

NGDA Dataset Report

Official NGDA Title: Protected Areas Database of the United States (PADUS) - Combined: Version 1.3

Metadata Record Title: Protected Areas Database of the United States (PADUS) - Combined: Version 1.3

A-16 NGDA Theme: Cadastre

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Metadata:

Registration Status: Complete

Registered on 12/10/2014

GeoPlatform Link*: <https://www.geoplatform.gov/node/243/27a9df67-4416-47b7-9b3d-5d58827a5607>

Data.gov Metadata Link*: <http://catalog.data.gov/harvest/object/c8c9ca5b-8bd1-4d0f-852f-df1bd8e59551/html>

*If the metadata has been updated and reharvested after publication of this report, the link may no longer be valid. The dataset may be searched for manually in Data.gov or GeoPlatform.gov.

NGDA Lifecycle Maturity Assessment (LMA) Report

Time Frame:

Baseline assessment responses include dataset activities from 2008 to 2015. PAD-US was first released by GAP in April 2009.

LMA Submission:

Status: Complete

Date: 10/21/2015

Extension Requested: Yes

LMA Reviewer(s):

Supervisor: Sky Bristol

Theme Lead: Did not review

Executive Champion: Did not review

SAOGI*: Did not review

Other: Did not review

LMA Verifier:

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Attachments:

To get access to any attachments referenced in the report, email the LMA Help Desk at NGDA_LMA_help@fgdc.gov. Please use the subject "Dataset Report Attachment(s)" and indicate the associated official NGDA title.

*Senior Agency Official for Geospatial Information (SAOGI)

Lifecycle Maturity Assessment (LMA) Summary

Overall Maturity:

Mature; Consistent

General Questions: 48%

Transition; Transformation

Stage 4 - Access: 100%

Optimized; Established

Stage 1 - Define/Plan: 90%

Optimized; Established

Stage 5 - Maintain: 28%

Planned; Initial Development

Stage 2 - Inventory/Evaluate: 100%

Optimized; Established

Stage 6 - Use/Evaluate: 77%

Mature; Consistent

Stage 3 - Obtain: 100%

Optimized; Established

Stage 7 - Archive: 33%

Transition; Transformation

NGDA Dataset Maturity Definitions:

How To Calculate Maturity: https://www.geoplatform.gov/sites/default/files/How_to_Calculate_Maturity.pdf

Maturity	Maturity Characteristics for All Lifecycle Stages
Optimized; Established Rank = 5	Dataset meets virtually all business needs of all users. The dataset is considered authoritative by owners and secondary users. It is curated across all stages of the approved lifecycle. Future needs are defined on a regular basis and resources for addressing both current and future business requirements are available.
Mature; Consistent Rank = 4	Dataset meets all the business needs of the primary owner and most of the secondary users. The dataset is curated and used as authoritative by the primary owner. Dataset is used widely by secondary users actively engaged in sustaining the dataset. Future needs are identified and steps are planned to address these. All stages are supported and reviewed on a recurring basis. The dataset is well managed in relation to the approved lifecycle.
Managed; Predictable Rank = 3	Dataset meets a significant number of the business needs of the primary owner and is widely used as an authoritative resource by secondary users. Benchmark activities are occurring in at least four of the approved lifecycle stages. Management practices in relation to the approved lifecycle is moderate but consistent. Dataset is integrating changing business requirements in lifecycle stages impacting overall maturity.
Transition; Transformation Rank = 2	Dataset meets business needs of the primary owner and has moderate use by secondary users. Benchmark activities are occurring in at least three stages. Efforts to integrate funding, include partners, and obtain data are not supported in a sustained manner. Management practices in relation to the stages of the approved lifecycle is limited.
Planned; Initial Development Rank = 1	Dataset limited in meeting business needs of the primary owner. Benchmark activities in the approved lifecycle are just starting to consider secondary uses, partnerships are forming to support additional dataset uses. Dataset development is in a very early stage. Minimal or limited management against the benchmarks in the approved lifecycle.
No Activity Rank = no activity	Dataset meets project or local business needs of the primary owner, secondary or additional uses or users were not considered, not recognized as an authoritative data or is part of a similar dataset. Not managed to any of the benchmarks in the approved lifecycle.

General Questions for All Stages

1) Is there a recurring process to obtain funding for all lifecycle stages of this dataset?

Answer: Funding support exists but is not adequate to meet known requirements, most lifecycle stages are supported.

Justification Comment:

Attachment(s): 0

The Protected Areas Database of the United States (PAD-US) is funded adequately on an annual basis to meet most of the lifecycle stages from Define through the Access stage. For instance, funding for PAD-US supports activities related to defining data standards. The "PAD-US Data Standards Manual" is currently undergoing an update and peer review process within USGS. The final published manual can be shared with NGDA staff when the USGS review process is complete. A draft of the standard can be found here: <http://gapanalysis.usgs.gov/padus/data/standards/>. Data stewards from state and federal agencies who provide data to PAD-US have been an integral part of developing a PAD-US data standard that meets the need of our data users. Funding also supports activities to aggregate and collect protected areas data (Inventory/Evaluate and Obtain lifecycle stages) and to provide data access through tools such as a data download page:

<http://gapanalysis.usgs.gov/padus/data/download/> and a data viewer:

<http://gis1.usgs.gov/csas/gap/viewer/padus/Map.aspx>. Currently the Core Science Analytics, Synthesis and Libraries (CSAS&L) program (under which PAD-US is located) is undertaking several program planning activities that will help CSAS&L more adequately meet the requirements of the Maintain, Use/Evaluate, and Archive stages. These planning activities will address known needs for a proper data repository solution, as well as the need for Data Management Plans that will address several of the required activities in the Maintain through Archive lifecycle stages.

2) Is there a process in place to ensure that open government and transparency guidelines are followed in all lifecycle stages for this dataset?

Answer: Process under development.

Justification Comment:

Attachment(s): 0

PAD-US openly communicates information about the database and data standards as needed with various data stewards and users. All PAD-US data are in the public domain. The PAD-US website is maintained by USGS staff and meets accessibility requirements (e.g., 508 compliant). The PAD-US website serves as a resource to communicate about the PAD-US database and the future vision for PAD-US <http://gapanalysis.usgs.gov/padus/vision/>.

Openly communicating our vision: In April 2008, the U.S. Geological Survey Gap Analysis Program (GAP) and the Doris Duke Charitable Foundation supported a yearlong design project to develop the organizational and technical strategies needed to create a fully comprehensive and current inventory of America's protected lands. The resulting proposal is summarized in the July 2009 report, "A Map for the Future," available for download from the PAD-US Web site (http://gapanalysis.usgs.gov/padus/files/2012/09/PADUS_FinalJuly2009LowRes.pdf). While resources do not currently exist to fully implement the PAD-US vision, GAP continues to address key recommendations. Primary objectives are to coordinate with federal land data managers to more efficiently aggregate data, build a state data steward network, implement suggested attributes (for example, Date of Establishment, Source ID) and utilize available database management technologies.

3) Are there processes and tools in place so that staff are sufficiently knowledgeable to ensure a continuity of the dataset for all stages of the lifecycle, especially during staffing transitions?

Answer: Processes and tools to ensure dataset continuity are under development.

Justification Comment:

Attachment(s): 0

Efforts are underway by the Core Science Analytics Synthesis, and Libraries (CSAS&L) program to properly document activities at all stages of the USGS Science Data Lifecycle <http://www.usgs.gov/datamanagement/> for its products. PAD-US is included in this effort. These efforts will ensure proper documentation for Standard Operating Procedures and Data Management Plans which will support continuity of staff knowledge even during staff transitions. Processes and tools that are in development also need to focus on the Maintain through Archive stages of the lifecycle. Please see question #1 for further description of program planning activities that CSAS&L is undertaking to meet these lifecycle needs.

STAGE 1 - Define/Plan

4) Are user and business requirements defined and formalized?

Answer: A recurring process is in place, including defining new partner and stakeholder business needs as they arise, and is fully implemented.

Justification Comment:

Attachment(s): 0

The PAD-US Data Standard is developed in collaboration with federal and state data partners. These partners include: the FGDC Federal Lands Working Group, the National Conservation Easement Database (NCED) Data Managers, the NOAA Marine Protected Areas Inventory Data Center, The Nature Conservancy (TNC), The Commission for Environmental Cooperation (CEC), and UNEP-World Conservation Monitoring Center (WCMC). With these partners we work to refine standards and data management processes that ensure PAD-US is locally relevant and globally interoperable.

5) How are partners/stakeholders involved in the requirements collection process?

Answer: A recurring process is in place, including defining new partner and stakeholder business needs as they arise, and is fully implemented.

Justification Comment:

Attachment(s): 0

The PAD-US Coordinator is a Co-Chair of the FGDC Federal Lands Working Group (organized under the National Boundaries Group). Participation in this group allows PAD-US to coordinate with federal land data managers to more efficiently aggregate federal lands data to meet common federal agency needs. Federal agency representatives also provide input on the PAD-US Data Standard.

A state data steward network has been established to more efficiently collect state and local protected areas data using a common protected areas data schema. These state data partners can also provide input to the PAD-US Data Standard. The network helps to build capacity in states so they can develop more robust protected areas data in their state and continuously contribute that data to the larger PAD-US Database.

6) Is there a quality assurance process for the dataset?

Answer: Process established, significant portions of the documentation is complete.

Justification Comment:

Attachment(s): 0

PAD-US does have a quality assurance process in place. The process is currently documented as part of an internal project of CSAS&L to more document the data workflow process for all its products. This data workflow process, including QA/QC steps, will be more fully documented to meet requirements set by the Core Science Analytics Synthesis, and Libraries (CSAS&L) program. See reference to CSAS&L program planning activities under Question #1.

PAD-US will release a new version PAD-US 1.4 in the fall of 2015. This product will go through the USGS data review and release process as described in the USGS Instructional Memorandum IM OSQI 2015-03 <http://www.usgs.gov/usgs-manual/im/IM-OSQI-2015-03.html>

7) Is there a process to evaluate the sensitivity, privacy, and confidentiality of this dataset?

Answer: Sensitivity, privacy, and confidentiality evaluations fully implemented, reviewed and updated

on a recurring basis.

Justification Comment:

Attachment(s): 0

The PAD-US Database does not include sensitive or PII information.

8) Are defined data standards used in collecting, processing, and/or rendering the data?

Answer: Standards being implemented.

Justification Comment:

Attachment(s): 0

The PAD-US Data Standard provides guidance for collecting and processing protected areas data for input into the PAD-US Database. The PAD-US Data Standard is currently in draft form and undergoing a USGS peer review process before final publication. A draft of the standard can be found here: <http://gapanalysis.usgs.gov/padus/data/standards/>

STAGE 2 - Inventory/Evaluate

9) Is there a process for determining if data necessary to meet requirements already exist from other sources (either within or outside the agency) before collecting or acquiring new data?

Answer: Process for determining appropriate data is being reused fully implemented, reviewed, and updated on a regular basis.

Justification Comment:

Attachment(s): 0

PAD-US is using data collected from authoritative data sources such as: federal agency data stewards for lands they manage; state data stewards <http://gapanalysis.usgs.gov/padus/stewards/> ; and authoritative data sources for private conservation easement data including the National Conservation Easement Database <http://conservationeasement.us/> and The Nature Conservancy.

STAGE 3 - Obtain

10) Is there a process for obtaining data in relation to this dataset?

Answer: Process is fully implemented, reviewed and updated on a regular basis.

Justification Comment:

Attachment(s): 0

PAD-US is using data collected from authoritative data sources such as: federal agency data stewards for lands they manage; state data stewards <http://gapanalysis.usgs.gov/padus/stewards/> ; and authoritative data sources for private conservation easement data including the National Conservation Easement Database (NCED) <http://conservationeasement.us/> and The Nature Conservancy. A schedule is in place to receive data from these authoritative data sources. An example of the data workflow for obtaining data from the NCED: When state data stewards submit easement data to PAD-US this data is then forwarded on to NCED by PAD-US in the winter. NCED will then ensure this data is accurate and meets their standards before incorporating into the NCED database. After incorporating this easement data into their database, the NCED database is published in the spring to be incorporated nationally for a summer PAD-US update. Please note the exact times for these updates and transfer of data may vary each year.

11) Is the metadata in a FGDC endorsed geospatial metadata standard?

Answer: Metadata is available in a format endorsed by the FGDC, it fully describes the dataset and provides all the information required to make the dataset discoverable, accessible, and usable.

Justification Comment:

Attachment(s): 0

PAD-US has FGDC metadata: <http://catalog.data.gov/dataset/protected-areas-database-of-the-united-states-padus-combined-version-1-3ca519>

12) How complete is the geographic coverage as defined in the requirements for the dataset?

Part 1 Answer: Business requirements for cyclic updates identified and a process is in place.

Part 2 Answer: Dataset has presently attained the greatest geographic coverage as defined by the

current requirements or roughly 100%.

Justification Comment:

Attachment(s): 0

PAD-US contains data for all 50 U.S. States, Puerto Rico, and the Virgin Islands. The intent of the Gap Analysis Program (which manages PAD-US) is to identify boundaries, representative of and used by management, accurate to USGS 1:100,000 spatial accuracy standards.

STAGE 4 - Access

13) Do you have a process for providing users access to the data in an open digital machine readable format?

Answer: User access process is fully implemented, data is available, process is reviewed and updated on a recurring basis.

Justification Comment:

Attachment(s): 0

PAD-US data is accessed via data download page: <http://gapanalysis.usgs.gov/padus/data/download/> and a data viewer: <http://gis1.usgs.gov/csas/gap/viewer/padus/Map.aspx>
Two web services are available: Ownership layer http://gis1.usgs.gov/arcgis/rest/services/gap/PADUS_Owner/MapServer and GAP status layer http://gis1.usgs.gov/arcgis/rest/services/gap/PADUS_Status/MapServer These web services are documented in the metadata: <http://catalog.data.gov/dataset/protected-areas-database-of-the-united-states-padus-combined-version-1-3ca519>

STAGE 5 - Maintain

14) Is there a maintenance process for updating and storing the dataset?

Answer: Dataset maintenance process is under development.

Justification Comment:

Attachment(s): 0

PAD-US has been updated on a yearly cycle from 2009 – 2012: <http://gapanalysis.usgs.gov/padus/data/history/> Dataset requirements have evolved over time and the new version of the PAD-US Data Standards Manual will reflect current data requirements and standards. The CSAS&L program is in the process of better addressing other aspects of the Maintain lifecycle, for example agency records management requirements.

15) Is there an error correction process as part of dataset maintenance?

Answer: Error correction process under development.

Justification Comment:

Attachment(s): 0

A quality control process is used to check data that is submitted for aggregation into PAD-US.

Feedback is accepted from data users regarding errors in PAD-US and corrected data would be included as appropriate in future versions of PAD-US.

A draft federal lands geodatabase, supported by the USGS Gap Analysis Program (GAP) to update the PAD-US, was provided to the FGDC Federal Lands Working Group for their review. The geodatabase model separates federal fee, easement, and management designation (e.g. National Monument, Wilderness Area) boundaries to highlight topology overlap errors within and between agency datasets.

STAGE 6 - Use/Evaluate

16) Is there a process to determine if the dataset meets user needs?

Answer: Process is complete and being implemented on ad hoc basis.

Justification Comment:

Attachment(s): 0

As part of the USGS data review and release process, a data reviewer will review PAD-US for data

accuracy, completeness, and usability. This review will be occurring in the fall of 2015. Outreach to user groups does occur but no formal and regularly scheduled user input process is in place at this point. Further refining of the process to evaluate user needs should be part of a broader CSAS&L effort to enhance activities during the Use/Evaluate stage of the lifecycle.

17) Is there a process to provide users information on how to access and properly use the dataset?

Answer: Process is fully implemented supporting access and proper use, process is reviewed on a recurring basis.

Justification Comment:

Attachment(s): 0

The PAD-US website <http://gapanalysis.usgs.gov/padus/> provides information on accessing and using the data via the data download page <http://gapanalysis.usgs.gov/padus/data/download/> or the data viewer <http://gis1.usgs.gov/csas/gap/viewer/padus/Map.aspx>.

Access to web services is provided here: <http://gapanalysis.usgs.gov/data/web-services/>

Access in Data.gov <http://catalog.data.gov/dataset/protected-areas-database-of-the-united-states-padus-combined-version-1-3ca519>

PAD-US Fact Sheet: <http://pubs.usgs.gov/fs/2013/3086/>

18) Are the business processes and management practices assessed to meet changing technology?

Answer: Assessment process implementation started for taking advantage of changing technology.

Justification Comment:

Attachment(s): 0

CSAS&L (the program under which PAD-US sits) is currently assessing cyberinfrastructure and technological needs for PAD-US and other data products of the program. With the release of a new PAD-US version program staff are assessing needs for additional web services to develop for PAD-US.

STAGE 7 - Archive

19) Is there an archiving process for the dataset?

Answer: Archival and/or disposition processes are in development.

Justification Comment:

Attachment(s): 0

The CSAS&L program is currently addressing data archival and disposition processes for all program datasets. The development of formal data management plans for CSAS&L products will address some of the needed actions under the Archive stage.