BLM Rangeland Health Map
Metadata

blm_natl_grazing_allot_lhs2020.shp

Identification Information:
Citation:
Citation Information:
Originator: Peter D. Lattin / Public Employees for Environmental Responsibility (PEER)
Publication Date: 20220302
Title: blm_natl_grazing_allot_lhs2020
Geospatial Data Presentation Form: vector digital data
Online Linkage: https://peer.org/wp-content/uploads/2022/03/Rangeland-Health-Map-Metadata-3-4-022.pdf
Description:
Purpose: This dataset represents the merging and consolidation of three tabular datasets, each containing all BLM allotment land health standards evaluation records. Each dataset was compiled by BLM in response to separate Freedom of Information Act (FOIA) requests between 2007 and 2021. These data were compiled to create a geospatial dataset of the most current records of BLM Land Health Standards assessment findings across landscape, ecoregional, and West-wide spatial scales. To date, the agency has neither compiled nor maintained current allotment land health evaluation records in electronic format. Lack of spatial data has also hampered an understanding of the condition and trends has land health with respect to the effects of livestock grazing as an ecological stressor and disturbance factor. Livestock grazing remains one of the few ecological stressors and disturbance factors that the agency has not examined at regional scales, yet is both central to their mission, and one of the few disturbance agents under our direct control.

These data were compiled to examine patterns and trends of livestock grazing reported as a significant cause of failure to achieve Land Health Standards (LHS) at broad spatial scales. Many types of ecological stressors or disturbance factors are recorded as significant causes of failure to achieve Land Health Standards, but livestock grazing is far and away THE single most frequently recorded cause of failure to achieve land health standards. No other causal factor in the records comes close in reporting frequency. The size of BLM grazing allotments varies in orders of magnitude, from 40 acres in the Dakotas to more than 1 million acres in Nevada. The total area occupied by allotments failing to meet standards due to livestock grazing dwarfs that of all other recorded causal factors. Allotments are recorded as failing where livestock grazing is identified as a significant cause even when other significant causes are present. The agency has used both the number and area of allotments as reporting units in their Rangeland Inventory, Monitoring, and Evaluation (RIME) reports for several decades for annual land health status inventories. In addition, the BLM and USGS have used area of allotments that failing habitat standards attributable to livestock grazing to map areas where Greater Sage-grouse

might be at risk from the effects of livestock grazing (Manier, D.J., Wood, D.J.A., Bowen, Z.H., Donovan, R.M., Holloran, M.J., Juliusson, L.M., Mayne, K.S., Oyler, McCance, S.J., Quamen, F.R., Saher, D.J., and Titolo, A.J., 2013, *Summary of science, activities, programs, and policies that influence the rangewide conservation of Greater Sage-Grouse (Centrocercus urophasianus)*: U.S. Geological Survey Open-File Report 2013–1098, 170 p., http://pubs.usgs.gov/of/2013/1098/). Broadly speaking, in the current dataset, patterns of failure attributable to livestock appear to be more strongly associated with ecoregions than with specific offices or states within those ecoregions. Veblen *et al*. (Veblen, K.E., D.A. Pyke, C.L. Aldridge, M.L. Casazza, T.J. Assal, and M.A. Farinha. 2011. *Range-wide assessment of livestock grazing across the sagebrush biome*: U.S. Geological Survey Open-File Report 2011-1263, 74 p.) mapped land health standards allotment status also by coding all allotments failing one or more fundamental land health standard due to grazing as failing due to grazing with the 2007 BLM LHS dataset that had been compiled for a private organization. Their dataset included records of allotment LHS evaluations between 1997 through 2007, whereas the current dataset now contains those earlier records but updated through 2019. Although the map has filled in, the general distribution of allotments identified as failing one or more LHS due to grazing has remained similarly distributed across ecoregions. Most of the area identified by Veblen et al. (2011) as failing LHS due to livestock was within the Central Basin and Range, Northern Basin and Range, Snake River Plain, and Wyoming Basin. That remains true. Level III ecoregions Central Basin and Range, Northern Basin and Range, Snake River Plain, and the Wyoming Basin were extremely high, each nested within the Levell II Cold Deserts ecoregion that itself had a livestock failure level of 40%. By contrast, the Level III Northwestern Glaciated Plains, Northwestern Great Plains, High Plains, Southwestern Tablelands, Madrean Archipelago, Arizona/New Mexico Mountains, Arizona/New Mexico Plateau, and Chihuahuan Deserts are all in the single digits. The Level II Cold Deserts ecoregion stands out as having an extraordinarily high level of failure. In that ecoregion, 40% or more of acres assessed through 2019 lie within allotments identified as failing land health standards that identify livestock grazing as a significant factor, and less than 50% identified as even achieving land health standards. Within the Cold Deserts Level II ecoregion, the Central Basin and Range, Northern Basin and Range, Snake River Plain and Wyoming Basin Level III ecoregions all exceeded 40%. Much of the BLM lands that have not had a land health standards evaluation are within the Central Basin and Range ecoregion, where half of assessed lands are in allotments identified as failing and where livestock were a significant cause. This should be cause for concern. In addition, a substantial portion of allotment area within Western Cordillera Level II ecoregion also fall within allotments failing due to livestock.

Manier *et al.* (2013) used allotments that were recorded in the 2007 data as failing habitat standards and where livestock was a causal factor as a means to map out livestock's footprint or areas where Greater Sage-grouse preliminary priority habitat (PPH) and preliminary general habitat (PGH) might be vulnerable to livestock grazing. This approach resulted in a discrete and static map that just existing reported condition rather than a dynamic map reflecting potential susceptibility where grazing is ongoing and at much broader spatial scales. Unlike livestock grazing, vulnerability of GRSG habitat to wild horses was defined simply as areas where Wild Horse and Burro Herd Management Areas overlapped GRSG PPH and PGH. The authors chose to apply a very narrow, spatially limited, and static assumption of the direct footprint of livestock grazing on PPH & PGH but not to wild horses and burro. In the years since the report was published, the direct footprint of allotments failing due to livestock has certainly increased, and many allotments previously identified as failing due to grazing have recovered, whereas others now fail due to livestock grazing, emphasizing the problems with the approach applied to livestock grazing as a stressor/disturbance factor in the Manier et al. (2013) report. Our preliminary evaluation of these new compiled data suggests that, with respect to the Greater

Sagegrouse, the Direct Footprint for livestock on BLM managed lands should include all active allotments overlapping important Sage-grouse habitat, not just those allotments specifically identified as failing a habitat standard at any point in time. In addition, the clear differences between Level III and Level II ecoregions with respect to the relative apparent significance of livestock as a cause of LHS failure suggest opportunities for weighting to reflect underlying differences in relative risk of failure based on ecoregional differences.

It is also important to keep in mind that the data used in the *Summary of science, activities, programs, and policies that influence the rangewide conservation of Greater Sage-Grouse* were based on BLM records, compiled from scratch at field offices in response to a Freedom of Information Act (FOIA) request, because BLM does not maintain a centralized agency-wide geodatabase for their allotment Land Health Standards evaluation records, nor are they reviewed by the agency to determine whether they would meet agency quality standards. The data in blm_natl_grazing_allot_lhs2020 includes that used in the Summary of the science, in addition to two other such datasets compiled by the agency in response to FOIA requests, including the most recent in 2020.

Time Period of Content:
Time Period Information: Single
Date/Time:
Calendar Date: 20220302
Currentness Reference: publication date *Status:*
Progress: Complete
Maintenance and Update Frequency: As needed *Spatial*
Domain:
Bounding Coordinates:
West Bounding Coordinate:
East Bounding Coordinate:
North Bounding Coordinate:
South Bounding Coordinate:
Keywords:
Theme:
Theme Keyword Thesaurus:
Theme Keyword: environment
Theme Keyword: biota *Theme:*
Theme Keyword Thesaurus: None
Theme Keyword: rangeland health
Theme Keyword: Land Health Standards
Theme Keyword: BLM
Theme Keyword: livestock
Theme Keyword: grazing
Theme Keyword: allotment
Theme Keyword: Ecoregion *Theme*
Keyword: Greater Sage-grouse *Theme*
Keyword:
Theme Keyword: *Theme*
Keyword:
Theme Keyword:
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Theme Keyword:
Theme Keyword:
Theme:
Place Keyword Thesaurus: BLM-State; Bureau of Land Management
Place Keyword: ID
Place Keyword: ND
Place Keyword: NV
Place Keyword: OR
Place Keyword: MT
Place Keyword: US
Place Keyword: WA
Place Keyword: WY
Place Keyword: CA
Place Keyword: CO
Place Keyword: UT
Place Keyword: SD

Access Constraints: None, these data are considered public domain.

Use Constraints: These data are provided by the Public Employees for Environmental Responsibility (PEER) "as is" and might contain errors or omissions. PEER and PEER's contractors assume no responsibility for errors or omissions. No warranty is made by PEER or PEER's contractors as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data; nor shall the act of distribution to contractors, partners, or beyond, constitute any such warranty for individual or aggregate data use with other data. The User assumes the entire risk associated with its use of these data and bears all responsibility in determining whether these data are fit for the User's intended use. The information contained in these data is dynamic and may change over time. The data are not better than the BLM sources from which they were derived, and both scale and accuracy may vary across the data set. These data might not have the accuracy, resolution, completeness, timeliness, or other characteristics appropriate for applications that potential users of the data may contemplate. The User is encouraged to carefully consider the content of the metadata file associated with these data. These data are neither legal documents nor land surveys and must not be used as such. Official records may be referenced at most BLM offices. The land health status records included in these were compiled by individual field offices and were evaluated by BLM for accuracy and were not subjected BLM data quality standards review prior to release to the requestors of the data. In addition, the User should be aware that the land health standards data in this dataset were compiled and released as very brief summaries abstracted from the original documents at each office. Please direct all questions regarding allotment land health standards records for any specific allotment or groups of allotments and report any errors in the data to the BLM office from which it was obtained. The BLM should be cited as the original data source in any products derived from these data, and P.D. Lattin as the compiler of the BLM allotment Land Health Standards evaluation records tabular data. Any Users wishing to modify the data should describe the types of modifications they have performed. The User should not misrepresent the data, nor imply that changes made were approved or endorsed by BLM, PEER, or P.D. Lattin. Any Users wishing to modify the data should describe the types of modifications they have performed. This data may be updated by the PEER without notification. Users are further cautioned that these data and interpretations derived from them do not eliminate the need for reviewing the original field office records from which BLM compiled the Land Health Standards evaluation data.

Point of Contact:

Contact Organization Primary:

Contact Organization: Public Employees for Environmental Responsibility (PEER) Contact Person:

Contact Position: PEER GIS Data Steward

Contact Address: 962 Wayne Avenue, Suite 610

Address Type: physical address

Address: 962 Wayne Avenue, Suite 610

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State or Province: MD

Postal Code: 20910-4453

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Data Set Credit: Peter D. Lattin

Native Data Set Environment:

Data Quality Information:

Attribute Value Accuracy Information:

Attribute Accuracy Report: The BLM allotment Land Health Standards assessment tabular data compiled for this dataset were compiled from scratch from original records at field offices three times between 2008 and 2020. They were then compiled by the State offices, and finally by the BLM National Operations Center before release to the requesting organizations. None of these tabular datasets, compiled in response to FOIA requests, were reviewed for accuracy by the agency. The attribute data in this dataset were organized, cleaned, errors, omissions, and inconsistencies identified and where possible, corrected. Many records were difficult to interpret due to use of abbreviations, shorthand, typographic mistakes, transcription errors, uninterpretable dates, etc.. In addition, merging of three datasets compiled for many of the same records up to three times revealed other accuracy problems. Although they had been transcribed from scratch each time, at least in many cases, the records often differed. In some instances, a dataset would erroneously identify an early land health evaluation as the most current. Elsewhere, for the same evaluation, one dataset might identify livestock as a significant cause of failure to achieve LHS, while a more recent dataset did not, or identify an allotment as meeting all standards for the same evaluation that had previously been recorded as failing. The opportunity to review side-by-side three sets of records both exposed record-keeping and transcription problems, but also provided an opportunity to identify and to correct mistakes and to flag others. Accuracy problems included *Content* (present, missing, or in sufficient detail), *LHS Status* (Met/Not Met, Not Met – Livestock / Not Met – Not Livestock), *Causal determination* (one dataset reporting livestock another not, for the same evaluation record), *Dates* (missing, conflicting between datasets for same evaluation, or not the most current evaluation). Recordkeeping practices were clearly discernable between field offices. Some provided considerable detail regarding conditions upon which causal determinations were made. Others provided little to no information. All of the data from which this dataset is compiled are a product of the BLM field office data transcriptions spanning more than a decade. The public land acreage values were not assessed for accuracy. Contact the BLM point of contact for this dataset for information or questions regarding the attribute accuracy.

Quantitative Attribute Accuracy Assessment: Date conflicts and sufficient information detail were problems. It was clear that none of the datasets had been reviewed for accuracy.

Attribute Accuracy Explanation: This data was originally compiled at field offices and is a product of the BLM. Contact the BLM point of contact for this dataset for information regarding the attribute accuracy.

Logical Consistency Report: Logical consistency because a problem as datasets compiled for the same records at different times were merged. It included problems with dates, causal descriptions vs. LHS status (citing livestock as a cause of failure but identified as ALL STANDARDS MET), dates conflicting between datasets for same evaluation, or not the most current evaluation), or reporting that no determination had been conducted when in fact it had. In addition, there were issues with use of the same shorthand to mean different things. Logical inconsistencies were identified between GIS acres and public land acres in the tabular join from the data received from BLM. Contact the BLM point of contact for this dataset for information regarding logical consistency.

Completeness Report: A substantial number of records in each of the datasets received lacked complete data for a land health standards evaluation. Only through multiple requests was it possible to piece together a complete record. It was frequently difficult to determine whether a record had been left blank on purpose or whether the allotment had not yet been assessed. Contact the BLM point of contact for this dataset for information regarding the dataset completeness.

Positional Accuracy:

Horizontal Positional Accuracy:

Horizontal Positional Accuracy Report: The spatial data is a product of the BLM. Contact the BLM point of contact for this dataset for information regarding the horizontal accuracy.

Quantitative Horizontal Positional Accuracy Assessment:

Horizontal Positional Accuracy Explanation The spatial data is a product of the BLM. Contact the BLM point of contact for this dataset for information regarding the horizontal accuracy.

Vertical Positional Accuracy:

Vertical Positional Accuracy Report: The spatial data is a product of the BLM. Contact the BLM point of contact for this dataset for information regarding the vertical accuracy.

Lineage:

Source Information:

Source Citation:

Citation Information:

Originator: Peter D. Lattin

Publication Date: 20220120

Title: **BLM Land Health Status (2020)** *blm_natl_grazing_allot_lhs2020.shp Online*

Linkage: https://mangomap.com/peer/maps/126421/blm-rangeland-health-status-2020-thesignificance-of-livestock-grazing-on-public-lands?preview=true#

Type of Source Media: Website *Source Time Period of Content:*

Time Period Information: Single

Date/Time:

Calendar Date: 20220120

Source Currentness Reference: Public release of "BLM Rangeland Health Status (2020) - The Significance of Livestock Grazing on Public Lands (BLM's allotment Land Health Standards (LHS) assessment records (1997 - 2019))"

Source Citation Abbreviation: PEER

Process Step:

Process Description: This feature class was created from a merging, cleanup, and reconciliation of three land health data tabular records datasets compiled by BLM Field Offices in response to three

FOIA requests between 2008 and 2020 to assign the land health status of the most recent allotment LHS evaluation to each allotment present in the BLM National Grazing Allotment Polygon layer. Public land acres recorded for allotments in the Land Health Evaluation records were also joined to the BLM allotment layer.

Source Used Citation Abbreviation: PEER

Process Date: 20220120 *Process Contact:*

Contact Information:

Contact Organization Primary:

Contact Organization: Public Employees for Environmental Responsibility (PEER)

Contact Person: Interactive Grazing Map Portal Data Steward

Contact Position: Interactive Grazing Map Portal Data Steward

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Address Type: physical address

Address: 962 Wayne Avenue, Suite 610

City: Silver Springs

State or Province: MD

Postal Code: 20910-4453

Country: US

Contact Voice Telephone: (202) 265-7337

Contact Electronic Mail Address: info@peer.org

Spatial Data Organization Information:

Direct Spatial Reference Method: Vector *Point and Vector Object Information:*

SDTS Terms Description:

SDTS Point and Vector Object Type: GT-polygon composed of chains *Point and Vector Object Count:*

Spatial Reference Information:

Horizontal Coordinate System Definition:

Planar:

Map Projection:

GEOGCS["GCS_WGS_1984",

DATUM["D_WGS_1984",

SPHEROID["WGS_1984",6378137,298.257223563]],

PRIMEM["Greenwich",0],

UNIT["Degree",0.017453292519943295]] Entity and Attribute Information:

Detailed Description:

Entity Type:

Entity Type Label: **BLM Land Health Status (2020)**

Entity Type Definition: Feature Class *Entity Type Definition Source:* PEER

Attribute:

Attribute Label: **gra_allot_poly**

Attribute Definition: BLM Grazing Allotment Polygons

Attribute Definition Source: BLM Grazing Allotment Polygons

Attribute Domain Values: Pasture and Allotment Boundaries Implementation Guidelines

Unrepresentable Domain:
Attribute:
Attribute Label: **OBJECTID**
Attribute Definition: Internal feature number.
Attribute Definition Source: Esri
Attribute Domain Values:
Unrepresentable Domain: Sequential unique whole numbers that are automatically generated.
Attribute:
Attribute Label: **Shape_Area**
Attribute Definition: Area of feature in internal units squared.
Attribute Definition Source: Esri
Attribute Domain Values:
Unrepresentable Domain: Positive real numbers that are automatically generated.
Attribute:
Attribute Label: **ALLOT_NO**
Attribute Definition: The number that identifies an Allotment which is unique within the BLM administrative state
Attribute Definition Source: Pasture and Allotment Boundaries Implementation Guidelines *Attribute Domain Values:*
Unrepresentable Domain:
Attribute:
Attribute Label: **ALLOT_NAME**
Attribute Definition: The name by which the allotment is commonly known
Attribute Definition Source: Pasture and Allotment Boundaries Implementation Guidelines
Attribute Domain Values:
Unrepresentable Domain:
Attribute:
Attribute Label: **GIS_ACRES**
Attribute Definition: This is a calculated value of area in units of acres based on the area field created by default within the ESRI Polygon data structure.
Attribute Definition Source: Pasture and Allotment Boundaries Implementation Guidelines
Attribute Domain Values:
Unrepresentable Domain:
Attribute:
Attribute Label: **ADMIN_ST**
Attribute Definition: An administrative unit that identifies the state or geographic area which has administrative jurisdiction over lands, and cases.
Attribute Definition Source: Pasture and Allotment Boundaries Implementation Guidelines
Attribute Domain Values:
Unrepresentable Domain:
Attribute:
Attribute Label: **DOM_ADMIN_ST**
Attribute Definition: Pasture and Allotment Boundaries Implementation
Guidelines
Attribute Definition Source:
Attribute Domain Values:

Unrepresentable Domain:
Attribute:
Attribute Label: **ADM_OFC_CD**
Attribute Definition: BLM administrative office (which is subordinate to the state office) that has jurisdiction and/or management authority over lands within a geographic area
Attribute Definition Source: Pasture and Allotment Boundaries Implementation Guidelines
Attribute Domain Values:
Unrepresentable Domain:
Attribute:
Attribute Label: **ADM_UNIT_CD**
Attribute Definition: The BLM administrative unit/office that is a combination of Administrative State Code and Administrative Office Code that fully identifies the geographic area which has jurisdiction over the lands.
Attribute Definition Source: Pasture and Allotment Boundaries Implementation Guidelines
Attribute Domain Values:
Unrepresentable Domain:
Attribute:
Attribute Label: **DOM_ADM_UNIT_CD**
Attribute Definition: Pasture and Allotment Boundaries Implementation
Guidelines
Attribute Definition Source:
Attribute Domain Values:
Unrepresentable Domain:
Attribute:
Attribute Label: **ST_ALLOT**
Attribute Definition: This is a concatenation of two existing attributes but is not a substitute for having either of those two attributes. It is the existing unique code that allows identification of individual allotments throughout the entire United States.
Attribute Definition Source: Pasture and Allotment Boundaries Implementation Guidelines
Attribute Domain Values:
Unrepresentable Domain:
Attribute:
Attribute Label: **publicacres**
Attribute Definition: Acres of public land within the allotment recorded
in the allotment Land Health Evaluation Dataset compiled by BLM
response to a Freedom of Information Act (FOIA) requests in 2020.
Attribute Definition Source:
Attribute Domain Values:
Unrepresentable Domain:
Attribute:
Attribute Label: **last_lheyr**
Attribute Definition: The year of the last allotment land health evaluation or determination based on the reconciliation of three datasets compiled since 2008 by BLM in response to FOIA requests by private organizations.
Attribute Definition Source: P.D. Lattin from BLM, raw data compiled in response to a FOIA request by a private organization. The data had not been subjected by BLM to QA/QC.

Attribute Domain Values:
Unrepresentable Domain:
Attribute:
Attribute Label: **determ2020**
Attribute Definition: The recorded information pertaining to the land health standards determination as received from BLM in the 2020 dataset. Had not been subjected by BLM to QA/QC.
Attribute Definition Source: : P.D. Lattin from BLM, raw data compiled in response to a FOIA request by a private organization. The data had not been subjected by BLM to QA/QC
Attribute Domain Values:
Unrepresentable Domain:
Attribute:
Attribute Label: **blmcat2020**
Attribute Definition: The recorded land health standards CATEGORY as received from BLM in the 2020 dataset.
Attribute Definition Source: P.D. Lattin from BLM, raw data compiled in response to a FOIA request by a private organization. The data had not been subjected by BLM to QA/QC
Attribute Domain Values: CATEGORY A is assigned to allotments that achieve or are making significant progress towards achievement of land health standards, CATEGORY B and CATEGORY C are assigned to allotments failing to achieve land health standards and identify current livestock grazing as a significant cause of failure, CATEGORY D is assigned to allotments that fail to achieve land health standards where current livestock grazing is not identified as a significant cause, and DETERMINATION NOT COMPLETE assigned to allotments that have not had a land health standards evaluation since assessments began in 1997, and OTHER (various descriptions)
Unrepresentable Domain:
Attribute:
Attribute Label: **causes2020**
Attribute Definition: The recorded information pertaining the cause of causes of failure to achieve land health standards as received from BLM in 2020 in response to a FOIA request by a private organization.
Attribute Definition Source: BLM, raw data compiled in response to a FOIA request. Had not been subjected by BLM to QA/QC
Attribute Domain Values:
Unrepresentable Domain:
Attribute:
Attribute Label: **notes2020**
Attribute Definition: Notes made when inconsistencies in BLM record information were identified
Attribute Definition Source: P.D. Lattin
Attribute Domain Values:
Unrepresentable Domain:
Attribute:
Attribute Label: **causes2007**
Attribute Definition: The recorded information pertaining the cause(s) of failure to achieve land health standards as received in the first LHS dataset compiled by BLM in response to a FOIA request by a private organization containing records through 2007
Attribute Definition Source: P.D. Lattin from BLM, raw data compiled in response to a FOIA request by a private organization. The data had not been subjected by BLM to QA/QC

Attribute Domain Values:
Unrepresentable Domain:
Attribute:
Attribute Label: **causes2012**
Attribute Definition: The reconciled cause(s) of failure to achieve land health standards after merging of the first LHS dataset compiled by BLM in response to a FOIA request containing records through 2007 and a second later obtained containing records through 2012.

During the process of merging and updating of the LHS data, many errors, omissions, and inconsistencies were identified. Many of these records had been recompiled for the same LHS evaluation and determination reports, but differed in language and materially, in dates, status, and reported causes. Best professional judgment was used in the reconciliation process, however, if reference to livestock grazing was present in the 2007 dataset but absent in the 2012 dataset, the 2012 record was assumed to have been inaccurate and "livestock grazing" was assumed to have been a cause of failure. Similarly, a number of records in the 2012 dataset reported that one or more land health standard had not been achieved but did not report a cause of non-achievement. The cause or causes reported in the 2007 dataset were used to assign land health status. In some cases, a record in one of the two datasets recorded the allotment as achieving all standards while the other reported that one or more standard had not been achieved. In these instances, the allotment was assumed to have not been achieved.
Attribute Definition Source: P.D. Lattin from raw data compiled by BLM in response to FOIA requests by a private organization. Required reconciliation of two raw datasets, neither of which had not been subjected by BLM to QA/QC.
Attribute Domain Values:
Unrepresentable Domain:
Attribute:
Attribute Label: **last_lhe**
Attribute Definition: Date of the most recent land health standards evaluation. The format of the original data was inconsistent and incomplete. The attribute last lheyr was used for data reconciliation due to problems with recorded dates.
Attribute Definition Source: P.D. Lattin from BLM, raw data compiled in response to three FOIA request by private organizations between 2008 and 2020. The data had not been subjected by BLM to QA/QC *Attribute Domain Values:*
Unrepresentable Domain:
Attribute:
Attribute Label: **lhs_2020**
Attribute Definition: The land health standards status as of 2020. The reconciled cause(s) of failure to achieve land health standards after merging of the first LHS dataset compiled by BLM in response to a FOIA request containing records through 2007, a second containing records through 2012, and the third containing records through 2019 that was compiled in 2020.

During the process of merging and updating of the LHS data, many errors, omissions, and inconsistencies were identified. Many of these records had been recompiled for the same LHS evaluation and determination reports, but differed in language and materially, in dates, status, and reported causes. Best professional judgment was used in the reconciliation process, however, if reference to livestock grazing was present in the 2007 or in the 2012 dataset, but absent in the 2020 dataset, the 2020 record was assumed to have been inaccurate and "livestock grazing" was assumed to have been a cause of failure. Similarly, several records in the 2020 dataset reported that one or more

land health standard had not been achieved but did not report a cause of non-achievement. The cause or causes reported in the 2007 or 2012 dataset for the same LHS allotment evaluation were used to assign land health status. In some cases, a record in one of the three datasets recorded the allotment as achieving all standards while the other reported that one or more standard had not been achieved for the same land health standards evaluation. In these instances, the allotment was assumed to have not been achieved. The datasets did not always report the most recent land health evaluation. In these cases, the status of the most recent LHE was assigned to the allotment. The 2020 BLM LHS CATEGORY (A, B, C, D, …) was assumed to be correct, but were reviewed where there was contradictory information. If an allotment was identified as CATEGORY A but the most recent LHS information from any of the three datasets identified the allotment as failing, then the category was overridden. If the information was ambiguous, the recorded BLM CATEGORY was assumed to be correct and coded with the appropriate LHS status (ALL STANDARDS MET, NOT MET – LIVESTOCK, NOT MET – OTHER, DETERMINATION NOT COMPLETE). The general protocol applied throughout was that the LHS status was correct unless there was recorded information to suggest that is was not correct, and in those cases, failure overrode "met", and "livestock" overrode "not livestock".

Attribute Definition Source: P.D. Lattin, from three raw BLM allotment Land Health Standards evaluation datasets. None of the original dataset had been reviewed for data quality.

Attribute Domain Values: (ALL STANDARDS MET, NOT MET – LIVESTOCK, NOT MET – CAUSE NOT IDENTIFIED, NOT MET – OTHER, DETERMINATION NOT COMPLETE, OTHER)

Unrepresentable Domain:

Attribute:

Attribute Label: **cat_2020**

Attribute Definition: The corrected BLM's land health standards categorical status as of 2020. The reconciled cause(s) of failure to achieve land health standards after merging of the first LHS dataset compiled by BLM in response to a FOIA request containing records through 2007, a second containing records through 2012, and the third containing records through 2019 that was compiled in 2020. During the process of merging and updating of the LHS data, many errors, omissions, and inconsistencies were identified. Many of these records had been recompiled for the same LHS evaluation and determination reports, but differed in language and materially, in dates, status, and reported causes. Best professional judgment was used in the reconciliation process, however, if reference to livestock grazing was present in the 2007 or in the 2012 dataset, but absent in the 2020 dataset, the 2020 record was assumed to have been inaccurate and "livestock grazing" was assumed to have been a cause of failure. Similarly, a number of records in the 2020 dataset reported that one or more land health standard had not been achieved but did not report a cause of non-achievement. The cause or causes reported in the 2007 or 2012 dataset for the same LHS allotment evaluation were used to assign land health status. In some cases, a record in one of the three datasets recorded the allotment as achieving all standards while the other reported that one or more standard had not been achieved for the same land health standards evaluation. In these instances, the allotment was assumed to have not been achieved. The datasets did not always report the most recent land health evaluation. In these cases, the status of the most recent LHE was assigned to the allotment. The 2020 BLM LHS CATEGORY (A, B, C, D, …) was assumed to be correct, but were reviewed where there was contradictory information. If an allotment was identified as CATEGORY A but the most recent LHS information from any of the three datasets identified the allotment as failing, then the category was overridden. If the information was ambiguous, the recorded BLM CATEGORY was assumed to be correct and coded with the appropriate LHS status (ALL STANDARDS MET, NOT MET – LIVESTOCK, NOT MET – OTHER, DETERMINATION NOT COMPLETE). The general protocol applied throughout was that the LHS status was correct unless there was recorded

information to suggest that it was not correct, and in those cases, failure overrode "met", and "livestock" overrode "not livestock". The final categorical 2020 status was translated from the finalized lhs_2020 status into CATEGORY A (all standards met or making significant progress towards being met), CATEGORY B (not met and livestock was a significant cause), CATEGORY C (not met and livestock was a significant cause), and CATEGORY D (not met but current livestock grazing management was not a significant cause), with the addition of NOT MET – CAUSE NOT IDENTIFIED in cases of causal ambiguity, and in instances where the field was left blank, a CATEGORY was assigned based lhs_2020, except in cases of failure due to livestock, an allotment was assigned a causal status of CATEGORY B.

Attribute Definition Source: P.D. Lattin, from three raw BLM allotment Land Health Standards evaluation datasets. None of the original dataset had been reviewed for data quality by BLM. Errors and inconsistencies were reconciled by P.D. Lattin. In addition, several categories were added by P.D. Lattin where data was missing or unclear.

Attribute Domain Values: (CATEGORY A, CATEGORY B, CATEGORY D, CATEGORY D, NOT MET – CAUSE NOT IDENTIFIED, DETERMINATION NOT COMPLETE, OTHER (various subcategories)

Unrepresentable Domain:

Attribute:

Attribute Label: **suspaums**

Attribute Definition: Total suspended AUMs summarized for the allotment based on the BLM Rangeland Administration System (RAS) Allotment Information Report downloaded 2-16-2022. This figure is dynamic and reflects the allotment status at time of download and is subject to change annually.

Attribute Definition Source:

Attribute Domain Values:

Unrepresentable Domain:

Attribute Label: **permaums**

Attribute Definition: Total permitted AUMs summarized for the from the BLM Rangeland Administration System (RAS) Allotment Information Report downloaded 2-16-2022. This figure is dynamic and reflects the allotment status at time of download and is subject to change annually.

Attribute Definition Source:

Attribute Domain Values:

Unrepresentable Domain:

Attribute Label: **susptmpaums**

Attribute Definition: Total temporarily suspended AUMs summarized for the allotment based on the BLM Rangeland Administration System (RAS) Allotment Information Report downloaded 2-16-2022. This figure is dynamic and reflects the allotment status at time of download and is subject to change annually.

Attribute Definition Source:

Attribute Domain Values:

Unrepresentable Domain:

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Digital Form:
Digital Transfer Information:
Format Name: Feature Class *Format*
Version Number:
Format Specification: ESRI shapefile *File*
Decompression Technique:
Transfer Size:
Digital Transfer Option:
Online Option:
Computer Contact Information:
Network Address:
Network Resource Name: Available
Time Period:
Time Period Information:
Single Date/Time:
Calendar Date:
Resource Description: Downloadable Data *Metadata*
Reference Information:
Metadata Date: 20220302 *Metadata*
Review Date: 20220302 *Metadata*
Contact:
Contact Information:
Contact Organization Primary:
Contact Organization: Public Employees for Environmental Responsibility (PEER)
Contact Person: Interactive Grazing Map Portal Steward
Contact Position: Interactive Grazing Map Portal Steward Contact Address:
Address Type: physical address
Address: 962 Wayne Avenue, Suite 610
City: Silver Springs
State or Province: MD
Postal Code: 20910-4453
Country: US
Contact Voice Telephone: (202) 265-7337
Contact Electronic Mail Address: info@peer.org
Metadata Standard Name: FGDC Content Standard for Digital Geospatial Metadata
Metadata Standard Version: FGDC-STD-001-1998
Metadata Time Convention: local time

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Metadata Extensions:

Online Linkage:

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