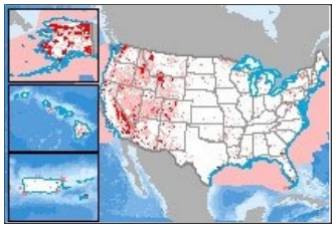
Protected Areas Database of the United States (PAD-US) 3.0 v2.0



Tags

Land Use Change, Land Stewardship, New Jersey (NJ), 2015, South Carolina (SC), Forest Service, Kentucky (KY), 2005, Protected Area, Cadastre Theme, Iowa (IA), Minnesota (MN), Gap Analysis, 2010, NGDAID27, Bureau of Reclamation, Department of Energy, 2007, Tennessee (TN), Alaska (AK), Land Ownership, Protected Area, West Virginia (WV), Mariana Islands (MP), Puerto Rico (PR), New Mexico (NM), Tennessee Valley Authority, Indiana (IN), NGDAID27, 2017, State Lands, Public Open Space, Delaware (DE), Oregon (OR), U.S. Minor Outlying Islands (UM), Cadastre Theme, Protection Status, Local Government Lands, NGDA, National Geospatial Data Asset, NGDA Portfolio Themes, Hawaii (HI), Land Manager, 2006, Bureau of Land Management, Army Corps of Engineers, Utah (UT), National Park Service, North Dakota (ND), Arizona (AZ), Colorado (CO), 2012, Private Lands, Kansas (KS), Oklahoma (OK), 2011, Georgia (GA), Idaho (ID), Washington (WA), 2009, United States, 2020, Connecticut (CT), Arkansas (AR), Texas (TX), Louisiana (LA), Wyoming (WY), Maryland (MD), Florida (FL), Public Health, Land Use and Land Cover, Nevada (NV), 2014, Parks, Governmental Units, Missouri (MO), Alabama (AL), Conservation, South Dakota (SD), Outdoor Recreation, United States, Federal Lands, Ohio (OH), Montana (MT), Wisconsin (WI), Biodiversity, New Hampshire (NH), Virginia (VA), 2008, Department of Defense, Agricultural Research Service, American Samoa (AS), Illinois (IL), Guam (GU), Maine (ME), NGDA, 2021, Nebraska (NE), IUCN Category, Massachusetts (MA), California (CA), Public Lands, New York (NY), National Oceanic and Atmospheric Administration, Mississippi (MS), 2018, North Carolina (NC), U.S. Fish and Wildlife Service, Michigan (MI), Vermont (VT), Rhode Island (RI), Natural Resources Conservation Service, 2013, 2019, GAP Status Code, National Geospatial Data Asset, Pennsylvania (PA), 2016, United States Virgin Islands (VI), Geography

Summary

The PAD-US geodatabase was originally developed to organize and assess the management status (i.e. apply 'GAP Status Code') of elements of biodiversity protection by identifying species and plant communities not adequately represented in existing conservation lands (https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap). In cooperation with the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC), PAD-US also supports global conservation analyses to inform policy decisions (https://www.protectedplanet.net/country/USA , https://www.protectedplanet.net/en/resources/global-reports). The dataset is robust and has been expanded in recent years with major additions of local parks data to PAD-US 2.1, to support the recreation, natural resource management, wildfire planning, emergency management, transportation, research, and public health communities. New applications of the data are frequently discovered. Multiple attributes and a flexible database structure provide context for data to be used at local, regional, state, national, and international scales. See https://www.usgs.gov/gapanalysis/PAD-US-resources for more information.

Description

The USGS Protected Areas Database of the United States (PAD-US) is the nation's inventory of protected areas, including public land and voluntarily provided private protected areas, identified as an A-16 National Geospatial Data Asset in the Cadastre Theme (https://communities.geoplatform.gov/ngda-cadastre/). The PAD-US is an ongoing project with several published versions of a spatial database including areas dedicated to the preservation of biological diversity, and other natural (including extraction), recreational, or cultural uses, managed for these purposes through legal or other effective means. The database was originally designed to support biodiversity assessments; however, its scope expanded in recent years to include all open space public and nonprofit lands and waters. Most are public lands owned in fee (the owner of the property has full and irrevocable ownership of the land); however, permanent and long-term easements, leases, agreements, Congressional (e.g. 'Wilderness Area'), Executive (e.g. 'National Monument'), and administrative designations (e.g. 'Area of Critical Environmental Concern') documented in agency management plans are also included. The PAD-US strives to be a complete inventory of U.S. public land and other protected areas, compiling “best available” data provided by managing agencies and organizations. The PAD-US geodatabase maps and describes areas using thirty-six attributes and five separate feature classes representing the U.S. protected areas network: Fee (ownership parcels), Designation, Easement, Marine, Proclamation and Other Planning Boundaries. An additional Combined feature class includes the full PAD-US inventory to support data management, queries, web mapping services, and analyses. The Feature Class (FeatClass) field in the Combined layer allows users to extract data types as needed. A Federal Data Reference file geodatabase lookup table (PADUS3_0Combined_Federal_Data_References) facilitates the extraction of authoritative federal data provided or recommended by managing agencies from the Combined PAD-US inventory. This PAD-US Version 3.0 dataset includes a variety of updates from the previous Version 2.1 dataset (USGS, 2020, https://doi.org/10.5066/P92QM3NT), achieving goals to: 1) Annually update and improve spatial data representing the federal estate for PAD-US applications; 2) Update state and local lands data as state data-steward and PAD-US Team resources allow; and 3) Automate data translation efforts to increase PAD-US update efficiency. The following list summarizes the integration of "best available" spatial data to ensure public lands and other protected areas from all jurisdictions are represented in the PAD-US (other data were transferred from PAD-US 2.1). Federal updates - The USGS remains committed to updating federal fee owned lands data and major designation changes in annual PAD-US updates, where authoritative data provided directly by managing agencies are available or alternative data sources are recommended. The following is a list of updates or revisions associated with the federal estate: 1) Major update of the Federal estate (fee ownership parcels, easement interest, and management designations where available), including authoritative data from 8 agencies: Bureau of Land Management (BLM), U.S.

Census Bureau (Census Bureau), Department of Defense (DOD), U.S. Fish and Wildlife Service (FWS), National Park Service (NPS), Natural Resources Conservation Service (NRCS), U.S. Forest Service (USFS), and National Oceanic and Atmospheric Administration (NOAA). The federal theme in PAD-US is developed in close collaboration with the Federal Geographic Data Committee (FGDC) Federal Lands Working Group (FLWG, https://communities.geoplatform.gov/ngda-govunits/federal-lands-workgroup/). 2) Improved the representation (boundaries and attributes) of the National Park Service, U.S. Forest Service, Bureau of Land Management, and U.S. Fish and Wildlife Service lands, in collaboration with agency data-stewards, in response to feedback from the PAD-US Team and stakeholders. 3) Added a Federal Data Reference file geodatabase lookup table (PADUS3_0Combined_Federal_Data_References) to the PAD-US 3.0 geodatabase to facilitate the extraction (by Data Provider, Dataset Name, and/or Aggregator Source) of authoritative data provided directly (or recommended) by federal managing agencies from the full PAD-US inventory. A summary of the number of records (Frequency) and calculated GIS Acres (vs Documented Acres) associated with features provided by each Aggregator Source is included; however, the number of records may vary from source data as the "State Name" standard is applied to national files. The Feature Class (FeatClass) field in the table and geodatabase describe the data type to highlight overlapping features in the full inventory (e.g. Designation features often overlap Fee features) and to assist users in building queries for applications as needed. 4) Scripted the translation of the Department of Defense, Census Bureau, and Natural Resource Conservation Service source data into the PAD-US format to increase update efficiency. 5) Revised conservation measures (GAP Status Code, IUCN Category) to more accurately represent protected and conserved areas. For example, Fish and Wildlife Service (FWS) Waterfowl Production Area Wetland Easements changed from GAP Status Code 2 to 4 as spatial data currently represents the complete parcel (about 10.54 million acres primarily in North Dakota and South Dakota). Only aliquot parts of these parcels are documented under wetland easement (1.64 million acres). These acreages are provided by the U.S. Fish and Wildlife Service and are referenced in the PAD-US geodatabase Easement feature class 'Comments' field. State updates - The USGS is committed to building capacity in the state data-steward network and the PAD-US Team to increase the frequency of state land updates, as resources allow. The USGS supported efforts to significantly increase state inventory completeness with the integration of local parks data in the PAD-US 2.1, and developed a state-to-PAD-US data translation script during PAD-US 3.0 development to pilot in future updates. Additional efforts are in progress to support the technical and organizational strategies needed to increase the frequency of state updates. The PAD-US 3.0 included major updates to the following three states: 1) California - added or updated state, regional, local, and nonprofit lands data from the California Protected Areas Database (CPAD), managed by GreenInfo Network, and integrated conservation and recreation measure changes following review coordinated by the data-steward with state managing agencies. Developed a data translation Python script (see Process Step 2 Source Data Documentation) in collaboration with the data-steward to increase the accuracy and efficiency of future PAD-US updates from CPAD. 2) Virginia - added or updated state, local, and nonprofit protected areas data (and removed legacy data) from the Virginia Conservation Lands Database, provided by the Virginia Department of Conservation and Recreation's Natural Heritage Program, and integrated conservation and recreation measure changes following review by the data-steward. 3) West Virginia - added or updated state, local, and nonprofit protected areas data provided by the West Virginia University, GIS Technical Center. For more information regarding the PAD-US dataset please visit, https://www.usgs.gov/gapanalysis/PAD-US/. For more information about data aggregation please review the PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual . A version history of PAD-US updates is summarized below (See https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-history for more information): 1) First posted - April 2009 (Version 1.0 - available from the PAD-US: Team pad-us@usgs.gov). 2) Revised - May 2010 (Version 1.1 - available from the PAD-US: Team pad-us@usgs.gov). 3) Revised - April 2011 (Version 1.2 - available from the PAD-US: Team pad-us@usgs.gov). 4) Revised - November 2012 (Version 1.3) https://doi.org/10.5066/F79Z92XD 5) Revised - May 2016 (Version 1.4) https://doi.org/10.5066/F7G73BSZ 6) Revised - September 2018 (Version 2.0) https://doi.org/10.5066/P955KPLE 7) Revised - September 2020 (Version 2.1) https://doi.org/10.5066/P92QM3NT 8) Revised - January 2022 (Version 3.0) https://doi.org/10.5066/P9Q9LQ4B Comparing protected area trends between PAD-US versions is not recommended without consultation with USGS as many changes reflect improvements to agency and organization GIS systems, or conservation and recreation measure classification, rather than actual changes in protected area acquisition on the ground.

Credits

U.S. Geological Survey (USGS) Gap Analysis Project (GAP), 2022, Protected Areas Database of the United States (PAD-US) 3.0: U.S. Geological Survey data release, https://doi.org/10.5066/P9Q9LQ4B

Use limitations

The Digital Object Identifier https://doi.org/10.5066/P9Q9LQ4B for PAD-US 3.0 provides the persistent reference that should be used to obtain the data for use. The U.S. Geological Survey and all contributing data partners shall not be held liable for improper or incorrect use of the data described and (or) contained herein. All information is created with a specific end use or uses in mind. This is especially true for GIS data, which is expensive to produce and must be directed to meet the immediate program needs. These data were created with the expectation that they would be used for other applications; however, inappropriate uses are listed below. This list is in no way exhaustive but should serve as a guide to assess whether a proposed use can or cannot be supported by these data. For many uses, it is unlikely that PAD-US will provide the only data needed, and for uses with a regulatory outcome, authoritative agency data and field surveys should verify the result. PAD-US is recommended for users seeking general information about more than one agency or organization's lands. Users should seek authoritative source data directly to answer questions regarding one agency or those requiring more frequent updates (See PAD-US Steward Reports for contacts and agency data download locations: http://www.protectedlands.net/data-stewards/). The PAD-US includes the best available representation of federally owned lands (meaning a federal agency or the U.S. holds the title records), developed from authoritative source data in direct collaboration with federal agency data-stewards. Several ownership related data gaps exist and USGS provides no legal warranty. Agencies are always the official and best source of their land data and some update more frequently than PAD-US. The FGDC Federal Lands Working Group recommends the use of PAD-US to describe federally managed lands (i.e. “Manager Name” not “Owner Name”), unless spatial data inventory completeness is over 95% and appropriate scale for display is 1:24,000 as illustrated in “State of PAD-US Data” (e.g. USFS, USFWS, NPS, BLM, DOD) - a graphical summary of inventory

completeness, appropriate scale, and update frequency at: https://communities.geoplatform.gov/ngda-govunits/wp-content/uploads/2021/02/StateofPADUS_Feb2021.pdf) . Ultimately, it is the responsibility of each data user to determine if these data can answer the question being asked. Furthermore, the database is released on condition that neither the USGS nor the U.S. Government shall be held liable for any damages resulting from its authorized or unauthorized use. Inappropriate uses include: Using PAD-US for applications or analyses associated with one agency or a particular unit (agencies are always the best and authoritative source of their land data and many publish updates more frequently than PAD-US). Using data to map small areas, typically requiring mapping resolution at scale finer than 1:24,000, as boundary quality varies by data source (See "State of PAD-US Data") and using aerial photographs or ground surveys in areas where data are incomplete. Combining these data with other data finer than 1:100,000 scale (except for select federal agencies or states identified in "State of PAD-US Data") to produce new hybrid maps or answer queries. Generating specific areal measurements from the data finer than the nearest thousand hectares. Representing boundaries as a legal representation for regulation or acquisition. Establishing definite occurrence or non-occurrence of any feature for an exact geographic area. Determining abundance, health, or condition of any feature. Using the data without acquiring and reviewing the metadata.

Extent

West -179.999989 **East** 179.999989

North 74.996354 **South** -15.386142

Scale Range

Maximum (zoomed in) 1:5,000

Minimum (zoomed out) 1:150,000,000

Topics and Keywords

THEMES OR CATEGORIES OF THE RESOURCE planningCadastre, health

* CONTENT TYPE Downloadable Data

PLACE KEYWORDS United States

THESAURUS

TITLE Common geographic areas

PLACE KEYWORDS New Jersey (NJ), South Carolina (SC), Kentucky (KY), Iowa (IA), Minnesota (MN), Tennessee (TN), Alaska (AK), West Virginia (WV), Mariana Islands (MP), Puerto Rico (PR), New Mexico (NM), Indiana (IN), Delaware (DE), Oregon (OR), U.S. Minor Outlying Islands (UM), Hawaii (HI), Utah (UT), North Dakota (ND), Arizona (AZ), Colorado (CO), Kansas (KS), Oklahoma (OK), Georgia (GA), Idaho (ID), Washington (WA), Connecticut (CT), Arkansas (AR), Texas (TX), Louisiana (LA), Wyoming (WY), Maryland (MD), Florida (FL), Nevada (NV), Missouri (MO), Alabama (AL), South Dakota (SD), United States, Ohio (OH), Montana (MT), Wisconsin (WI), New Hampshire (NH), Virginia (VA), American Samoa (AS), Illinois (IL), Guam (GU), Maine (ME), Nebraska (NE), Massachusetts (MA), California (CA), New York (NY), Mississippi (MS), North Carolina (NC), Michigan (MI), Vermont (VT), Rhode Island (RI), Pennsylvania (PA), United States Virgin Islands (VI)

TEMPORAL KEYWORDS 2015, 2005, 2010, 2007, 2017, 2006, 2012, 2011, 2009, 2020, 2014, 2008, 2021, 2018, 2013, 2019, 2016

THEME KEYWORDS Land Use Change, Protected Area, Land Use and Land Cover, Geography

THESAURUS

TITLE USGS Thesaurus

THEME KEYWORDS Cadastre Theme, NGDAID27, NGDA, National Geospatial Data Asset

THESAURUS

TITLE NGDA Portfolio Themes

THEME KEYWORDS Land Stewardship, Gap Analysis, Land Ownership, Protected Area, NGDAID27, State Lands, Public Open Space, Cadastre Theme, Protection Status, Local Government Lands, National Geospatial Data Asset, NGDA Portfolio Themes, Land Manager, Private Lands, Public Health, Parks, Governmental Units, Conservation, Outdoor Recreation, Federal Lands, Biodiversity, NGDA, IUCN Category, Public Lands, GAP Status Code

THEME KEYWORDS Forest Service, Bureau of Reclamation, Department of Energy, Tennessee Valley Authority, Bureau of Land Management, Army Corps of Engineers, National Park Service, Department of Defense, Agricultural Research Service, National Oceanic and Atmospheric Administration, U.S. Fish and Wildlife Service, Natural Resources Conservation Service

THESAURUS

TITLE Federal Agencies and Programs

Citation

TITLE Protected Areas Database of the United States (PAD-US) 3.0 v2.0

PUBLICATION DATE 2022-01-31

EDITION 3.0

PRESENTATION FORMATS * digital map

FGDC GEOSPATIAL PRESENTATION FORMAT vector and tabular digital data

SERIES

NAME PAD-US

ISSUE Version 3.0

COLLECTION TITLE Protected Areas Database of the United States (PAD-US)

Citation Contacts

RESPONSIBLE PARTY
ORGANIZATION'S NAME U.S. Geological Survey (USGS)
CONTACT'S ROLE publisher
CONTACT INFORMATION
ADDRESS
DELIVERY POINT https://www.usgs.gov/gapanalysis/PAD-US/

RESPONSIBLE PARTY
ORGANIZATION'S NAME U.S. Geological Survey (USGS) Gap Analysis Project (GAP)
CONTACT'S ROLE originator

Resource Details

DATASET LANGUAGES English (UNITED STATES)
STATUS completed
SPATIAL REPRESENTATION TYPE vector
SUPPLEMENTAL INFORMATION

The PAD-US database strives to be a complete inventory of areas dedicated to the preservation of biological diversity, and other natural (including extraction), recreational or cultural uses, managed for these purposes through legal or other effective means. PAD-US is an aggregation of “best available” spatial data provided by agencies and organizations at a point in time. This includes both fee ownership of lands as well as management through leases, easements, or other binding agreements. The inventory also includes Congressional designations, Executive designations, and administrative designations identified in management plans (e.g. Bureau of Land Management 'Area of Critical Environmental Concern'). These factors provide for a robust dataset offering a spatial representation of the complex U.S. protected areas network. It is important to have in mind a specific analysis question when approaching how to work with the data. As a full inventory of areas aggregated from authoritative source data whenever possible, PAD-US includes overlapping designation types and small boundary discrepancies between agency datasets. Overlapping designations mainly occur in the Federal estate of the 'Designation' or 'Combined' feature class (e.g. 'Wild and Scenic River' over a 'Wilderness Area' both within a 'National Forest' boundary or a 'State Wildlife Area' over Federal Fee owned land). See the Entity and Attribute Information Section for more information about PAD-US feature classes. It is important to note the presence of overlaps especially when trying to calculate area statistics; overlapping boundaries count the same area of ground multiple times. While minor boundary discrepancies remain, most major overlaps have been removed from the 'Fee' feature class and this is the best source for overall land area calculations by land manager ('Manager Name') within the PAD-US database (data gaps limit calculations by fee ownership or 'Owner Name'). Statistics summarizing 'Public Access' or Protection Status ('GAP Status Code') by managing agency or organization from an analysis of the PAD-US 'Combined' feature class are available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/science/pad-us-statistics-and-reports . The PAD-US database is a direct aggregation of source data and the PAD-US development team rarely alters spatial linework. Exceptions are: 1) to “clip” polygon boundaries along State legal boundary lines (using the annually updated, national, authoritative State boundary file provided by the U.S. Census Bureau, https://www2.census.gov/geo/tiger/TGRGDB20/tlgdb_2020_a_us_substategeo.gdb.zip), 2) to remove the small segments of boundaries created by this process associated with State or local lands (not Federal or nonprofit lands), and 3) to integrate Bureau of Land Management Field or District Office boundaries into the large boundaries representing National Public Lands (mainly across the West) to attribute PAD-US "Unit Name" and support PAD-US applications (e.g. Wildland Fire Decision Tools). Some boundary discrepancies (or slivers) remain in the dataset. Data overlaps are shared (see 'Processing Step 10 Fee Topology Assessment' in this data release or Fee Topology web services in the PAD-US Viewer, https://maps.usgs.gov/padus/), along with the U.S. Census Bureau national State jurisdictional boundary standard (updated annually) with PAD-US data-stewards to facilitate edits in source files, as appropriate, that will then be incorporated into subsequent PAD-US versions over time. This PAD-US Version 3.0 dataset includes a variety of updates and improvements (listed in the abstract) to address user needs from the previous version 2.1 dataset. The PAD-US database is built in collaboration with many partners and data-stewards. Information regarding data-stewards is available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/science/pad-us-data-stewards . Story maps, presentations, and other descriptions of the PAD-US and applications include: 1) U.S. Geological Survey (USGS) Gap Analysis Project (GAP), 2022, Protected Areas Database of the United States (PAD-US) 3.0 Spatial Analysis and Statistics: U.S. Geological Survey (USGS), https://doi.org/10.5066/P9KLBB5D . 2) Conserving and Restoring American the Beautiful, 2021: A preliminary report to the National Climate Task Force recommending a ten-year, locally led campaign to conserve and restore the lands and waters upon which we all depend, and that bind us together as Americans (https://www.doi.gov/sites/doi.gov/files/report-conserving-and-restoring-america-the-beautiful-2021.pdf) . 3) U.S. Geological Survey, 2021, Analysis of Updated USGS Database Finds Increase in America’s Lands and Waters Managed for Biodiversity. U.S. Geological Survey Technical Announcement: https://www.usgs.gov/news/analysis-updated-usgs-database-finds-increase-america-s-lands-and-waters-managed-biodiversity . 4) 2021 National Park Service's Connected Conservation Seminar Series. Protected Areas Database with USGS (https://www.nps.gov/articles/000/c2-pad-us.htm). 5) Davidson, A.; Dunn, L.; Gergely, K.; McKerrow, A.; Williams, S.; Case, M. Refining the coarse filter approach: Using habitat-based species models to identify rarity and vulnerabilities in the protection of U.S. biodiversity. Global Ecology and Conservation, Volume 28. 2021. https://doi.org/10.1016/j.gecco.2021.e01598 . 6) 2021 The State of PAD-US Data: Completeness, Scale, and Update Frequency for Source Data in the Protected Areas Database of the U.S. (3.0) as of November 2021 (https://communities.geoplatform.gov/ngda-govunits/wp-content/uploads/2021/11/StateofPADUS_Nov2021.pdf). 7) U.S. Geological Survey (USGS) - GAP Analysis Project (GAP), 2021, Protected Areas Database of the United States (PAD-US) 2.1 - World Database on Protected Areas (WDPA) Submission (ver 1.1, April 2021): U.S. Geological Survey data release, https://doi.org/10.5066/P9IVLRSS. 8) Morgan, J.; Rhoden, C.; White, B.; Riley, S. A state assessment of private lands wildlife conservation in the United States. Wildlife Society Bulletin, Volume 43, Issue 3. 2019. https://doi.org/10.1002/wsb.997 . 9) Completing America’s Inventory of Public Parks and Protected Areas: An Action Plan for 2016 - 2020: https://www.protectedlands.net/vision/ . 10) Online PAD-US Help System: http://www.protectedlands.net/help/ . 11) 2020 USGS Supports Wildland Fire Decision Support: http://www.protectedlands.net/uses/usgs-supports-wildland-fire-decision-support/ . 12) 2019 How to Use PAD-US in Base Maps - Guidelines for Incorporating Public Park and Related Protected Areas Data for the U.S. into Online Base Maps (https://communities.geoplatform.gov/ngda-govunits/wp-content/uploads/2019/09/Guidelines-for-Base-Maps-Data-Use_Version17Sept2019.pdf). 13) 2019 PAD-US Helps Connect Trail Systems Nationally: http://www.protectedlands.net/uses/pad-us-helps-connect-trail-systems-nationally/ . 14) 2018 New Federal Lands Recreation Poster Map: http://www.protectedlands.net/uses/new-federal-recreation-lands-poster/ . 15) 2018 DOI Office

of Policy Analysis Seminar: The New and Improved PAD-US 2.0 (with FGDC Federal Lands Working Group panel): https://communities.geoplatform.gov/ngda-govunits/wp-content/uploads/2021/12/DOI_PPA_Seminar_PDF2018July9_FINAL.pdf . 16) 2017 DOI Office of Policy Analysis Seminar: All of America's Parks and Protected Areas - Building and Using the PAD-US (with Federal Lands Working Group panel): https://communities.geoplatform.gov/ngda-govunits/wp-content/uploads/2021/12/PADUS-DOI-PPA_Seminar_Final2017.pdf . 17) Johnson, Lisa, Croft, Mason, and Larry Orman. 2017. "Building a complete GIS database of protected areas: USGS leads inventory of lands in the public interest." Esri ArcNews. Spring 2017. Volume 39, Number 2. https://www.esri.com/about/newsroom/arcnews/building-a-complete-gis-database-of-protected-areas/ . 18) 2017 PAD-US and City Parks: http://www.protectedlands.net/uses/pad-us-and-cityregional-park-agencies/ . 19) 2017 The Lands We Share: America's Protected Areas: https://storymaps.esri.com/stories/2017/protected-areas/ . 20) Jarvis, Jonathan B. A Report on North American Conservation. Presented on behalf of NAWPA. 2016 World Conservation Congress: https://story.maps.arcgis.com/apps/Cascade/index.html?appid=6d3a412ee9f34ce7868667bda19e5679 . 21) NAWPA Committee. 2016. Conservation in North America: An analysis of land-based conservation in Canada, Mexico, and the United States by NAWPA agencies. Report. North American Intergovernmental Committee on Cooperation for Wilderness and Protected Area Conservation; Canada, Mexico, and the United States of America. http://nawpacommittee.org/wp-content/uploads/2016/08/Conservation-in-North-America.pdf . 22) Grant, Tamara. 2017. Federal Agencies Working Together to Improve Data in the Living Atlas. Esri ArcGIS Blog, Analytics: https://www.esri.com/arcgis-blog/products/arcgis-living-atlas/analytics/federal-agencies-working-together-to-improve-data-in-the-living-atlas/ . 23) Building Green Infrastructure in the U.S: A Framework for Sustainable Growth: https://www.esri.com/en-us/industries/green-infrastructure/overview .

PROCESSING ENVIRONMENT Environment as of Metadata Creation: Microsoft Windows Server 2012 R2 Standard; Python 9.3; Esri ArcGIS 10.6 (Build 8321), PAD_US3_0.gdb (1.01 GB)

CREDITS

U.S. Geological Survey (USGS) Gap Analysis Project (GAP), 2022, Protected Areas Database of the United States (PAD-US) 3.0: U.S. Geological Survey data release, https://doi.org/10.5066/P9Q9LQ4B

ARCGIS ITEM PROPERTIES

* NAME land_restriction_protected_areas_database_230320_v5

Extents

EXTENT

GEOGRAPHIC EXTENT

BOUNDING RECTANGLE

WEST LONGITUDE -180
EAST LONGITUDE 180
SOUTH LATITUDE -15.3861
NORTH LATITUDE 71.312

EXTENT

DESCRIPTION

publication date

TEMPORAL EXTENT

BEGINNING DATE 2005-01-01
ENDING DATE 2021-01-01

EXTENT

GEOGRAPHIC EXTENT

BOUNDING RECTANGLE

EXTENT TYPE Extent used for searching
* WEST LONGITUDE -179.999989
* EAST LONGITUDE 179.999989
* NORTH LATITUDE 74.996354
* SOUTH LATITUDE -15.386142
* EXTENT CONTAINS THE RESOURCE Yes

EXTENT IN THE ITEM'S COORDINATE SYSTEM

* WEST LONGITUDE -20037507.067162
* EAST LONGITUDE 20037507.067162
* SOUTH LATITUDE -1733742.233514
* NORTH LATITUDE 12930675.078317
* EXTENT CONTAINS THE RESOURCE Yes

Resource Points of Contact

POINT OF CONTACT

INDIVIDUAL'S NAME PAD-US Team
ORGANIZATION'S NAME USGS Science Analytics and Synthesis (SAS)
CONTACT'S POSITION PAD-US Dataset Manager
CONTACT'S ROLE point of contact

CONTACT INFORMATION

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DELIVERY POINT PO Box 25046, MS 302
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ADMINISTRATIVE AREA Colorado
POSTAL CODE 80225
COUNTRY US
E-MAIL ADDRESS pad-us@usgs.gov

Resource Maintenance

RESOURCE MAINTENANCE

UPDATE FREQUENCY annually

Resource Constraints

LEGAL CONSTRAINTS

LIMITATIONS OF USE

Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data on any other system or for general or scientific purposes, nor shall the act of distribution constitute any such warranty. This database, identified as PAD-US version 3.0, has been approved for release by the U.S. Geological Survey (USGS). Although this database has been subjected to rigorous review and is substantially complete, the USGS reserves the right to revise the data pursuant to further analysis and review.

OTHER CONSTRAINTS

These data are in the public domain.

CONSTRAINTS

LIMITATIONS OF USE

The Digital Object Identifier https://doi.org/10.5066/P9Q9LQ4B for PAD-US 3.0 provides the persistent reference that should be used to obtain the data for use. The U.S. Geological Survey and all contributing data partners shall not be held liable for improper or incorrect use of the data described and (or) contained herein. All information is created with a specific end use or uses in mind. This is especially true for GIS data, which is expensive to produce and must be directed to meet the immediate program needs. These data were created with the expectation that they would be used for other applications; however, inappropriate uses are listed below. This list is in no way exhaustive but should serve as a guide to assess whether a proposed use can or cannot be supported by these data. For many uses, it is unlikely that PAD-US will provide the only data needed, and for uses with a regulatory outcome, authoritative agency data and field surveys should verify the result. PAD-US is recommended for users seeking general information about more than one agency or organization's lands. Users should seek authoritative source data directly to answer questions regarding one agency or those requiring more frequent updates (See PAD-US Steward Reports for contacts and agency data download locations: http://www.protectedlands.net/data-stewards/). The PAD-US includes the best available representation of federally owned lands (meaning a federal agency or the U.S. holds the title records), developed from authoritative source data in direct collaboration with federal agency data-stewards. Several ownership related data gaps exist and USGS provides no legal warranty. Agencies are always the official and best source of their land data and some update more frequently than PAD-US. The FGDC Federal Lands Working Group recommends the use of PAD-US to describe federally managed lands (i.e. “Manager Name” not “Owner Name”), unless spatial data inventory completeness is over 95% and appropriate scale for display is 1:24,000 as illustrated in “State of PAD-US Data” (e.g. USFS, USFWS, NPS, BLM, DOD) - a graphical summary of inventory completeness, appropriate scale, and update frequency at: https://communities.geoplatform.gov/ngda-govunits/wp-content/uploads/2021/02/StateofPADUS_Feb2021.pdf) . Ultimately, it is the responsibility of each data user to determine if these data can answer the question being asked. Furthermore, the database is released on condition that neither the USGS nor the U.S. Government shall be held liable for any damages resulting from its authorized or unauthorized use. Inappropriate uses include: Using PAD-US for applications or analyses associated with one agency or a particular unit (agencies are always the best and authoritative source of their land data and many publish updates more frequently than PAD-US). Using data to map small areas, typically requiring mapping resolution at scale finer than 1:24,000, as boundary quality varies by data source (See "State of PAD-US Data") and using aerial photographs or ground surveys in areas where data are incomplete. Combining these data with other data finer than 1:100,000 scale (except for select federal agencies or states identified in "State of PAD-US Data") to produce new hybrid maps or answer queries. Generating specific areal measurements from the data finer than the nearest thousand hectares. Representing boundaries as a legal representation for regulation or acquisition. Establishing definite occurrence or non-occurrence of any feature for an exact geographic area. Determining abundance, health, or condition of any feature. Using the data without acquiring and reviewing the metadata.

Spatial Reference

ARCGIS COORDINATE SYSTEM

* TYPE Projected
* GEOGRAPHIC COORDINATE REFERENCE GCS_WGS_1984
* PROJECTION WGS_1984_Web_Mercator_Auxiliary_Sphere
* COORDINATE REFERENCE DETAILS

PROJECTED COORDINATE SYSTEM

WELL-KNOWN IDENTIFIER 102100
X ORIGIN -22041258.62706707
Y ORIGIN -33265068.629224766
XY SCALE 135385248.82427496
Z ORIGIN -100000
Z SCALE 10000
M ORIGIN -100000
M SCALE 10000
XY TOLERANCE 0.001
Z TOLERANCE 0.001
M TOLERANCE 0.001
HIGH PRECISION true
LATEST WELL-KNOWN IDENTIFIER 3857
WELL-KNOWN TEXT PROJCS["WGS_1984_Web_Mercator_Auxiliary_Sphere",GEOGCS["GCS_WGS_1984",DATUM

["D_WGS_1984",SPHEROID["WGS_1984",6378137.0,298.257223563]],PRIMEM["Greenwich",0.0],UNIT
["Degree",0.0174532925199433]],PROJECTION["Mercator_Auxiliary_Sphere"],PARAMETER
["False_Easting",0.0],PARAMETER["False_Northing",0.0],PARAMETER["Central_Meridian",0.0],PARAMETER
["Standard_Parallel_1",0.0],PARAMETER["Auxiliary_Sphere_Type",0.0],UNIT["Meter",1.0],AUTHORITY["EPSG",3857]]

REFERENCE SYSTEM IDENTIFIER
* VALUE 3857
* CODESPACE EPSG
* VERSION 8.8(9.3.1.2)

Spatial Data Properties

VECTOR
* LEVEL OF TOPOLOGY FOR THIS DATASET geometry only

GEOMETRIC OBJECTS
FEATURE CLASS NAME land_restriction_protected_areas_database_230320_v5
* OBJECT TYPE composite
* OBJECT COUNT 441609

ARCGIS FEATURE CLASS PROPERTIES
FEATURE CLASS NAME land_restriction_protected_areas_database_230320_v5
* FEATURE TYPE Simple
* GEOMETRY TYPE Polygon
* HAS TOPOLOGY FALSE
* FEATURE COUNT 441609
* SPATIAL INDEX TRUE
* LINEAR REFERENCING FALSE

Data Quality

SCOPE OF QUALITY INFORMATION
RESOURCE LEVEL dataset

DATA QUALITY REPORT - TOPOLOGICAL CONSISTENCY
EVALUATION METHOD
Boundary discrepancies (mostly small slivers) between agency datasets and major overlaps associated with fee ownership (mostly between Federal and State lands) have been identified and are shared with data-stewards, who will edit source files as appropriate and resources allow. Users are encouraged to review topology overlap errors associated with the PAD-US 3.0 Fee Topology Overlap Assessment (see 'Processing Step 10 Fee Topology Assessment' attached in this data release or Fee Topology web services in the PAD-US Viewer, https://maps.usgs.gov/padus/) for reference. The topology assessment identifies all overlaps (minimum distance between feature coordinates to evaluate overlap relationship = 0.05 meter), large (greater than 5 acres) and small (less than 5 acres) overlaps, between Federal lands and between Federal and State agency lands in the Fee feature class.

DATA QUALITY REPORT - CONCEPTUAL CONSISTENCY
MEASURE DESCRIPTION
Boundary discrepancies (mostly small slivers) between agency datasets and major overlaps associated with fee ownership (mostly between Federal and State lands) have been identified and are shared with data-stewards, who will edit source files as appropriate and resources allow. Users are encouraged to review topology overlap errors associated with the PAD-US 3.0 Fee Topology Overlap Assessment (see 'Processing Step 10 Fee Topology Assessment' attached in this data release or Fee Topology web services in the PAD-US Viewer, https://maps.usgs.gov/padus/) for reference. The topology assessment identifies all overlaps (minimum distance between feature coordinates to evaluate overlap relationship = 0.05 meter), large (greater than 5 acres) and small (less than 5 acres) overlaps, between Federal lands and between Federal and State agency lands in the Fee feature class.

DATA QUALITY REPORT - COMPLETENESS OMISSION
MEASURE DESCRIPTION
This dataset is considered complete for the information presented, as described in the abstract and supplemental information section. Estimated completeness of the PAD-US 2.1 inventory, by Federal agency or State, is available at http://www.protectedlands.net/data-stewards. This information will be updated, with partners, after an assessment of PAD-US 3.0 following the data release. Qualitative completeness estimates balance acres inventoried and the quality of data/attributes in each inventory, including fee owned parcels, easement interests, and major designations. For example, Federal agencies estimate the percent completeness of lands data submitted for PAD-US 2.1 as: NPS (95%), USFS (99%), FWS (89%), BLM (85%), U.S. Army Corps of Engineers (USACE) (80%), Department of Defense (DOD) (79%), U.S. Bureau of Reclamation (USBR) (50%), NRCS (85%), Bureau of Ocean Energy Management (BOEM) (95%), National Oceanic and Atmospheric Administration (NOAA) (95%), California (95%), West Virginia (70%), and Virginia (95%). USGS seeks to increase the completeness, efficiency, and accuracy of PAD-US updates in collaboration with data-stewards as summarized in, "State of PAD-US Data" (https://communities.geoplatform.gov/ngda-govunits/wp-content/uploads/2021/02/StateofPADUS_Feb2021.pdf , periodic updates available on FLWG website), "Completing America's Inventory of Public Parks and Protected Areas: An Action Plan for 2016 - 2020" (November, 2016), and "A Map of the Future", published following the PAD-US Design Project (July, 2009) available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/science/pad-us-vision .

DATA QUALITY REPORT - QUANTITATIVE ATTRIBUTE ACCURACY
MEASURE DESCRIPTION
As a compilation of many datasets, attribute completeness and accuracy may vary. Federal and state data providers reviewed the translation of their spatial data files into the PAD-US schema and several provide data in the PAD-US format. In addition, the PAD-US Team summarized and reviewed the final aggregated database and each feature class for overall attribute accuracy and consistency as described in the PAD-US 3.0 Review Summary Tables (See Process Step 9) attached in this data release.

DATA QUALITY REPORT - ABSOLUTE EXTERNAL POSITIONAL ACCURACY

DIMENSION horizontal

MEASURE DESCRIPTION

As a compilation of many datasets, attribute completeness and accuracy may vary. Federal data providers reviewed the translation of their spatial data files into the PAD-US schema. In addition, the PAD-US Team summarized and reviewed the final aggregated database and each feature class for overall attribute accuracy and consistency as described in PAD-US 3.0 Review Summary Tables (See Process Step 9 attached in this data release).

DATA QUALITY REPORT - ABSOLUTE EXTERNAL POSITIONAL ACCURACY ►

DIMENSION vertical

MEASURE DESCRIPTION

A formal accuracy assessment of the vertical positional information in the data set is not applicable.

Lineage

PROCESS STEP

WHEN THE PROCESS OCCURRED 2021-01-25

DESCRIPTION

PAD-US 3.0 Planning, Blank Schema, and Data Manual: The PAD-US database aggregation involves the compilation of thousands of agency and nonprofit organization source data files from a network of nearly 100 data-stewards, with select updates prioritized annually based on needs, the availability of source data, and resources. The USGS is committed to building capacity in the state data-steward network and the PAD-US Team to increase the frequency of state land updates as resources allow. The USGS supported efforts to complete state inventories with the integration of local parks data in the PAD-US 2.1, and tested a state-to-PAD-US data translation script during PAD-US 3.0 development. Additional efforts are in progress to support the technical and organizational strategies needed to increase the frequency of state updates. The PAD-US 3.0 included major updates to the federal estate, CA, WV, and VA. The first processing step in the PAD-US development was to update the Blank PAD-US schema (Process Step 1, Create Blank Schema attached in this data release) in response to data-steward and user feedback and the PAD-US Action Plan (https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/science/pad-us-vision). The blank schema provides a blueprint of the database for the PAD-US Team to load input files for PAD-US aggregation and it is shared with data-stewards seeking to submit source data in the PAD-US format. Data aggregation and development are an ongoing and evolving process as land management agency and nonprofit organization GIS systems mature and stakeholder feedback improve the process. The PAD-US Data Manual and schema has changed over time to better reflect user needs, with the majority of changes reflected in the PAD-US 2.0 providing a more stable format to further develop data partnerships and increase automation. The schema includes all the components to build the PAD-
US 3.0, including the multiple feature class structure
('Fee', 'Designation', 'Easement', 'Proclamation', 'Marine', 'Combined'), core attributes, and all standardized domain tables ('State Name', 'IUCN Category', 'GAP Status Code', 'Designation Type', 'Category', 'Agency Type', 'Agency Name', 'Public Access'). A "Feature Class" (FeatClass) field is available in the fully Combined layer to describe which feature class the data originated from and for users to extract data types as needed (see Federal Data Reference lookup table for authoritative federal data). The 'Marine' and 'Easement' feature classes also include fields (in addition to PAD-US core attributes) unique to the NOAA Marine Protected Areas Inventory and National Conservation Easement Database. In addition, the Blank PAD-US 3.0 Schema includes the U.S. Census Bureau State file (from the national sub-state geography geodatabase: https://www2.census.gov/geo/tiger/TGRGDB20/tlgdb_2020_a_us_substategeo.gdb.zip) that serves as the common standard (updated annually) for legal State jurisdictional boundaries, the 'State Name' field in the PAD-US, and the full extent of analysis products. The PAD-US development team works closely with a large variety of stakeholders including development partners, data sources, and data users to develop and maintain the "Data Manual for PAD-US" Table crosswalks (online resource available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual) .

PROCESS STEP

WHEN THE PROCESS OCCURRED 2021-01-29

DESCRIPTION

Source Data Documentation and Translation: The PAD-US Data-Steward Network includes Federal, State, and nonprofit partners that provide source data files for PAD-US as summarized in online and pdf Steward Reports (http://www.protectedlands.net/data-stewards/). More information about the PAD-US Data-Steward Network is available on the PAD-US website (https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/science/pad-us-data-stewards). Eight federal agencies (BLM, Census Bureau, DOD, FWS, NPS, NRCS, USFS, NOAA) and three state aggregators (CA, WV, VA) delivered data for PAD-US 3.0 or USGS compiled data from agency recommended sources (See details about data contributors and source data files in Process Step 2, Source Data Documentation attached in this data release). The PAD-US Team translated individual source files into the PAD-US format (unless provided by the data-steward in the PAD-US format).

PROCESS STEP

WHEN THE PROCESS OCCURRED 2021-03-15

DESCRIPTION

Quality Assessment and Quality Control: The PAD-US development team uses a Python script to generate a Quality Assessment and Quality Control (QA/QC) report each time a source file is submitted or translated to ensure the major components needed for database aggregation are included (See Process Step 3, PAD-US QA/QC attached in this data release). Subsequent process steps will outline the general workflow and processes used to compile each major component of the final database.

PROCESS STEP

WHEN THE PROCESS OCCURRED 2021-04-25

DESCRIPTION

Local Agency to Agency Name Crosswalk: A Python script was used to crosswalk data provided by PAD-US contributors, referencing the land owner or managing entity for a unit, into standardized PAD-US geodatabase domain tables (See PAD-US Process Step 4 Local Agency to Agency Name Crosswalk attached in this data release). PAD-US retains source data as provided in the 'Local Owner' and 'Local Manager' fields. These fields often provide additional detail to complement the standardized 'Owner Name' and 'Manager Name' fields, respectively.

PROCESS STEP

WHEN THE PROCESS OCCURRED 2021-05-15

DESCRIPTION

Transfer Locally Reviewed Conservation and Recreation Measures from PAD-US 2.1: Input files are compared to the previous PAD-US (version 2.1) to evaluate new records and assign identifiers to join (ExistJoinID) source data updates (input files) with the previous version of PAD-US (2.1). File records are compared via automated scripts tracking attributes and polygon location followed by manual review to ensure existing and locally reviewed data flagged for attribute transfer (ConsMeasTrn) match updates correctly and new records are identified. Once a reliable JoinID is confirmed post review, the Transfer Non Default Conservation Measures Python script transfers value added data managed by USGS (not available in source data) including locally assigned conservation ('GAP Status Code', 'IUCN Category') or recreation access measures ('Public Access'), the World Database on Protected Areas (WDPA) Site ID (a unique identifier assigned by UNEP-WCMC and managed by USGS), and 'Date of Establishment'. See Process Step 5, Reconciliation attached in this data release.

PROCESS STEP

WHEN THE PROCESS OCCURRED 2021-07-02

DESCRIPTION

Categorical Assignments by Designation Type: The areas in PAD-US are assigned conservation measures that assess management intent to permanently protect biological diversity: the nationally relevant 'GAP Status Code' (that also identifies multiple use areas) and the global 'IUCN Category' standard. In addition, a general measure of recreation access ('Public Access') is also assigned. After locally reviewed measures were transferred from PAD-US 2.1 (as described in Process Step 5, Reconciliation) input files are checked for completeness of required attributes and that all domains and standardized field attributes are completely assigned. In the absence of other information (e.g. local assignment or review), 'GAP Status Code', 'IUCN Category', and 'Public Access' are assigned categorically based on 'Designation Type' using a Python script (See Process Step 6 Categorical Assignments by Designation Type attached in this data release) that references crosswalk tables (e.g. Tables 6 and 9) available in the PAD-US Data Manual (https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual).

PROCESS STEP

WHEN THE PROCESS OCCURRED 2021-07-12

DESCRIPTION

Multiple Feature Class Implementation: The major feature of PAD-US 2.0 involved the expansion of the multiple feature class database structure; primarily, the removal of overlapping management designations from fee owned lands. The expanded structure, defined by the addition of the "Designation" feature class was replicated in PAD-US 2.1 and 3.0. Building on Federal Lands Working Group (https://communities.geoplatform.gov/ngda-govunits/federal-lands-workgroup/) efforts to collaboratively develop PAD-US, it was fairly straightforward to determine feature class placement of Federal spatial data. Federal data-stewards defined the 'Category' (the data type field in PAD-US) associated with source data submitted for PAD-US as fee parcels, easement interest, leases, agreements, overlapping management designations, proclamation, or marine boundaries. An automated Python script process compared State and other overlaps to Federal fee data to determine feature class placement (See Process Step 7, Multiple Feature Class attached in this data release).

PROCESS STEP

WHEN THE PROCESS OCCURRED 2021-08-10

DESCRIPTION

Database Aggregation and Load Order: Input files referenced in the "Source Data Collection and Translation" processing step above are aggregated into the PAD-US geodatabase in a purposeful load order to achieve the necessary visual and analytical results associated with current database technology (See Process Step 8, Load Order attached in this data release). Load order strives to account for boundary size, type, and spatial data quality, to increase the likelihood overlapping features are visible on maps and to support assessments of biodiversity protection status or outdoor recreation access. Files in the PAD-US geodatabase feature class loaded first, remain on the bottom in cases of overlap. Feature classes are manually loaded separately (agencies referenced below are listed in geodatabase load order within their respective feature classes - bottom to top) before the PAD-US 3.0 'Combined' feature classes are created. For example, the full 'PADUS3_0Combined_Proclamation_Marine_Fee_Designation_Easement' feature class represents this load order (PAD-US feature class and a general description of agency source data listed from the bottom to the top): 1) 'Proclamation' feature class (FWS Approved Acquisition, USFS Proclamation Boundaries, NPS Proclamation Boundaries, DOD Military Lands, Census American Indian Areas [AIA]); 2) 'Marine' feature class (BOEM Blocks, NOAA Marine Protected Areas Inventory); 3) Federal fee lands (Department Of Energy (DOE), Tennessee Valley Authority (TVA), Agricultural Research Service (ARS) legacy data transferred from the previous PAD-US, BLM public lands from Surface Management Area database, USBR legacy data transferred from the previous PAD-US, USACE lands transferred from the previous PAD-US, USFS fee parcel data, NPS fee parcel data, FWS fee parcel data); 4) State and local government fee lands, in alphabetical order by State; 5) Federal designations (USBR designations, BLM ACEC (transferred from the previous PAD-US), BLM Monuments/National Conservation Areas/Similar, USACE reservoirs (transferred from the previous PAD-US), USFS Inventory Roadless Areas, BLM Wilderness Study Areas, NPS Other Categories of Wilderness, NPS designations, USFS Withdrawals, USFS designations, USFS Special Interest Management areas, BLM Wilderness, USFS Wilderness, USFS Wild and Scenic Rivers, NPS Legislated Wilderness (from Wilderness.net), FWS Special Designations, BLM Wild and Scenic Rivers); 6) State and Local designations, in alphabetical order by State (mostly transferred from the previous PAD-US); 7) Easements (often small) are loaded last to remain visible on top of overlapping records. The PAD-US 3.0 update includes federal easements provided directly by managing agencies only - all other easements transferred from PAD-US 2.1 are from a subset of the National Conservation Easement Database for PAD-US (non-sensitive easements suitable for distribution in the public domain published February 2018).

PROCESS STEP
WHEN THE PROCESS OCCURRED 2021-08-18
DESCRIPTION
PAD-US 3.0 Review: Once all attributes are assigned and feature classes are aggregated, the PAD-US development team conducts a final review by summarizing the database (See Process Step 9, Review Summary Tables attached in this data release) and reviewing tables associated with each feature class. In addition, 'GIS Acres' are compared to known sources and spatial data are compared to previous PAD-US versions. Federal Lands Working Group data-stewards reviewed the translation of authoritative spatial data (federal lands and waters) into the PAD-US format and USFS, NPS, and FWS provide data in the PAD-US format. In addition, Quality Control / Quality Assurance (QA/QC) reports documenting edits to source data to meet PAD-US requirements are shared with data-stewards to continually improve update efficiency and accuracy.

PROCESS STEP
WHEN THE PROCESS OCCURRED 2021-08-20
DESCRIPTION
Data quality assessment and appropriate use of federal spatial data: The PAD-US Team and FLWG recommends users review "The State of PAD-US Data" (https://communities.geoplatform.gov/ngda-govunits/wp-content/uploads/2021/02/StateofPADUS_Feb2021.pdf , periodic updates available on FLWG website) to better understand the appropriate scale to use data, estimated level of spatial data inventory completeness, and update frequency of agency source data aggregated in PAD-US. The summary graphic, developed by USGS cooperators in collaboration with the FLWG and SLWG following the publication of PAD-US 2.1, is updated following each PAD-US data release. Overlaps between agency fee ownership datasets (mostly slivers) are available for review in Process Step 10, Fee Topology Assessment attached in this data release and displayed as web services in the PAD-US Viewer (https://maps.usgs.gov/padus/). In addition, "Guidance for Base Map Developers to Use PAD-US" (https://communities.geoplatform.gov/ngda-govunits/wp-content/uploads/2019/09/Guidelines-for-Base-Maps-Data-Use_Version17Sept2019.pdf) and PAD-US Steward Reports (http://www.protectedlands.net/data-stewards/) highlight PAD-US as the authoritative source for aggregated data only (that is, more than one agency) and document data-steward contacts and data download locations to obtain source data directly. Agencies are always the best and authoritative source of their land data and many update spatial datasets more frequently than PAD-US.

Distribution

DISTRIBUTOR
CONTACT INFORMATION
ORGANIZATION'S NAME U.S. Geological Survey - ScienceBase
CONTACT'S ROLE distributor
CONTACT INFORMATION
PHONE
VOICE 1-888-275-8747
ADDRESS
TYPE both
DELIVERY POINT Building 810, Mail Stop 302
CITY Denver
ADMINISTRATIVE AREA Colorado
POSTAL CODE 80225
COUNTRY US
E-MAIL ADDRESS sciencebase@usgs.gov

AVAILABLE FORMAT
NAME The File downloads in a .zip format

ORDERING PROCESS
TERMS AND FEES None. No fees are applicable for obtaining this data-set.

TRANSFER OPTIONS
ONLINE SOURCE
LOCATION https://doi.org/10.5066/P9Q9LQ4B

TRANSFER OPTIONS
ONLINE SOURCE
DESCRIPTION Download or view data from https://www.usgs.gov/gapanalysis/PAD-US/ or https://doi.org/10.5066/P9Q9LQ4B . The PAD-US version 3.0 data was developed using an Esri ArcGIS version 10.6 File Geodatabase format to utilize the expanded capabilities of the File Geodatabase for overall size, attribute name length, attribute aliases, coded domain values and topology analysis tools (See PAD_US3_0_GDB.zip attached in this data release). Users may download a shapefile (.shp), Keyhole Markup Language (.kmz), and ArcGIS version 10.x file geodatabase (.gdb) formats at https://www.usgs.gov/gapanalysis/PAD-US-data-download . Various Web Mapping Services (https://www.usgs.gov/gapanalysis/PAD-US-web-services) and poster maps (https://www.usgs.gov/gapanalysis/PAD-US-resources) are also available.

DISTRIBUTION FORMAT
* NAME File Geodatabase Feature Class
TRANSFER OPTIONS
ONLINE SOURCE
LOCATION https://www.usgs.gov/programs/gap-analysis-project/science/pad-us-data-overview
ONLINE SOURCE
LOCATION https://www.usgs.gov/gapanalysis/PAD-US
ONLINE SOURCE
LOCATION https://doi.org/10.5066/P9Q9LQ4B

Fields

DETAILS FOR OBJECT land_restriction_protected_areas_database_230320_v5

* TYPE Feature Class
* ROW COUNT 441609

DEFINITION

The 'Combined' feature class integrates other feature classes from the PAD-US 3.0 geodatabase, as described in the name (and in database load order with Proclamation boundaries under all other features and Easements on top) including core PAD-US attributes only (The Marine and Easement feature classes include additional attributes specific to those data types).

DEFINITION SOURCE

PAD-US Development Team

FIELD FeatClass

* ALIAS Feature Class
* DATA TYPE String
* WIDTH 12
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION

This field, in the 'Combined' feature class, identifies the original feature class ('Fee', 'Easement', 'Designation', etc.) a protected area unit or record occurred in before combination. This is included to assist users seeking data in the 'Fee' feature class as data gaps exist and 'Category' (which would otherwise define feature class placement) may be 'Other' or 'Unknown'. Use this field to extract select data as needed from the fully Combined inventory (e.g. Fee_Easement) and see the Federal Data Reference lookup table (DBF) for authoritative data provided directly by federal management agencies by Aggregator Source.

DESCRIPTION SOURCE

See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES

NAME OF CODELIST FeatClass
SOURCE U.S. Geological Survey

FIELD EHoldTyp

* ALIAS Easement Holder Type
* DATA TYPE String
* WIDTH 50
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION

'Easement Holder Type' is the general description (e.g., 'Federal', 'Tribal', 'State', 'Private') of the easement holder, following the PAD-US 'Agency Type' domain codes and descriptions. This is a core attribute in the National Conservation Easement Database (NCED) that was transferred to the PAD-US Easement feature class.

DESCRIPTION SOURCE

See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES

NAME OF CODELIST EHoldTyp
SOURCE U.S. Geological Survey

FIELD Shape

* ALIAS SHAPE
* DATA TYPE Geometry
* WIDTH 0
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION

Feature geometry.

DESCRIPTION SOURCE

ESRI

DESCRIPTION OF VALUES

Coordinates defining the features.

FIELD Loc_Mang

* ALIAS Local Manager
* DATA TYPE String
* WIDTH 250
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION

The name of the land manager as provided by the data source, to complement the standardized 'Manager Name' field (e.g. 'City Land' is a standard 'Manager Name' while 'Agoura Hills, City of' is an example of a 'Local Manager').

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST Loc_Manag
SOURCE U.S. Geological Survey

FIELD Loc_Own
* ALIAS Local Owner
* DATA TYPE String
* WIDTH 250
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
The name of the land owner as provided by the data source, to complement the standardized 'Owner Name' field (e.g. 'State Fish and Wildlife' is a standard 'Owner Name', while 'Washington Department of Fish and Wildlife' reflects source data in the 'Local Owner' field) as more detail may be provided. A Python script assigns 'Owner Name' from 'Local Owner' (See Process Step 4, Local Agency to Agency Name Crosswalk attached in this data release). Efforts to complete and standardize 'Local Owner' in cooperation with data-stewards are in progress to enhance database utility.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST Loc_Own
SOURCE U.S. Geological Survey

FIELD Pub_Access
* ALIAS Public Access
* DATA TYPE String
* WIDTH 20
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
Level of 'Public Access' permitted, described as: 'Open' requires no special requirements for public access to the property (may include regular hours of availability); 'Restricted' requires a special permit from the owner for access, a registration permit on public land (e.g. self-permitting Wild and Scenic River, backcountry Wilderness registration) or has highly variable times when open to use (e.g. seasonal Wildlife Refuge closure); 'Closed' occurs where no public access is allowed (e.g. land bank property, special ecological study areas, military bases, many easements, etc.). 'Unknown' is assigned where information is not currently available.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST Pub_Access
SOURCE U.S. Geological Survey

FIELD GAPCdSrc
* ALIAS GAP Status Code Source
* DATA TYPE String
* WIDTH 150
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
An acronym to describe the GAP Code Source or organization(s) that applied 'GAP Status Code' to a unit boundary. This field also describes the methods used for assigning GAP Status as follows: 'GAP - Default' is assigned when GAP's categorical assignment of status has been applied, without more detailed review or inquiry. 'GAP' is assigned when standard methods (includes management plan review or land manager interview to assign GAP Status to a protected area) apply. 'GAP - Other Organization' (e.g. 'GAP - NPS') applies when the measure is assigned in partnership with GAP, including review. 'Other Organization' is assigned when another organization applied GAP Status according to their methods (e.g. The Nature Conservancy). See GAP Status Code Assignment reference document for more information: https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST GAPCdSrc
SOURCE U.S. Geological Survey

FIELD IUCNCtSrc
* ALIAS IUCN Category Source
* DATA TYPE String
* WIDTH 150
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION
An acronym to describe the organization(s) that applied 'IUCN Category' to the polygon. This field also describes the methods used for assigning 'IUCN Category' as follows: 'GAP - Default' is assigned when GAP's categorical assignment of status has been applied, without additional review. 'GAP - Other Organization' (e.g. 'GAP - NPS') applies when the measure is assigned in partnership with GAP, including review. 'Other Organization' applies when the IUCN Category is assigned by another organization according to their methods (e.g. NOAA). See the PAD-US Standards Manual for more information.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST IUCNCtSrc
SOURCE U.S. Geological Survey

FIELD GAP_Sts
* ALIAS GAP Status Code
* DATA TYPE String
* WIDTH 95
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION
The 'GAP Status Code' is a measure of management intent to conserve biodiversity defined as: 'GAP Status Code 1': An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a natural state within which disturbance events (of natural type, frequency, intensity, and legacy) are permitted to proceed without interference or are mimicked through management. 'GAP Status Code 2': An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a primarily natural state, but which may receive uses or management practices that degrade the quality of existing natural communities, including suppression of natural disturbance. 'GAP Status Code 3': An area having permanent protection from conversion of natural land cover for most of the area, but subject to extractive uses of either a broad, low-intensity type (e.g., logging, Off Highway Vehicle recreation) or localized intense type (e.g., mining). It also confers protection to Federally listed endangered and threatened species throughout the area. 'GAP Status Code 4': There are no known public or private institutional mandates or legally recognized easements or deed restrictions held by the managing entity to prevent conversion of natural habitat types to anthropogenic habitat types. The area generally allows conversion to unnatural land cover throughout or management intent is unknown. See the PAD-US Standards Manual GAP Status Code Assignment reference document for a summary of assumptions, criteria, and methods or the geodatabase 'GAP_Status' lookup table for short descriptions.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST GAP_Sts
SOURCE U.S. Geological Survey

FIELD WDPA_Cd
* ALIAS WDPA Site Code
* DATA TYPE Integer
* WIDTH 4
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION
The 'World Database for Protected Areas (WDPA) Site Code' is assigned by the UNEP- World Conservation Monitoring Centre (UNEP-WCMC) to all areas submitted to the WDPA. USGS maintains these codes, assigned to overall protected areas by 'Unit Name' (includes 'Designation Type'), between PAD-US updates. Areas identified as 'GAP Status Code' 1 or 2 meet the definition of protection by the International Union for the Conservation of Nature (IUCN) as primarily managed for biodiversity protection and are submitted to WCMC for the WDPA. Other areas will not have a 'WDPA Code'. A derivative PAD-US product, with all 'WDPA Codes', is sent to WCMC for the WDPA following each PAD-US update. This field is incomplete in PAD-US 3.0 and has not been reviewed by the PAD-US Team, pending additional code assignments for new protected areas by WCMC following PAD-US 3.0 publication and development of the WDPA 3.0 Submission. The PAD-US WDPA 2.1 Submission is available for download (https://doi.org/10.5066/P9IVLRSS) and display via Protected Planet (https://www.protectedplanet.net/country/USA). It is important to note statistics published by the National Oceanic and Atmospheric Administration (NOAA) Marine Protected Areas (MPA) Center and the USGS differ from statistics published by the UNEP-WCMC as methods to remove overlapping designations differ slightly and U.S. Territories are reported separately by the UNEP-WCMC.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST WDPA_Cd
SOURCE U.S. Geological Survey

FIELD Src_Date
* ALIAS GIS Source Date
* DATA TYPE String
* WIDTH 15
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
This represents the date (yyyy/mm/dd) GIS data was published or accessed (in the case of infrequently updated files) by the data aggregator. If month or day is unknown, the date is yyyy/00/00. The date an aggregated dataset was delivered to USGS may also be assigned to address data gaps when the original 'GIS Source Date' is not available.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST Src_Date
SOURCE U.S. Geological Survey

FIELD Comments
* ALIAS Comments
* DATA TYPE String
* WIDTH 255
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
Comments from either the original data source, aggregator, or the PAD-US Team.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST Comments
SOURCE U.S. Geological Survey

FIELD Loc_Nm
* ALIAS Local Name
* DATA TYPE String
* WIDTH 250
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION
The name of the protected area as provided by the data source; the 'Local Name' field is not standardized. This field may or may not include designations, different formats, spelling errors, unit or area identifiers unique to parcels; however, it links directly to source data files and may provide additional information not available in the 'Unit Name' field.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST Loc_Nm
SOURCE U.S. Geological Survey

FIELD IUCN_Cat
* ALIAS IUCN Category
* DATA TYPE String
* WIDTH 70
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
International Union for the Conservation of Nature (IUCN) management categories assigned to protected areas for inclusion in the United Nations Environment World Conservation Monitoring Center (UNEP-WCMC) World Database for Protected Areas (WDPA), the North America Intergovernmental Committee on Cooperation for Wilderness and Protected Areas Conservation (NAWPA) Protected Area Database, and the Commission for Environmental Cooperation (CEC) North American Terrestrial Protected Areas Database. IUCN defines a protected area as, "A clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values" (includes GAP Status Code 1 and 2 only). Management categories are not hierarchical and follows as: 'IUCN Category Ia': Strict Nature Reserves are strictly protected areas set aside to protect biodiversity and possibly geological or geomorphological features, where human visitation, use and impacts are strictly controlled and limited to ensure preservation of the conservation values. Such protected areas can serve as indispensable reference areas for scientific research and monitoring. 'IUCN Category Ib': Wilderness Areas protected areas are usually large unmodified or slightly modified areas, retaining their

natural character and influence, without permanent or significant human habitation, which are protected and managed to preserve their natural condition. 'IUCN Category II': National Park protected areas are large natural or near natural areas set aside to protect large-scale ecological processes, along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities. 'IUCN Category III': Natural Monument or Feature protected areas are set aside to protect a specific natural monument, which can be a landform, sea mount, submarine caverns, geological features such as caves, or even a living feature such as an ancient grove. They are generally quite small protected areas and often have high visitor value. 'IUCN Category IV': Habitat and (or) species management protected areas aim to protect particular species or habitats and management reflects this priority. Many Category IV protected areas will need regular, active interventions to address the requirements of particular species or to maintain habitats, but this is not a requirement of this category. 'IUCN Category V': Protected landscape and (or) seascape protected areas occur where the interaction of people and nature over time has produced an area of distinct character with significant ecological, biological, cultural, and scenic value. 'IUCN Category VI': Protected area with sustainable use (community based, non-industrial) of natural resources are generally large, with much of the area in a more-or-less natural condition and whereas a proportion is under sustainable natural resource management and where such exploitation is seen as one of the main aims of the area. 'Other Conservation Areas' are not recognized by IUCN at this time; however, they will be evaluated to determine if they meet the definition of Other Effective Area Based Conservation Measures (OECMs) for inclusion in the WDPA following recently released guidance. These areas (GAP Status Code 3 areas only) are attributed in the 'IUCN Category' Domain along with 'Unassigned' areas (GAP Status Code 4). In addition, a few areas are included as 'Not Reported', these areas meet the definition of IUCN protection (i.e. GAP Status Code 1 or 2) but 'IUCN Category' has not yet been assigned and categorical assignment is not appropriate. See the PAD-US Data Manual, Table 12, for a crosswalk from Designation Type, GAP Status Code, and size to IUCN Category.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST IUCN_Cat
SOURCE U.S. Geological Survey

FIELD Date_Est
* ALIAS Date of Establishment
* DATA TYPE String
* WIDTH 4
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
The Year (yyyy) the protected area was designated, decreed or otherwise established. The date is assigned to each unit by name and the current designation type represented in the PAD-US, without event status tracking (e.g. Yellowstone National Park: 1872, Frank Church-River of No Return Wilderness Area: 1980). This field is not fully attributed and data gaps are difficult to address.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST Date_Est
SOURCE U.S. Geological Survey

FIELD Shape_Length
* ALIAS SHAPE_Length
* DATA TYPE Double
* WIDTH 8
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
Length of feature in internal units.

DESCRIPTION SOURCE
ESRI

DESCRIPTION OF VALUES
Positive real numbers that are automatically generated.

FIELD Shape_Area
* ALIAS SHAPE_Area
* DATA TYPE Double
* WIDTH 8
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
Area of feature in internal units squared.
DESCRIPTION SOURCE
ESRI
DESCRIPTION OF VALUES
Positive real numbers that are automatically generated.

FIELD EsmtHldr
* ALIAS Easement Holder
* DATA TYPE String
* WIDTH 100
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION
'Easement Holder' is the name of the organization managing or holding the easement standardized by NCED to Proper Case with all acronyms spelled out (e.g., The Nature Conservancy [TNC]). This is a core attribute in the National Conservation Easement Database (NCED) provided by the easement holder or data provider that was transferred to the PAD-US Easement feature class.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST EsmtHldr

SOURCE U.S. Geological Survey

FIELD Unit_Nm
* ALIAS Unit Name
* DATA TYPE String
* WIDTH 250
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION
The name of the overall protected area following the PAD-US Standard (i.e. full name including the designation type in Proper Case without acronyms, unit identifiers, special characters, space or return errors), complementing 'Local Name'. As null values are not permitted in this standardized field, categorical assignments are sometimes made from the 'Manager Name' field and an auto-incremented number for each protected area when data gaps occur in source files. This field is in a state of transition as data-stewards move toward common standards.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST Unit_Nm
SOURCE U.S. Geological Survey

FIELD Source_PAID
* ALIAS Source Protected Area ID
* DATA TYPE String
* WIDTH 100
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION
The 'Source Protected Area Identifier' (Source PAID) includes the persistent identifier (e.g. numbers, letters, or combinations of each) associated with each protected area, when available in source data. The intention is to maintain a reliable connection to join authoritative source data to previous PAD-US versions (to transfer attributes not available in source data) and support links to other data. This field is not fully attributed and significant work remains to ensure persistent identifiers are provided by data-stewards. Several Federal data-stewards provide 'Source PAID' for PAD-US and the FLWG plans to continue work to ensure this field is operational for the Federal estate in the PAD-US format.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST Source_PAID
SOURCE U.S. Geological Survey

FIELD Loc_Ds
* ALIAS Local Designation
* DATA TYPE String
* WIDTH 250
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION
The unit's land management description or designation as provided by the data source. 'Local Designation Type' is not standardized and complements the standardized PAD-US 'Designation Type' field as more detail may be available. Null values indicate designation related information was not available in source files and categorical assignments to 'Designation Type' apply. See the PAD-US Data Manual, Table 9, for a crosswalk of 'Designation Type' (e.g. 'State Conservation Area') from source data where 'Local Designation Type' may include various, related designations referenced in source data (e.g. State Natural Area, State Ecological Reserve, State Nature Preserve, State Critical Habitat Area, State Wildlife Management Area, etc.).

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST Loc_Ds

SOURCE U.S. Geological Survey

FIELD Des_Tp
* ALIAS Designation Type
* DATA TYPE String
* WIDTH 75
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
The unit's land management description or 'Designation Type', standardized for the U.S. (e.g. 'Area of Critical Environmental Concern', 'Wilderness Area', 'State Park', 'Local Recreation Area', 'Conservation Easement'). See the PAD-US Data Manual, Table 9, for a crosswalk of 'Designation Type' from source data where 'Local Designation Type' may include related designations in various formats (e.g. NWSR, National Recreation River, National Scenic River, Eligible - Recreational, Eligible - Wild, etc.) or the 'Designation_Type' geodatabase lookup table and PAD-US Data Manual Table 8 for domain codes and descriptions. 'Designation Type' supports PAD-US queries and the categorical assignment of conservation measures (i.e. 'GAP Status Code', 'IUCN Category') and 'Public Access' in the absence of other information (See the PAD-US Standards Manual 'GAP Status Code Assignment' reference document).

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST Des_Tp
SOURCE U.S. Geological Survey

FIELD State_Nm
* ALIAS State Name
* DATA TYPE String
* WIDTH 50
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
Location name of State or territory by United States Postal Service abbreviation. U.S. Census Bureau States and Equivalent data serve as the common standard to apply 'State Name' and to integrate State jurisdictional boundaries into the PAD-US. See domain codes and descriptions (e.g. Table 16) in PAD-US Data Manual or the 'State_Name' geodatabase lookup table for details.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST State_Nm
SOURCE U.S. Geological Survey

FIELD Agg_Src
* ALIAS Aggregator Source
* DATA TYPE String
* WIDTH 150
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
'Aggregator Source' describes the Aggregator (Organization) credited with data aggregation, version of PAD-US when the update (or data-steward review; if data did not change) occurred, feature class name (except when source data are mixed or split into multiple feature classes) the data reside in, reference to the original source data file, and a reference to describe the State location to manage boundary inconsistencies between agency datasets (from State data-steward submissions only). 'Aggregator Source' is attributed in the format 'Aggregator name_PADUSversion_featureclass_filename_filetype' (e.g. TNC_PADUS1_4_SecuredAreas2008.shp). State aggregations also include a reference to the State in the format 'organization name_PADUSversion_filename_filetype_StateUSPS'. Aggregators may not always be able to define the geodatabase feature class as data may be mixed (e.g. MNDNR_PADUS2_0_MN2015_PADUS_MN_1.gdb_MN, NJOGIS_PADUS2_0Fee_OSPRI_August2017_NJ). Organization acronyms are used and underscore replaces spaces and periods. A data aggregator submits data in the PAD-US format or is a nonprofit managing large regional or national datasets with required fields for PAD-US translation. USGS is identified as an aggregator when data translation is required (e.g. USGS_PADUS2_0Fee_BLM_SMA_ADMU_Union). More information about Protected Areas Database of the United States (PAD-US) data-stewards and source data files are available at http://www.protectedlands.net/data-stewards/ .

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST Agg_Src
SOURCE U.S. Geological Survey

FIELD Mang_Type
* ALIAS Manager Type
* DATA TYPE String
* WIDTH 50
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
General land manager description (e.g. 'Federal', 'Territorial', 'American Indian Lands', 'State', 'Regional Agency Special District', 'Local Government', 'Non-Governmental Organization', 'Private', 'Joint') standardized for the U.S. This field is assigned by a crosswalk from 'Manager Name'. See PAD-US Data Manual, Table 6, for "Agency Name to Agency Type Crosswalk" or 'Agency Type' geodatabase lookup table for full domain descriptions. Use the 'Manager Type' field for the most complete general depiction of Federal lands as ownership related data gaps (i.e. 'Owner Type' = 'Unknown') occur in the Federal theme.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST Mang_Type
SOURCE U.S. Geological Survey

FIELD Mang_Name
* ALIAS Manager Name
* DATA TYPE String
* WIDTH 70
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
Land manager or administrative agency (e.g. 'Forest Service', 'State Fish and Wildlife', 'City Land', Non-Governmental Organization') standardized for the U.S. See Agency Name domain codes and descriptions in the PAD-US Data Manual (Table 5) or 'Agency Name' geodatabase lookup table. A python script assigns 'Manager Name' from 'Local Manager' (See Process Step 4, Local Agency to Agency Crosswalk attached in this data release).
Use 'Manager Name' for the best depiction of Federal lands by agency as the 'Owner Name' field includes data gaps (i.e. 'Owner Name' = 'Unknown'), where parcel level ownership data are not yet available from authoritative data sources.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST Mang_Name
SOURCE U.S. Geological Survey

FIELD Own_Type
* ALIAS Owner Type
* DATA TYPE String
* WIDTH 50
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
The general land owner description (e.g. 'Federal', 'Territorial', 'American Indian Lands', 'State', 'Regional Agency Special District', 'Local Government', 'Non-Governmental Organization', 'Private', 'Joint') standardized for the U.S. This field is assigned by a crosswalk from 'Owner Name'. See PAD-US Data Manual, Table 6, for the "Agency Name to Agency Type Crosswalk", PAD-US Data Manual Table 4 or 'Agency Type' geodatabase lookup table for full domain codes and descriptions. 'Regional Agency Special Districts (DIST)' include limited purpose governmental units that exist separately from local governments such as county or municipal (e.g. some Regional Parks, Greenbelts, Water Management Areas). 'Designation' is applied to designations overlapping fee lands as ownership is not applicable. Use the 'Manager Type' field for the best general depiction of Federal lands as several ownership related data gaps (i.e. 'Owner Type' = 'Unknown') occur in the Federal theme.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST Own_Type
SOURCE U.S. Geological Survey

FIELD Category
* ALIAS Category
* DATA TYPE String
* WIDTH 50
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION
The general 'Category' for the protection mechanism associated with the protected area. 'Fee' simple, is the most common way real estate is owned. A conservation 'easement' creates a legally enforceable land preservation agreement between a landowner and government agency or qualified land protection organization (i.e. land trust). 'Other' types of protection include leases, agreements, or deed restrictions. 'Designation' is applied to management boundaries not represented in title documents (e.g. 'National Monument', 'Wild and Scenic River', and some 'State Wildlife Management Area') overlapping fee ownership parcels. 'Marine' includes outer continental shelf lands managed by the Bureau of Ocean Energy Management and Marine Protected Areas inventoried by the National Oceanic and Atmospheric Administration. 'Proclamation' defines the outer boundaries of areas without internal ownership defined: Tribal Lands (Census AIA), Military Lands (Department of Defense), Proclamation (National Park Service and Forest Service) and Approved Acquisition Boundaries (U.S. Fish and Wildlife Service) for planning purposes. See PAD-US Data Manual, Table 3, or 'Category' geodatabase lookup table for full domain codes and descriptions.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST Category
SOURCE U.S. Geological Survey

FIELD GIS_Acres
* ALIAS GIS Acres
* DATA TYPE Integer
* WIDTH 4
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION
Acres calculated for each polygon converted from the Shape_Area field using field calculator "!shape.area@acres!" rounded to the nearest whole number.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST GIS_Acres
SOURCE U.S. Geological Survey

FIELD OBJECTID
* ALIAS OBJECTID
* DATA TYPE OID
* WIDTH 4
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION
Internal feature number.

DESCRIPTION SOURCE
ESRI

DESCRIPTION OF VALUES
Sequential unique whole numbers that are automatically generated.

FIELD Access_Src
* ALIAS Public Access Source
* DATA TYPE String
* WIDTH 150
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION
An acronym to describe the organization(s) that applied 'Public Access' to the polygon. This field also describes the methods used for assigning 'Public Access' as follows: 'GAP - Default' is assigned when GAP's categorical assignment of status has been applied, without additional review. 'GAP - Other Organization' (e.g. 'GAP - NPS') applies when the measure is assigned in partnership with GAP, including review. 'Other Organization' applies when Public Access is assigned by another organization according to their methods (e.g. NOAA). See the PAD-US Standards Manual for more information.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST Access_Dt
SOURCE U.S. Geological Survey

FIELD Own_Name
* ALIAS Owner Name
* DATA TYPE String
* WIDTH 70
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
Land owner or holding agency (e.g. 'Forest Service', 'State Fish and Wildlife', 'City Land', Non-Governmental Organization') standardized for the U.S. See Agency Name domain codes and descriptions in the PAD-US Data Manual (Table 5) or 'Agency Name' geodatabase lookup table. A python script assigns 'Owner Name' from 'Local Owner' (See Process Step 4, Local Agency to Agency Crosswalk attached in this data release). Please note there are instances where 'Owner Name' = 'Designation' rather than an 'Agency Name' as expected. 'Designation' is applied to management designations that overlap fee ownership or where ownership information is not represented in the data type (e.g. 'Owner Type' and 'Owner Name' are not applicable to Designations such as 'Marine Protected Area', 'National Monument', or data included in the Proclamation and Other Planning Boundaries feature classes), while it remains a core attribute. 'Owner Name' also contains unknown values where parcel level ownership data are not yet available from authoritative data sources. Use the 'Manager Name' field for the best depiction of Federal lands by agency as several fee simple ownership related data gaps (i.e. 'Owner Name' = 'Unknown') occur in the Federal theme. See "The State of PAD-US Data" (https://communities.geoplatform.gov/ngda-govunits/wp-content/uploads/2021/02/StateofPADUS_Feb2021.pdf) or PAD-US Steward Reports by federal agency or state (http://www.protectedlands.net/data-stewards/) for more information about inventory completeness.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST Own_Name
SOURCE U.S. Geological Survey

FIELD Access_Dt
* ALIAS Public Access Date
* DATA TYPE String
* WIDTH 4
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION
The most current Year (yyyy) the 'Public Access' classification was assigned to the polygon. See the PAD-US Standards Manual for more information.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST Access_Dt
SOURCE U.S. Geological Survey

FIELD IUCNCtDt
* ALIAS IUCN Category Date
* DATA TYPE String
* WIDTH 4
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
The most current Year (yyyy) the 'IUCN Category' was assigned to the polygon.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST IUCNCtDt
SOURCE U.S. Geological Survey

FIELD GIS_Src
* ALIAS GIS Source
* DATA TYPE String
* WIDTH 200
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
The source of spatial data the aggregator obtained (e.g. WYGF_whmas08.shp) for each record. File names match original source data provided by managing agencies to increase update efficiency and data transparency. This field is in a state of transition to fully meet standards as the original 'GIS Source' is not always provided in aggregated datasets.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST GIS_Src
SOURCE U.S. Geological Survey

FIELD GAPCdDt
* ALIAS GAP Status Code Date
* DATA TYPE String
* WIDTH 4
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
The most current Year (yyyy) the 'GAP Status Code' was assigned to the polygon.

DESCRIPTION SOURCE
See Online PAD-US Data Manual available at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/pad-us-data-manual

CODED VALUES
NAME OF CODELIST GAPCdDt
SOURCE U.S. Geological Survey

References

AGGREGATE INFORMATION
ASSOCIATION TYPE cross reference
AGGREGATE RESOURCE NAME ►
TITLE Protected Areas Database of the United States (PAD-US)
PUBLICATION DATE 2022-01-31
EDITION 3.0
PRESENTATION FORMATS digital map
FGDC GEOSPATIAL PRESENTATION FORMAT vector digital data
RESPONSIBLE PARTY
ORGANIZATION'S NAME USGS Gap Analysis Project
CONTACT'S ROLE originator
RESOURCE LOCATION ONLINE
LOCATION https://www.usgs.gov/gapanalysis/PAD-US

AGGREGATE INFORMATION
ASSOCIATION TYPE larger work citation
AGGREGATE RESOURCE NAME
TITLE Protected Areas Database of the United States (PAD-US)
PUBLICATION DATE 2022-01-31
EDITION 3.0
FGDC GEOSPATIAL PRESENTATION FORMAT geodatabase
RESPONSIBLE PARTY
ORGANIZATION'S NAME U.S. Geological Survey (USGS)
CONTACT'S ROLE publisher
CONTACT INFORMATION
ADDRESS
DELIVERY POINT https://www.usgs.gov/gapanalysis/PAD-US/

RESPONSIBLE PARTY
ORGANIZATION'S NAME USGS Gap Analysis Project
CONTACT'S ROLE originator

RESOURCE LOCATION ONLINE
LOCATION https://www.usgs.gov/gapanalysis/PAD-US/

Metadata Details

METADATA LANGUAGE English (UNITED STATES)
METADATA CHARACTER SET utf8 - 8 bit UCS Transfer Format
SCOPE OF THE DATA DESCRIBED BY THE METADATA dataset
SCOPE NAME * dataset
LAST UPDATE 2022-03-01

ARCGIS METADATA PROPERTIES
METADATA FORMAT ArcGIS 1.0
STANDARD OR PROFILE USED TO EDIT METADATA FGDC
METADATA STYLE FGDC CSDGM Metadata
CREATED IN ARCGIS FOR THE ITEM 2024-01-10
LAST MODIFIED IN ARCGIS FOR THE ITEM 2024-01-11
AUTOMATIC UPDATES
HAVE BEEN PERFORMED Yes
LAST UPDATE 2024-01-11

Metadata Contacts

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