997	7,817,716
ID	1,985,928	4,090,572	751,754	1,151,796	2,951,347	10,052	10,941,449
MT	6,724,329	696,787	115,129	589,400	55,682	10,562	8,191,889
NM	8,540,680	174,916	52,328	139,252	3,435,771	0	12,342,947
NV	4,179,538	15,759,471	2,818,709	3,469,252	16,523,114	66,726	42,816,810
OR	5,384,682	2,602,853	2,064,381	1,176,808	2,355,276	10,569	13,594,569
UT	11,761,856	3,332,742	0	1,348,921	4,705,867	507,101	21,656,487
WY	5,908,788	5,825,789	909,316	1,733,706	2,891,104	98	17,268,801
<b>Total</b>	<b>57,820,276</b>	<b>37,885,522</b>	<b>6,966,846</b>	<b>11,899,530</b>	<b>36,580,713</b>	<b>1,200,667</b>	<b>152,353,554</b>

This table provides an overview of the current rangeland health standards status for all BLM allotments through 2023 for each state. It categorizes the status into standards met and not met, with further breakdowns into subcategories like livestock impact, cause not identified, and other determinations.

The data shows significant variation in the percentage of allotments meeting health standards across states. For instance, Nevada has the highest rate of allotments not meeting standards over 22 million acres (84% of assessed allotments), primarily due to livestock impacts, while

New Mexico shows a marked low failure rate (only 4% of the assessed allotments are failing land health standards).

**Figure 8: Standards Met and Total Assessed Acreage by State Through 2023**



- Between 2021 and 2023, there have been marked decreases in the number of allotments meeting land health standards in only two states: Nevada and Oregon. This suggests worsening conditions or possibly stricter evaluation criteria over time.
- State-level disparities in rangeland health status may reflect the diverse ecological, socio-economic, and political contexts. States like Idaho (51%), Nevada (60%), and Wyoming (41%) show high percentages of assessed land not meeting health standards due to livestock, which is a consistent theme across the data, suggesting that overgrazing is a pervasive issue.
- Conversely, states like Montana (83%) and New Mexico (96%) have higher percentages of land meeting health standards, indicating possible better management practices or less intensive grazing pressures.

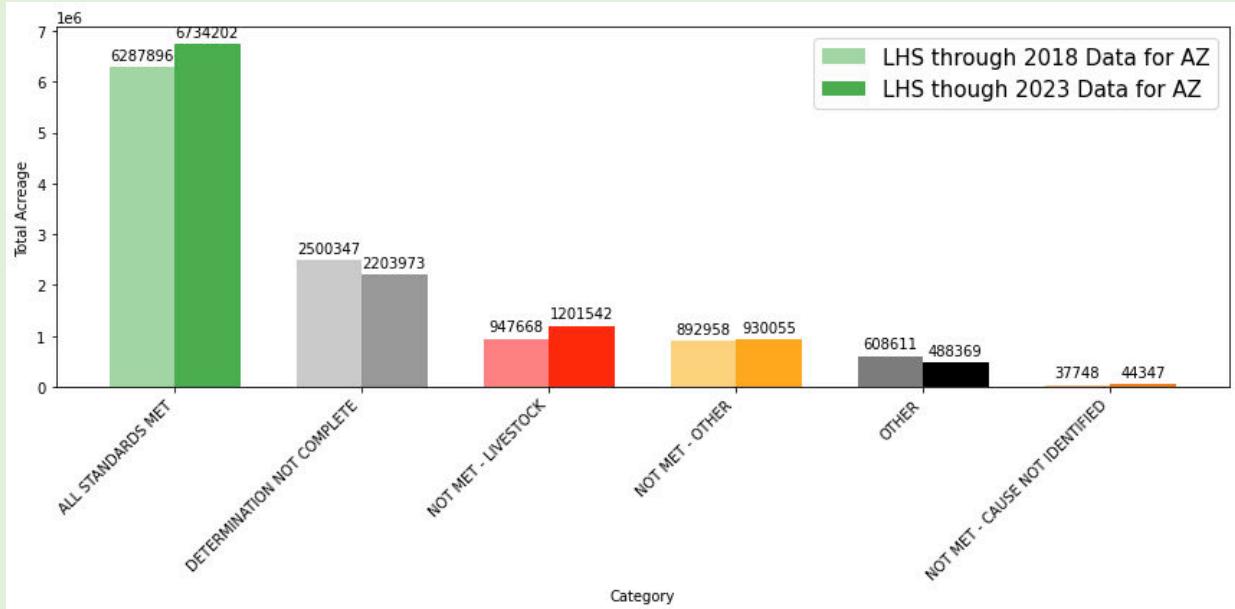
## Arizona

Despite an increase in assessed acreage from 6,287,896 acres in 2019 to 6,734,202 acres in 2023, there was a rise in the acreage not meeting standards due to livestock impacts, which now stands at 10%. The moderate utilization of the FLPMA §402(c)(2) exception at 31% suggests relatively better compliance with land health standards despite ongoing water scarcity and habitat fragmentation challenges.



BLM Photo

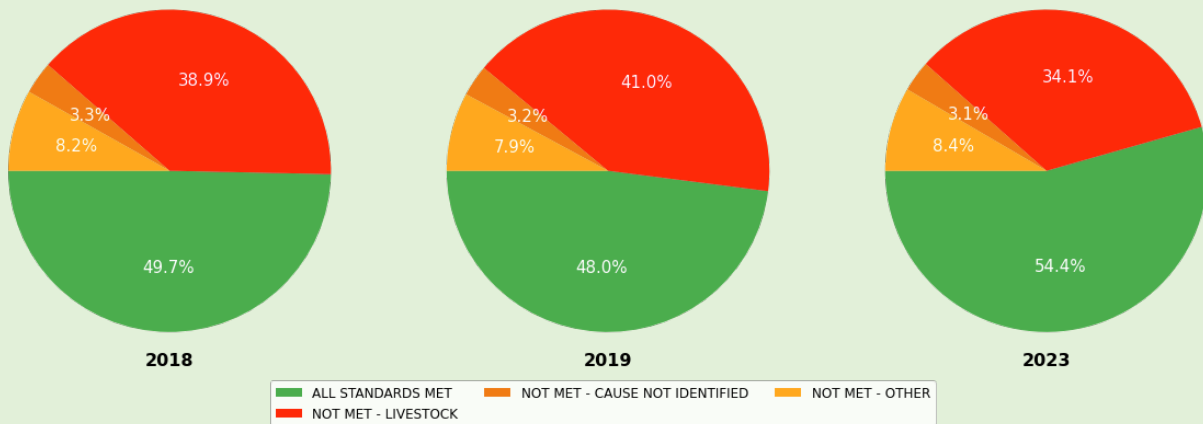
**Figure 9: Land Health Standards Acreage for Arizona**



**California**

The total assessed acreage meeting land health standards increased from 2,394,302 acres in 2019 to 2,747,950 acres in 2023. The proportion of acreage meeting standards due to livestock impacts also increased.

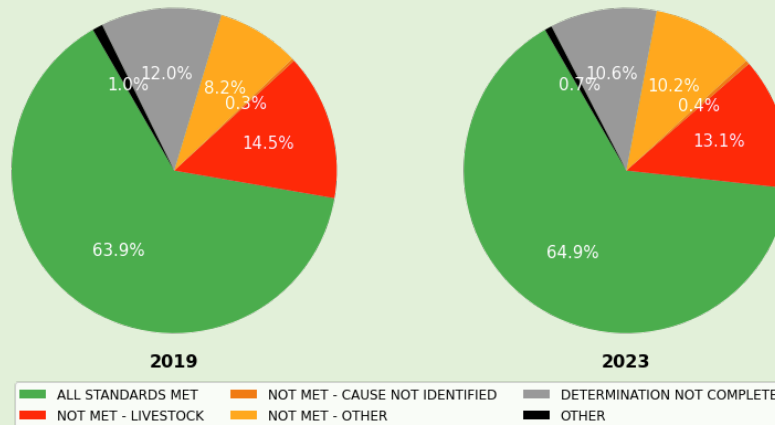
**Figure 10: Rangeland Health Standards Status for All Assessed Allotments by Acreage for California**



## Colorado

The state presents a complex landscape of rangeland health outcomes, with 49% of standards met and 32% not met due to livestock impacts. The moderate utilization rate of the FLPMA exception at 53% suggests a mixed effectiveness of current land management strategies across different regions.

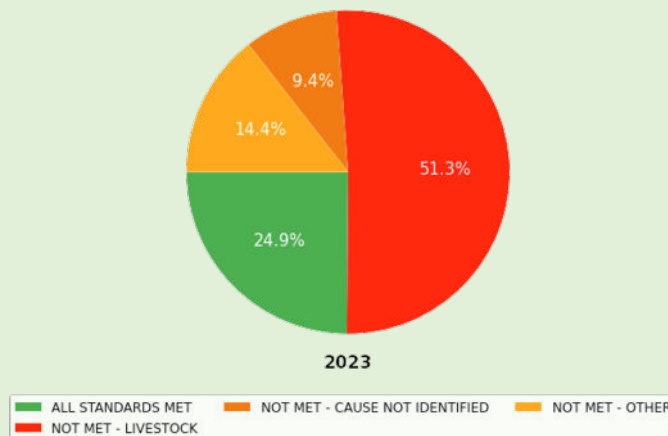
**Figure 11: Rangeland Health Standards Status for All Allotments by Records for Colorado**



## Idaho

In Idaho only 25% of the allotments assessed are meeting standards, with a high failure rate due to livestock (51%). These statistics underscore the urgent need for revising grazing management practices, possibly reducing AUMs, and introducing rest periods to mitigate impacts.

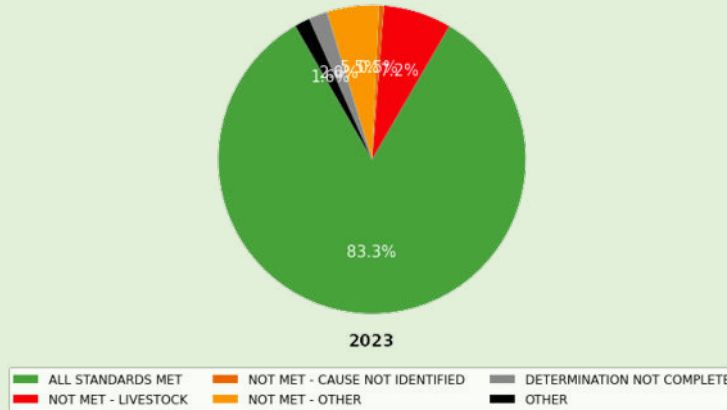
**Figure 12: Rangeland Health Standards Status for All Assessed Allotments by Acreage for Idaho**



## Montana

Based on BLM data, the vast majority of public lands in Montana are meeting land health standards and 83% of the acreage has been assessed. The allotments in this state are smaller. Many are in private inholdings, the traditional checkerboard pattern, which may account for different management and land health.

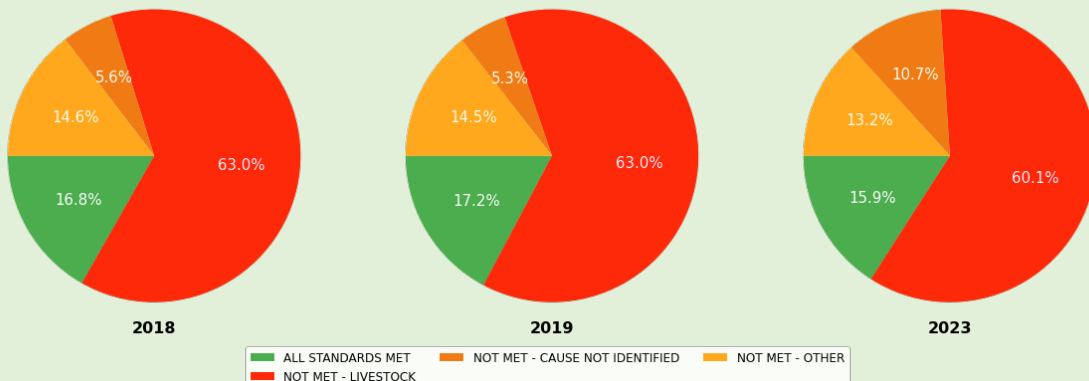
**Figure 13: Rangeland Health Standards Status for All Assessed Allotments by Acreage for Montana**



## Nevada

Nevada has the most acreage designated as grazing allotments at over 42 million acres. BLM has found that a considerable amount of land (15,759,471 acres) is failing to meet land health standards because of overgrazing. In 2018, Nevada reported 16.8% of the assessed allotments were meeting all land health standards. In 2024 that number decreased to 15.9%. It is one of the few states where the percentage of allotments failing land health standards has increased.

**Figure 14: Rangeland Health Standards Status for All Assessed Allotments by Acreage for Nevada**



A massive portion of Nevada allotment acreage (47.6%) has yet to be assessed. This suggests potential delays or complexities in evaluating these lands, which could affect management decisions and corrective actions. It also suggests ongoing challenges with grazing management with potential implications for land health. The size of these allotments necessitates stricter regulatory enforcement and better management practices to improve rangeland health.

## New Mexico

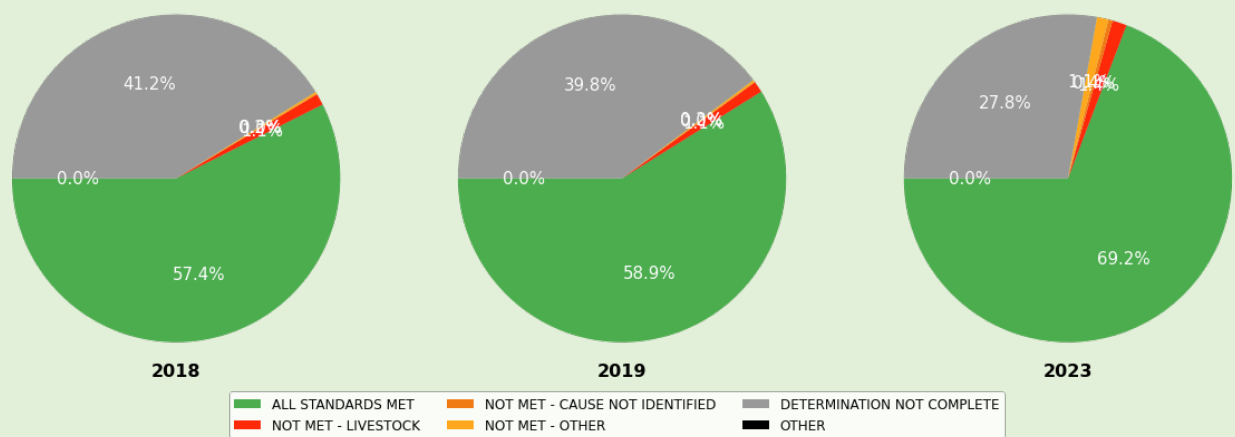
The land health in New Mexico appears to have made great progress with 69% of land health standards met and only 1% of the allotments failing to meet land health standards due to livestock grazing impacts. However, there is a concerning trend in the utilization of the FLPMA §402(c)(2) exception, which saw a 56% increase in reauthorizations of allotments failing to meet standards from 2021 to 2023. This underscores potential regulatory enforcement or management practice issues.



BLM Photo

Rangeland health data for New Mexico presents a very mixed picture, characterized by both promising trends and areas of concern. While the state data suggests vast amounts of healthy rangelands, we know that, like the rest of the country, the state has faced challenges such as drought, invasive species encroachment, and habitat fragmentation that pose significant threats to ecosystem resilience and biodiversity conservation. Analysis of land health standards status reveals notable disparities compared to neighboring states.

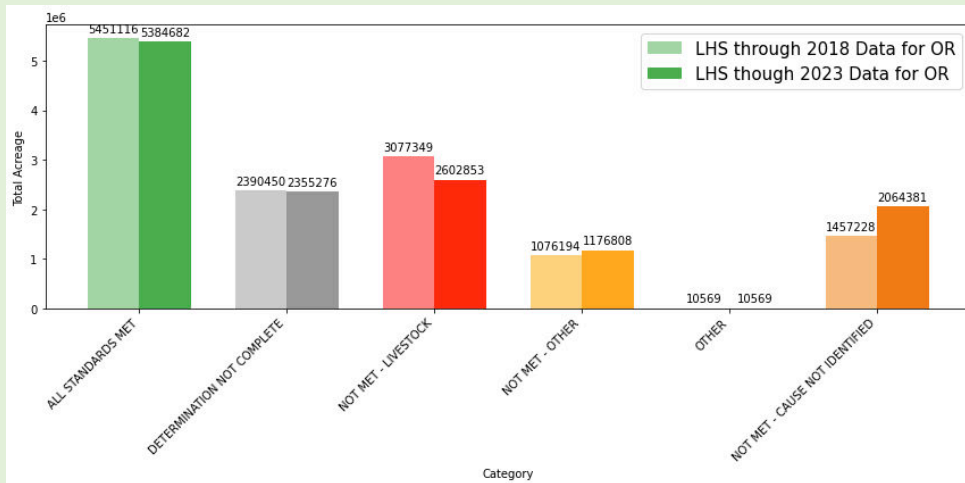
**Figure 15: Rangeland Health Standards Status for All Allotments by Acreage for New Mexico**



## Oregon

In Oregon, 48% of the state’s assessed grazing acreage meets land health standards, and it has a high rate of not meeting land health conditions due to livestock impacts (23%). It is notable that the percentage of unassessed land has remained static at around 17%.

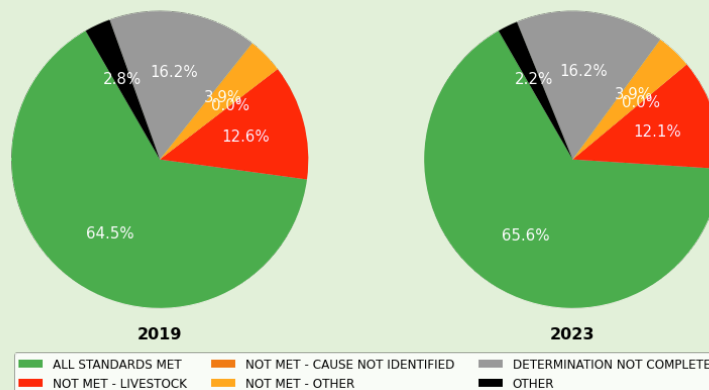
**Figure 16: Land Health Standards Acreage for Oregon**



## Utah

Utah has a diverse range of rangeland health outcomes, with 54% of land health standards met and 15% not met due to livestock grazing impacts. Analysis of FLPMA exception data reveals a moderate to high utilization rate of 80%, signaling gaps in management. Looking at outliers like Utah in FLPMA §402 (c)(2) exception data should inspire targeted interventions to improve the permitting process.

**Figure 17: Rangeland Health Standards Status for All Allotments by Records for Utah**



## Wyoming

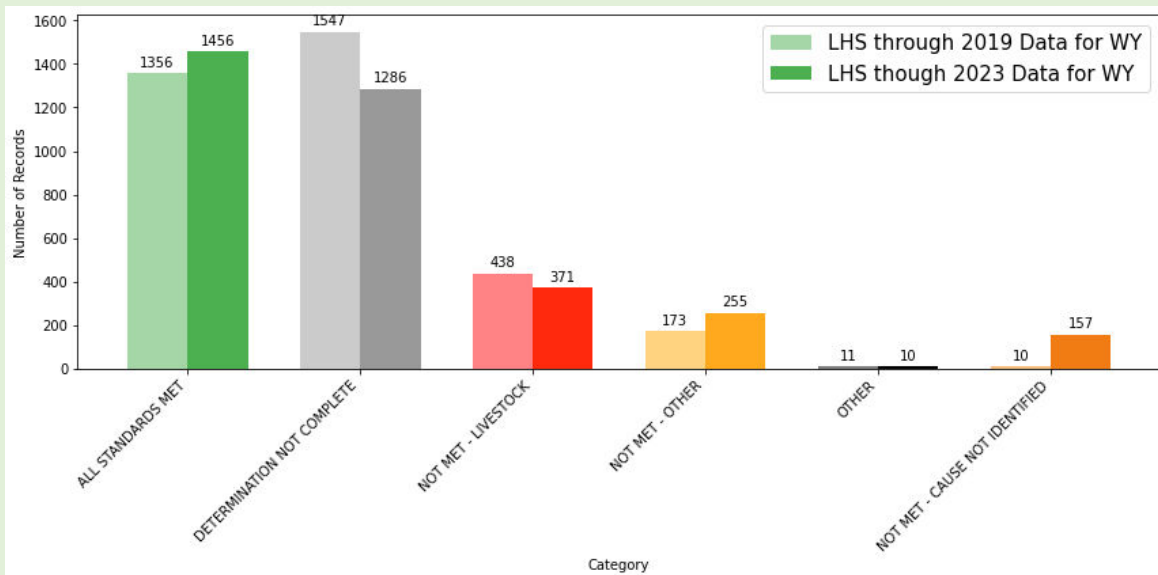
Wyoming has shown improvement in evaluating its allotments, reducing the proportion of unassessed allotments from 44% in 2019 to 36% in 2023. Although there has been a decrease in allotments failing due to livestock, there has been a corresponding rise in allotments failing without an identified cause. The gaps in how the data is collected or recorded give us an unclear picture of what is affecting the allotments. Improved monitoring technologies and methods are needed to better diagnose the specific reasons for failure.



BLM Photo

It is notable that Wyoming continues to almost always (93% of the time) renew permits under the FLPMA §402(c)(2) exception without an assessment or NEPA review.

**Figure 18: Comparison of Land Health Standards Acreage for Wyoming**





## IV. Recommendations

Based on the data analysis and discussion, the following recommendations are proposed for enhancing rangeland management practices on public lands:

**Resource and Personnel Shortages:** BLM needs increased funding and additional personnel to effectively address widespread non-compliance with rangeland health standards, as evidenced by significant percentages of land not meeting standards due to various causes, including livestock grazing. Enhanced funding would enable BLM to conduct more comprehensive assessments, implement targeted restoration projects, and allow for timely management adjustments to preserve the ecological balance and sustainability of these public lands.

**Enhanced Monitoring and Data Management:** BLM should move quickly to establish a centralized geodatabase for rangeland health evaluation records to streamline data access and enhance management efficacy. This system should integrate historical and current data, allowing for real-time updates and comprehensive data analysis.

**Data Transparency:** Ensuring transparency and accountability in data collection, analysis, and reporting processes is critical for maintaining public trust and confidence in land management agencies. Implementing robust quality assurance protocols, independent audits, and peer reviews can help detect and prevent data manipulation or bias.

**Addressing Specific Causes of Failure:** For allotments where livestock is a significant cause of failure, reducing livestock numbers, changing grazing seasons, or even resting the land periodically needs to occur. For non-livestock related issues, such as damage from off-road vehicles, BLM needs to implement stricter regulations and monitoring.

**State-Specific Management Approaches:** BLM should tailor management strategies to state-specific conditions and challenges. For instance, states with high failure rates might need more stringent controls and monitoring, while states with better compliance may benefit from practices aimed at maintaining their current standards. Outliers should be investigated with independent verification.

**Stakeholder Engagement and Collaborative Decision-Making:** The correlation between the decline in land health and the use of the loophole underscores the importance of public engagement and thorough environmental review processes. NEPA review and public comment periods provide opportunities for stakeholders to raise concerns, suggest alternatives, and ensure that land management decisions are based on comprehensive assessments.

**Conflict of Interest:** It is essential to recognize the potential for conflicts of interest among land managers, particularly if they have vested interests in specific management outcomes or stakeholder preferences. Clear guidelines, ethical standards, and conflict-of-interest disclosures can help mitigate the risk of bias and ensure the integrity of decision-making processes.

**Whistleblower Protections:** Whistleblower protections and channels for confidential reporting of misconduct or data manipulation are essential for empowering employees to raise concerns without fear of retaliation. Creating a culture of accountability, openness, and integrity within land management agencies can foster a supportive environment for whistleblowers to come forward with credible evidence.

## V. Conclusion

Overall, the comparison of 2019 and 2023 rangeland health data underscores the dramatic impact of overgrazing by livestock on our public lands. We can see the dynamic nature of rangeland ecosystems and the importance of ongoing monitoring and adaptive management to address emerging challenges and promote sustainable land stewardship practices.

Though the data does not show that rangeland health is improving, it is important to recognize the efforts of dedicated land managers and scientists who strive to conduct rigorous and objective assessments of rangeland health. The findings underscore the importance of proactive management interventions to address the challenges of overgrazing, habitat degradation, and ecosystem fragmentation on public lands.

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### **Additional resources**

#### **[Fact Sheet](#)**

#### **[Overall Status and Trends](#)**

##### **State Trends**

[Arizona](#)

[California](#)

[Colorado](#)

[Idaho](#)

[Montana](#)

[New Mexico](#)

[Nevada](#)

[Oregon](#)

[Utah](#)

[Wyoming](#)

#### **[Wild Horse Impacts and Trends](#)**

The **standards and guidelines** for grazing administration requires that authorized officers ensure that:

"(i) Management practices maintain or promote adequate amounts of ground cover to support infiltration, maintain soil moisture storage, and stabilize soils;

(ii) Management practices maintain or promote soil conditions that support permeability rates that are appropriate to climate and soils;

(iii) Management practices maintain or promote sufficient residual vegetation to maintain, improve or restore riparian-wetland functions of energy dissipation, sediment capture, groundwater recharge and stream bank stability;

(iv) Management practices maintain or promote stream channel morphology (e.g., gradient, width/depth ratio, channel roughness and sinuosity) and functions that are appropriate to climate and landform;

(v) Management practices maintain or promote the appropriate kinds and amounts of soil organisms, plants and animals to support the hydrologic cycle, nutrient cycle, and energy flow;

(vi) Management practices maintain or promote the physical and biological conditions necessary to sustain native populations and communities;

(vii) Desired species are being allowed to complete seed dissemination in 1 out of every 3 years (Management actions will promote the opportunity for seedling establishment when climatic conditions and space allow.);

(viii) Conservation of Federal threatened or endangered, proposed, candidate, and other special status species is promoted by the restoration and maintenance of their habitats;

(ix) Native species are emphasized in the support of ecological function;

(x) Non-native plant species are used only in those situations in which native species are not readily available in sufficient quantities or are incapable of maintaining or achieving properly functioning conditions and biological health;

(xi) Periods of rest from disturbance or livestock use during times of critical plant growth or regrowth are provided when needed to achieve healthy, properly functioning conditions (The timing and duration of use periods shall be determined by the authorized officer.);

(xii) Continuous, season-long livestock use is allowed to occur only when it has been demonstrated to be consistent with achieving healthy, properly functioning ecosystems;

(xiii) Facilities are located away from riparian-wetland areas wherever they conflict with achieving or maintaining riparian-wetland function;

(xiv) The development of springs and seeps or other projects affecting water and associated resources shall be designed to protect the ecological functions and processes of those sites; and

(xv) Grazing on designated ephemeral (annual and perennial) rangeland is allowed to occur only if reliable estimates of production have been made, an identified level of annual growth or residue to remain on site at the end of the grazing season has been established, and adverse effects on perennial species are avoided." [60 FR 9969, Feb. 22, 1995, as amended at 61 FR 59835, Nov. 25, 1996; 71 FR 39508, July 12, 2006]