BLM LAND HEALTH STATUS (2020) (blm_natl_grazing_allot_lhs2020.shp)

Description: BLM grazing allotment Land Health Standards evaluation records containing the most current land health status (1997 – 2019) and identifying allotment records that failed to achieve one or more standards and where livestock grazing was determined to have been a significant factor. The BLM does not maintain grazing allotment land health standards evaluation records in electronic format or in any centralized location. This dataset is the product of an effort to compile all allotment land health standards (LHS) evaluation records and to identify the most current evaluation as of 2020.

Three separate datasets were obtained from BLM through FOIA requests since 2008, each containing records from all 21,000 allotments. records obtained from BLM were compiled from scratch by field offices from original data sources in response to each FOIA request. These data were provided in spreadsheet format but were not examined by the agency to determine whether they met agency data quality standards. Once compiled, many records of the same evaluations were available for comparison and to help reconcile errors, omissions, and inconsistencies. Every effort was made to correct these data quality problems to produce a single merged dataset containing the most current land health standards evaluation records for BLM's 21,000 livestock grazing allotments through 2019.

These data were then joined with the BLM National Grazing Allotment polygon file for spatial exploration. These records were provided by BLM "as is", and although every effort was made to reconcile errors and inconsistencies The User must be aware that these data may contain errors or omissions. These data are intended just for use for broad scale exploration of livestock grazing impacts on land health, as reflected in BLM's allotment land health standards evaluation records.

Attributes:

OBJECTID (Internal feature number, a sequential unique whole number that are automatically generated)

SHAPE (Feature geometry)

ALLOT_NO (The number that identifies an Allotment which is unique within the BLM administrative state.)

ALLOT_NAME (The name by which the allotment is commonly known.)

GIS_ACRES (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, that includes both public and private lands)

ADMIN ST   (An administrative unit that identifies the state or geographic area which has administrative jurisdiction over lands, and cases BLM administrative office (which is subordinate to the state office) that has jurisdiction and/or management authority over lands within a geographic area.)

ADM UNIT CD   (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)

ST ALLOT   (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.)

GlobalID   (Software generated value. A field of type UUID (Universal Unique Identifier) in which values are automatically assigned by the geodatabase when a row is created. This field is not editable and is automatically populated when it is added for existing data. This attribute is included for purposes of replication only. It is not used as a unique identifier for relationships between feature classes/tables.)

ACTIVE DT   (The calendar date on which the boundary of an allotment is established and becomes effective. The format for the date will be MM/DD/YYYY, and will be entered only once for that polygon.)

SHAPE Length   (Length of feature in internal units.)

SHAPE Area (Area of feature in internal units squared.)

publicacres   (Acres of public land within the allotment)

last lheyr   (The year of the last allotment land health evaluation or determination)

determ2020 (The recorded information pertaining to the land health standards determination as received from BLM in the 2020 dataset)

blmcat2020   (The recorded land health standards CATEGORY as received from BLM in the 2020 dataset. 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)

causes2020   (The recorded information pertaining the cause of causes of failure to achieve land health standards as received from BLM in 2020)

notes2020   (Notes made when inconsistencies in BLM record information were noted)

causes2007   (The recorded information pertaining the cause of causes of failure to achieve land health standards as received in the first LHS dataset compiled by BLM in response to a FOIA request containing records through 2007)

causes2012   (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 nonachievement. 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.)

fincat2020   (The BLM LHS Category records were not formatted uniformly, nor often filled in or filled in correctly. This attribute just represents a standardization of the 2020 reported BLM LHS Category)

last_lhe   (Date of the most recent land health standards evaluation. The format of the original data were inconsistent and incomplete. The attribute **last_lheyr** was used for data reconciliation due to problems with recorded dates.)

lhs_2020   (The land health standards status as of 2020 (ALL STANDARDS MET, NOT MET – LIVESTOCK, NOT MET – OTHER, DETERMINATION NOT COMPLETE). 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 nonachievement. 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".)

cat 2020   (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 nonachievement. 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". 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 status of CATEGORY B).

suspaums   (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.)

permaums   (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.)

susptmpaums   (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.)

Metadata: https://peer.org/wp-Content/uploads/2022/02/blm_natl_grazing_allot_lhs2020_metadata.pdf

GIS files: BLM Rangeland Health Standards Mapping Project (mangomap.com)

LHS Failures – Livestock (2020) (blm_natl_grazing_allot_lhs2020.shp)

Description: BLM grazing allotment Land Health Standards evaluation records (1997 - 2019) containing the allotments identified as having failed to achieve one or more standard where livestock grazing was determined to have been a significant factor. This layer is BLM LAND HEALTH STATUS (2020) highlighting just those allotments that failed LHS where livestock grazing was a cause of non-achievement.

Regional Significance of Livestock (Level_III_Livestock_Failure_Level.shp)

Description: Significance of livestock grazing as a cause of failure to meet land health standards at the Level III Ecoregional scale. The layer represents the intersection of BLM LAND HEALTH STATUS (2020) and Western Level III Ecoregions. Allotments on Level III ecoregion boundaries are split and the portions within each ecoregion used to calculate the area of allotments within each Level III ecoregion. The calculation of "regional significance" is based on the area of allotments failing due to livestock divided by the total area of allotment assessed through 2019. This metric is used as a coarse reflection of the general sensitivity of the region to the effects of livestock grazing as a stressor or disturbance factor. This metric value was then then applied all

allotments within the ecoregion, whether assessed or unassessed. The User should interpret differences at the ecoregional scale, not at an allotment scale.

BLM Allotment Management Category (2021)
(BLM_natl_allot_lhs2020joinMngtStat2021.shp)

Description: This layer is BLM LAND HEALTH STATUS (2020) with the addition of the BLM Management Category obtained from RAS. The categorization process emphasizes ensuring that land health considerations are the primary basis for prioritizing the processing and issuing of grazing authorizations for use of allotments on public lands.

CATEGORY "I" (Improve) Allotments where current livestock grazing management or level of use on public lands is, or is expected to be, a significant causal factor in the non-achievement of land health standards, or where a change in mandatory terms and conditions in the grazing authorization is or may be necessary.

CATEGORY M (Maintain) Allotments where land health standards are met or where livestock grazing on public lands is not a significant causal factor, or where current management is in conformance with guidelines. Allotments where an evaluation of land health standards has not been completed, but existing monitoring data indicates that resource conditions are satisfactory.

CATEGORY C (Custodial) Allotments where public lands produce less than 10% of the forage or are less than 10% of the land area.

LHS Failures due to Livestock (USGS) (LHS_Draft_Selection.shp)

Description: This layer is provided for the purposes of comparison with the current map of rangeland health. It was compiled independently from the first of the raw datasets used in our compiled dataset. The protocol that we used was similar to but independent of these data. It is the USGS coding of a BLM LHS dataset compiled in response to a FOIA request by a private organization in 2008. This layer identified allotments that fail to meet any standard due to livestock. (Note: this dataset is only current through 2007). Please see: Kari E. Veblen, David A. Pyke, Cameron L. Aldridge, Michael L. Casazza, Timothy J. Assal, Melissa A. Farinha, Monitoring of Livestock Grazing Effects on Bureau of Land Management Land, Rangeland Ecology & Management, Volume 67, Issue 1, 2014, Pages 68-77, ISSN 1550-7424, https://doi.org/10.2111/REM-D-12-00178.1.

Online: USGS CROSS-WALK OF DATA 2008 dataset:
Readme: https://pubs.usgs.gov/ds/690/downloads/00Readme.txt
Metadata: https://pubs.usgs.gov/ds/690/downloads/metadata/
Tabular data: https://pubs.usgs.gov/ds/690/downloads/Datafiles/Tables/

GIS files: https://pubs.usgs.gov/ds/690/downloads/Datafiles/

GRSG Breeding Bird Density (25%)   (Range-wide_Breeding_Bird_Densities_BreedingDensity25.shp) see description below

GRSG Breeding Bird Density (50%)   (Range-wide_Breeding_Bird_Densities_BreedingDensity50.shp) see description below

GRSG Breeding Bird Density (75%)   (Range-wide_Breeding_Bird_Densities_BreedingDensity75.shp) see description below

GRSG Breeding Bird Density (100%)   (Range-wide_Breeding_Bird_Densities_BreedingDensity100.shp) see description below

Description: "ESRI file geodatabase of greater sage-grouse (Centrocercus urophasianus) range-wide breeding densities at 25% (BreedingDensity25), 50% (BreedingDensity50), 75% (BreedingDensity75) and 100% (BreedingDensity100) of breeding population. The objective of this BLM project is to map high breeding densities of greater sage-grouse for use in conservation planning. This completion report provides two deliverables: 1) The analytical framework for evaluating options on where partners can deliver actions that will yield the highest return on their conservation investment, and 2) The GIS shapefiles delineating high breeding densities of sage-grouse for use by conservation planners. Maps developed here provide a large-scale view of the distribution and abundance of sage-grouse, but risks and opportunities vary widely. State game and fish agencies responsible for sage-grouse conservation and management can provide additional knowledge of sage-grouse habitat needs. We encourage federal agencies and other partners to consult with their respective state wildlife agencies before implementing sage-grouse conservation actions.

   A major goal in greater sage-grouse (Centrocercus urophasianus) conservation is to spend limited resources conserving large and functioning populations efficiently. We used lek-count data (n = 4,885) to delineate high abundance population centers that contain 25, 50, 75, and 100% of the known breeding population for use in conservation planning. Findings show sage-grouse breeding abundance is highly clumped from range-wide to province and state-wide analysis scales. Breeding density areas contain 25% of the known population within 3.9% (2.92 million ha) of the species range, and 75% of birds are within 26.9% of the species range (20.4 million ha). Breeding bird abundance varies by Sage-grouse Management Zones, with Zones I, II, and IV containing 83.7% of all known sage-grouse. Zone II contains a particularly high density of birds which includes 40% of the known population and at least half of the highest density breeding areas range-wide. Despite high bird abundance in Zones I, II, and IV, maintaining current distribution of sage-grouse depends upon effective conservation in

each U.S. state and Canadian province. For example, each of the 11 states that contain sage-grouse have:1 landscape with enough breeding birds to meet the 75% breeding density threshold. Federal, state and private lands all play a role in sage-grouse conservation. On average, surface ownership within 75% breeding areas was 58.59% Federal, 35.99% privately owned, and 5.39% State lands. Diversity in surface and subsurface (e.g., mineral rights) ownership within states and provinces will play a major role in the approach used to maintain and enhance priority populations. Maps developed here provide a vision for decision makers to spatially prioritize conservation targets, but risks and opportunities vary dramatically in each state and province. More importantly, state and provincial game and fish agencies responsible for sage-grouse conservation and management have additional knowledge of seasonal habitat needs outside the breeding season and other data useful in decision-making. We encourage federal agencies and other partners to consult states before implementing sage-grouse conservation actions. Additionally, users are encouraged to contact their state game and fish agencies for similar state-level planning maps. States have additional planning information to help users make informed local-scale decisions prior to project implementation."

Compressed ESRI file geodatabases of Sage-Grouse range-wide 25%, 50% 75% and 100% breeding densities. Reference: Doherty, K., D. E. Naugle, H. Copeland, A. Pocewicz, and J. M. Kiesecker. 2010. Energy development and conservation trade-offs: Systematic planning for sage-grouse in their eastern range. *Studies in Avian Biology*. Available on-line at: http://sagemap.wr.usgs.gov/monograph.aspx (paper #22).

Source: Range-wide Breeding Densities.gdb, online linkage: https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/Pages/sagegrouse.aspx

Areas of Critical Environmental Concern (acac_desg_poly_w_tbl_joins.shp)

Description: This is an aggregate national dataset describing the geographic boundaries of the ACEC within the BLM managed public lands. The designated ACECs are areas within the public lands where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems of processes, or to protect life and safety from natural hazards. Modified for the GRSG CEA analysis effort by including PAD-US GAP_STATUS_CODEs to determine level of protection and selecting only those equal to 1 or 2. These data are used when making management decisions and are intended to assist in the protection of the resources the ACEC was designated to protect. It documents where ACECs are located.

Online linkage: https://gis.blm.gov/EGISDownload/LayerPackages/BLM_National_ACEC.zip

Greater Sage-grouse Primary Habitat Management Areas
(GRSG_PHMAsFeb2020.shp)

Description: Greater Sage-grouse Priority Habitat Management Areas (PHMAs) from each individual BLM ARMP and ARMPA/Record of Decision (ROD), and for subsequent updates.

This dataset represents the consolidated submissions of GRSG habitat management areas from each individual BLM ARMP & ARMPA/Records of Decision (ROD) and for subsequent updates. These data were submitted to the BLM's Wildlife Habitat Spatial Analysis Lab in March 2016 and were updated for UT in April of 2017, WY in October of 2017, and CO in February of 2020. All of the data used to create this file was submitted by the EIS. Quality Assurance/Quality Control (QA/QC) employed by the Wildlife Habitat Spatial Analysis lab was limited to: ensuring that the submitted data did not span the EIS boundary and ensuring that the submitted habitat data did not contain overlaps between various habitat management area designations. The EIS is solely responsible for the content and quality of submitted data used to create this file. The habitat data submitted by an EIS was identified by the EIS name and alternative through the addition and calculation of the EIS_HAB field. The EIS_HAB field calculation was performed according to the following template: For Priority habitat: "EIS Name"_"PH"_"ROD". For General habitat: "EIS Name"_"GH"_"ROD" or "EIS Name"_"IH"_"ROD" (representing Idaho's Important Habitat Management Areas). Restoration Habitat management Areas (RHMAs) for Montana, Linkage Connectivity Habitat Management Areas (LCHMAs) for NWCO, Other Habitat management Areas (OHMAs) for NVCA and Anthro Mountain for Utah were also included and calculated within the EIS_HAB field. The updated habitat delineations for NWCO include Undesignated Habitat (UDH) to address concerns surrounding the management of privately held irrigated agricultural lands. The BLM's NWCO Sage-Grouse Plan has no management decisions associated with this habitat designation. The Hab_Type field was calculated from the EIS_HAB field, and includes the following: PHMA, GHMA, IHMA, RHMA, OHMA, LCHMA, Anthro Mtn, and UDH. Features were dissolved to the EIS_HAB and Hab_Type fields and geometry was repaired. See the Details section of this metadata record for a description of the updates made to the original dataset.

Online Linkage:
https://gis.blm.gov/GRSGEISDownload/LayerPackages/BLM_WesternUS_GRSG_ROD_HabitatMgmtAreas_Feb2020.lpk

Greater Sage-grouse General Habitat Management Areas
(GRSG_GHMAsFeb2020.shp)

Description: Greater Sage-grouse General Habitat Management Areas (GHMAs) from each individual BLM ARMP and ARMPA/Record of Decision (ROD), and for subsequent updates.

This dataset represents the consolidated submissions of GRSG habitat management areas from each individual BLM ARMP & ARMPA/Records of Decision (ROD) and for subsequent updates. These data were submitted to the BLM's Wildlife Habitat Spatial Analysis Lab in March 2016 and were updated for UT in April of 2017, WY in October of 2017, and CO in February of 2020. All of the data used to create this file was submitted by the EIS. Quality Assurance/Quality Control (QA/QC) employed by the Wildlife Habitat Spatial Analysis lab was limited to: ensuring that the submitted data did not span the EIS boundary and ensuring that the submitted habitat data did not contain overlaps between various habitat management area designations. The EIS is solely responsible for the content and quality of submitted data used to create this file. The habitat data submitted by an EIS was identified by the EIS name and alternative through the addition and calculation of the EIS_HAB field. The EIS_HAB field calculation was performed according to the following template: For Priority habitat: "EIS Name"_"PH"_"ROD". For General habitat: "EIS Name"_"GH"_"ROD" or "EIS Name"_"IH"_"ROD" (representing Idaho's Important Habitat Management Areas). Restoration Habitat management Areas (RHMAs) for Montana, Linkage Connectivity Habitat Management Areas (LCHMAs) for NWCO, Other Habitat management Areas (OHMAs) for NVCA and Anthro Mountain for Utah were also included and calculated within the EIS_HAB field. The updated habitat delineations for NWCO include Undesignated Habitat (UDH) to address concerns surrounding the management of privately held irrigated agricultural lands. The BLM's NWCO Sage-Grouse Plan has no management decisions associated with this habitat designation. The Hab_Type field was calculated from the EIS_HAB field, and includes the following: PHMA, GHMA, IHMA, RHMA, OHMA, LCHMA, Anthro Mtn, and UDH. Features were dissolved to the EIS_HAB and Hab_Type fields and geometry was repaired. See the Details section of this metadata record for a description of the updates made to the original dataset.

Online Linkage:
https://gis.blm.gov/GRSGEISDownload/LayerPackages/BLM_WesternUS_GRSG_ROD_HabitatMgmtAreas_Feb2020.lpk

Greater Sage-grouse Management Zones (sageGrouseMgmtZones.shp)

Online link:
https://map.sagegrouseinitiative.com/wildlife/reference?ll=41.3155,-115.4041&overlay=ecosystem_rr&opacity=0.50&z=10&basemap=hybrid&data=pacRefLayer,mgmtZonesRefLayer

Wilderness Areas (NLCS) (nlcs_nlcs_wld_poly.shp)

Description: Landscape Conservation System (NLCS) Wilderness Areas, Wilderness Study Areas, and Other Related Lands. In June 2000, the BLM responded to growing concern over the loss of open space by creating the National Landscape Conservation System (NLCS). The NLCS brings into a single system some of the BLM's premier

designations. The Wilderness Areas, Wilderness Study Areas, and Other Related Lands represent three of these eleven premier designations. By putting these lands into an organized system, the BLM hopes to increase public awareness of these areas' scientific, cultural, educational, ecological and other values. The data standard for these boundaries will assist in the management of all eleven designations within the NLCS. Particularly, NLCS data pertains to the following BLM groups and their purposes: Land Use Planners, GIS Specialists, NLCS team leads, BLM managers, and public stakeholder groups.

online link:
https://gis.blm.gov/EGISDownload/LayerPackages/BLM_National_NLCS_Wilderness_and_WildernessStudyAreas_poly.zip

Wilderness Study Areas (NLCS) (nlcs_nlcs_wld_poly.shp)

Description: Landscape Conservation System (NLCS) Wilderness Areas, Wilderness Study Areas, and Other Related Lands. In June 2000, the BLM responded to growing concern over the loss of open space by creating the National Landscape Conservation System (NLCS). The NLCS brings into a single system some of the BLM's premier designations. The Wilderness Areas, Wilderness Study Areas, and Other Related Lands represent three of these eleven premier designations. By putting these lands into an organized system, the BLM hopes to increase public awareness of these areas' scientific, cultural, educational, ecological and other values. The data standard for these boundaries will assist in the management of all eleven designations within the NLCS. Particularly, NLCS data pertains to the following BLM groups and their purposes: Land Use Planners, GIS Specialists, NLCS team leads, BLM managers, and public stakeholder groups.

online link:
https://gis.blm.gov/EGISDownload/LayerPackages/BLM_National_NLCS_Wilderness_and_WildernessStudyAreas_poly.zip

Wild Horse and Burro Herd Mgmt Areas (whb_hma_pop_poly.shp)

Metadata:
https://gis.blm.gov/EGISDownload/Metadata/BLM_National_Wild_Horse_and_Burro.xml
GIS File:
https://gis.blm.gov/EGISDownload/LayerPackages/BLM_National_Wild_Horse_and_Burro.zip

Ecosystem Resistance and Resilience (R&R1000mVector.shp)

Description: This layer was included just as a backdrop to explore with the distribution of allotments failing to meet LHS standards due to grazing against an example of Index of relative ecosystem resilience to soil impacts. This dataset was compiled as a means to predict an area's resistance to soil disturbance and the potential for establishment of cheatgrass based on underlying soil temperature and moisture regimes. We resampled the original data to a coarse 1x1 km resolution.

For details, data and metadata download, see:
https://map.sagegrouseinitiative.com/ecosystem/collapse?ll=43.4799,-110.7624&overlay=brsp&opacity=0.80&z=6&basemap=roadmap

BLM TerrADat terrestrial sample plots (terradat.shp)

Description: The BLM Assessment, Inventory, Monitoring (AIM) terrestrial sampling plots includes monitoring data collected nationally to understand the status, condition, and trend of resources on BLM lands. They also include rangeland health assessment indicators (prefix RH_) in many allotments. A large number are found within allotments that have not yet had a Land Health Standards evaluation (DETERMINATION NOT COMPLETE).

TerrADat Metadata:
https://landscape.blm.gov/geoportal/rest/document?id=%7BFC25396E-D9BC-40AA-988B-D5B1B5F871DE%7D
TerrADat download:
https://gis.blm.gov/AIMDownload/LayerPackages/BLM_AIM_TerrADat.zip

BLM AquADat Lotic Monitoring Locations (aquadata.shp

Description: This layer includes monitoring data collected nationally to understand the status, condition and trend of Lotic resources on BLM lands (AquADAT). These data contain formation on watershed function and instream habitat quality, biodiversity and riparian habitat quality, and water quality. This dataset may provide field indicator information regarding the land health condition in allotments that have not had a formal Land Health Standards assessment.

AquADat Metadata:
https://landscape.blm.gov/geoportal/rest/document?id=%7B5C8DD8C9-CA61-4F73-B739-E7792D829006%7D
AquADat download:
https://gis.blm.gov/AIMDownload/LayerPackages/BLM_AIM_AquADat.zip

US Drought Monitor Map 9/29/2021
(U.S._Drought_Monitor_Release_20210928_Valid 8am_EDT_20210929.shp)

Description: This layer was included just as a backdrop just to explore other layers against a backdrop of a snapshot of ongoing drought conditions in the West (circa 9/27/2021). The Cold Desert Level II Ecoregion has some of the highest livestock-related failure levels of grazing lands under BLM management. As drought conditions worsen, both resistance and resilience in this ecoregion can be expected to decrease and become more susceptible to impacts of grazing as an ecosystem stressor and disturbance factor.

Source: https://droughtmonitor.unl.edu/DmData/GISData.aspx