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*for the* **FUTURE**

# **Comments on the Development of a Conservation and Stewardship Atlas**

**Ann Bartuska, Alexandra Thompson, and Margaret Walls**

**Public Comments**  
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US Department of the Interior  
1849 C Street, NW  
Washington, DC 20240

Greetings,

On behalf of Resources for the Future (RFF), I am pleased to share the accompanying comments with the US Department of the Interior (DOI) in response to the request for comments (DOI-2021-0016) on the development of the Conservation and Stewardship Atlas.

RFF is an independent, nonprofit research institution in Washington, DC. Its mission is to improve environmental, energy, and natural resource decisions through impartial economic research and policy engagement. RFF is committed to being the most widely trusted source of research insights and policy solutions leading to a healthy environment and a thriving economy.

While RFF researchers are encouraged to offer their expertise to inform policy decisions, the views expressed here are those of the individual authors and may differ from those of other RFF experts, its officers, or its directors. RFF does not take positions on specific legislative proposals.

Several RFF staff have provided comments on the issues listed below (among others):

- The importance of not “recreating the wheel” when putting together the Atlas, but instead building on datasets and tools already available wherever possible;
- The value of an accessible, user-friendly interface for Atlas data, as well as the value of highly robust data; and
- Suggestions for a range of attributes of lands and waters that should be included in the Atlas, including protection levels, recreational opportunities, land costs and development threats, and more.

If you have any questions or would like additional information, please contact me at [thompson@rff.org](mailto:thompson@rff.org).

Sincerely,

*Alexandra Thompson*

Alexandra Thompson  
Senior Research Associate at Resources for the Future

# Comments on the Development of a Conservation and Stewardship Atlas

*Prepared by Ann Bartuska, Alexandra Thompson, and Margaret Walls*

Overall, it is important that the Conservation and Stewardship Atlas not “reinvent the wheel” in terms of assembling a new conservation database. Many relevant datasets already exist; the Atlas may provide an opportunity to supplement and improve these datasets, but it should not duplicate ongoing efforts. For example, the Protected Areas Database of the United States (PAD-US) provides a comprehensive geolocated inventory of protected lands. However, it could be enhanced in various ways to provide additional information about those lands. PAD-US also has some missing information; the Atlas should look first to fill those missing gaps. In addition, the Atlas could serve to improve the information we have about private conservation lands, a clear gap in existing databases.

We feel that a clear set of goals and objectives for the Atlas is needed. Acquiring usable data for program implementation and verification of impact is always valuable, but clarity in the goals and objectives of those programs is an essential first step. This is especially true for measures that focus on environmental justice, which though highlighted as an important consideration, is not well described in terms of the desired outcome. In reviewing the *America the Beautiful* strategy, we note that greater clarity around what the conservation goals are (e.g., equity, carbon storage, habitat provisioning, biodiversity, recreational access, and so forth) would lead to greater clarity in data needs.

The Atlas could provide the opportunity to shed light on activities beyond land protection, but we urge caution as measuring and monitoring private land stewardship on an ongoing basis is difficult, costly, and likely to be fraught with misunderstandings. We feel strongly that anything reported in a Conservation and Stewardship Atlas be comprehensive and accurate, and that the Atlas not “cherry-pick” success stories.

Finally, there is the potential for the Atlas to become siloed within DOI/USGS rather than a collaborative effort across agencies that already acquire meaningful data (USDA, EPA) and non-governmental organizations and scientists. We encourage a broader approach, one that focuses on inclusivity. This will take time to develop but is likely to prove more efficient in development and more useful to the stakeholders.

## Science and Data

**What data sources, standards, and technical approaches should be applied to data included in the Atlas to ensure that it is an authoritative and useful tool for the public?**

### Accessibility

Achieving conservation goals will require a variety of user communities engage with the Atlas, both as users of and contributors to it. Thus, the user interface should be easily accessible and understandable. The Atlas should be seen as an interactive dashboard, readily usable by interested parties in planning, conservation, and land and water management. (See i-Tree tool as one good example, <https://www.itreetools.org/>.) In addition, it

is important that information in the Atlas be accessible not just interactively but as downloadable datasets. This ensures that research and analysis can be conducted, and conservation practices improved.

We suggest following best practices guidelines put forth by the Federal Geographic Data Committee in the April 2021 Summary of Feedback for user community needs (<https://www.fgdc.gov/ngac>):

- **Ease of use:** Build a straightforward interface, with options to expand details.
- **Fit for use:** Clearly communicate data limitations and appropriate uses.
- **Provide a “recipe book”:** Offer short examples of use cases, real or hypothetical.

In addition, to include as many potential stakeholders as possible, we suggest investing in translated websites, linking to resources on spatial literacy, and offering technical support.

## Data Improvements

PAD-US has augmented, or laid the groundwork for, a wealth of information products and research studies. As frequent users and analysts of these data, we have identified potential improvements which could expand the dataset’s potential and applicability in a coordinated conservation effort. These improvements include those specifically stated in the *America the Beautiful* report—e.g., including Tribal Nations conservation and completing private conservation area identification—as well as the following:

- **Establishment date:** This variable is incomplete in the PAD-US Version 2.1, making it difficult to describe and evaluate conservation trends within and between individual states and regions. It is only through recording establishment dates and tracking change in conserved areas over time that progress toward the 30x30 goal can be measured and achieved.
- **Addressing overlapping management:** This issue of co-occurring areas with different attributes within the PAD-US dataset has been continually improved upon by the USGS team, and further refinement will serve to streamline and facilitate analyses by a broad user community. Legitimately overlapping areas (not erroneous) provide examples of protection partnerships and could be evaluated as models of co-management.
- **Enabling crowdsourcing for missing information:** Especially in private and otherwise non-federal conservation areas, local stakeholders and even easement holders could provide information through an online input feature on area attributes, such as major landscape changes, changes to access, and date of establishment. This would require verification and QA/QC processes, but could increase engagement and information quality, as similar models have done so in the field of citizen science.

## Conservation as a Continuum

### How can the Atlas reflect the meaningful conservation work already underway in America?

The *America the Beautiful* report highlights the need for better identification of conservation easements. We believe this is a critical piece of missing information in existing conservation databases. The National Conservation Easement Database (which is the primary source of private easement information in PAD-US) records fewer than half the public easements in existence and is often missing spatial information on the location of lands under easement. Such information is often not disclosed as a term of the easement. Without

this information, the Atlas will be unable to accurately and usefully reflect the “meaningful conservation work already underway in America.”

In our view, it is important that the Atlas only provide complete information on conservation activities, and not selectively tell conservation success stories. The Atlas should not ignore areas of the country where data are missing or incomplete, or where there is a lack of success stories. The purpose of the Atlas should be to measure conservation as completely and accurately as possible across the entire United States—and do so on an ongoing basis, so that trends can be monitored.

**What stewardship actions should be considered, in addition to permanent protections, to capture a more complete picture of conservation and restoration in America?**

Farmers, ranchers, and other landowners often undertake a range of best management practices to maintain and enhance ecological services from their lands. These practices may include maintaining riparian buffers, employing no-till farming practices, planting cover crops, and considering a range of silviculture practices that protect waterways and wetlands. In our view, while highly beneficial, it would be too difficult to measure and monitor these activities on an ongoing basis for purposes of an Atlas that is focused primarily on conservation. We would encourage the federal government to focus its attention primarily on protected lands and improve the information currently available by (1) increasing coverage of private conservation easements and (2) adding detail and information beyond simple acreage estimates and GAP Status codes (we elaborate on this point below).

We do believe that private lands that are conserved through limited-term contracts, such as in the USDA Conservation Reserve Program (CRP), should be included in the Atlas but maintained in a special, clearly delineated category so as not to be aggregated with permanently protected lands. The CRP has 15-year leases, and those lands should not be misunderstood as permanently protected.

The Atlas could be a good opportunity for highlighting lands that are not currently protected but have high conservation value. One example is lands designated by the Forest Stewardship Council. We also feel strongly that the Atlas should provide an opportunity to highlight green space areas and tree cover in urban and periurban communities, especially those in underserved and marginalized communities. If the Atlas is viewed as an interagency platform, then integrating such diverse datasets as the Urban Forest Inventory and Analysis Program of the USDA Forest Service would significantly expand the potential use and coverage of the Atlas. For all these lands, however, we reiterate our point at the beginning that the conservation goals and objectives be clearly articulated. Not all lands in all locations provide the broad suite of potential conservation benefits—recreation access, habitat, water quality, climate resilience, and so forth—in equal measure. The type of conservation values provided for these unprotected lands should be made clear in the Atlas.

**What are the attributes of lands and waters that should be included in the Atlas? Considerations could include, for example, a clearly defined geographic boundary, status of ecological function, representation of species and habitats, extent of disturbance, expected future risks from climate change or other human stressors, ecosystem connectivity, or durability of management status.**

To both establish a comprehensive conservation inventory and track progress toward a range of crucial conservation objectives, we suggest including the following information in the Atlas, either through primary data collection or linking to other sources:

- **Elaborating on protection levels and uses:** The GAP Status variable in the PAD-US database is widely used as a measure of protection stringency and even development regulations. However, these broad classes could be enhanced by being further broken down into additional classes describing known restrictions, regulations, and uses within an area (e.g., GAP Status 3 currently lists off-road vehicle travel and resource extraction as potential uses, which have very different impacts on natural areas). Enhanced protection level descriptions paired with complete dates of establishment can help describe the area’s natural state, history of disturbance, types of disturbance, economic activity, and recreational demand.
- **Identifying recreation opportunities:** Recreational use of public lands has been on the rise for several years, and the CDC has also acknowledged the role of outdoor recreation access in public health. As increasing access to outdoor recreation is a stated goal of the *America the Beautiful* Campaign, identifying areas explicitly established or maintained for recreational use will allow for measures of progress. Although PAD-US currently includes a binary “access” variable, it is unclear the extent to which these areas actually have accessible recreational attributes (trails, facilities, etc.).
- **Incorporating population levels:** Many indigenous people, land stewards, and other communities live on protected areas. We suggest providing some broad measure of these population levels to ensure that considerations such as displacement, infrastructure, and historic/cultural considerations can be readily flagged.
- **Linking to land cover:** The National Land Cover Dataset provides highly resolved information on the extent of natural and developed land cover in an area. Tabulating land cover area in delineated protected areas, especially over time, can describe the history and role of an area in the broader landscape and contribute to an understanding of habitat, ecology, carbon storage, and other benefits.
- **Linking to services:** The three problems listed by the *America the Beautiful* report (nature loss, climate change, and inequitable access to the outdoors) are crucial benchmarks of a coordinated conservation effort. To measure progress toward solutions, an inventory of currently protected and conserved lands and their benefits is needed as a baseline. Several databases with information on local ecosystem services and benefits exist, and should be spatially linked to the Atlas:
  - EnviroAtlas (biodiversity, recreation access, carbon sequestration, etc.) (EPA)
  - National Environmental Public Health Tracking Network Query Tool (community park proximity, among others)—CDC
  - Resilient and Connected Landscapes—The Nature Conservancy
  - EJSCREEN (identification of vulnerable communities exposed to high levels of air pollution and other environmental problems)—EPA
  - The Map of Biodiversity Importance—NatureServe
  - Sea Level Rise Viewer (lands affected by marsh migration under various sea level rise scenarios)—NOAA
  - Forests to Faucets (watershed value for drinking water)—USFS
- **Identifying land costs and development threats:** Where ecological and demographic information might address the “benefits” side of conservation, information on **opportunity costs** of conservation ([Land Values 2019 Summary \(usda.gov\)](https://www.usda.gov/land-values-2019-summary)) and **projected land use change** ([Land Cover Projections \(usgs.gov\)](https://www.usgs.gov/land-cover-projections)) in the surrounding area would enable more effective planning. These are important for addressing pitfalls/barriers to effective conservation planning such as unintentional sprawl by conservation of areas best suited for development (“leapfrogging”), and inefficient conservation activities in areas under little or no development pressure.

### **How can the Atlas best reflect the contributions of State, local, Tribal, territorial, and private lands?**

We suggest leveraging local conservation and land use plans to provide an interactive overlay of jurisdictional boundaries. More and more localities are moving to digitized, publicly available land use planning data, including delineation of priority development and conservation areas as well as local risks such as flooding and wildfire. These are important considerations in conservation planning, and critical to the core principle of “Support Locally Led and Locally Designed Conservation Efforts.” For example, the Maryland GreenPrint program contains a Parcel Evaluation Tool which “provides a Conservation Benefits and Ecosystem Service Assessment Report Card for every land parcel in Maryland.” Virginia’s Department of Conservation and Recreation has a Land Conservation Strategy, “ConserveVirginia.” Similar regional and state datasets can augment other data in the Atlas.

As the America the Beautiful report acknowledges, engaging with Tribal Nations on their current, planned, and considered conservation and land use plans is crucial. However, we also understand that some of their conservation areas may be sensitive historic/cultural assets, and privacy considerations should be prioritized when accounting for conserved area. Therefore, aggregated measures (e.g., total acres in a tribal area) should be published when appropriate.

## **Outcomes**

### **How can the Atlas best reflect land and water contributions to biodiversity, climate change mitigation and resilience, and equitable access to nature and its benefits?**

We offer several suggestions:

- Measure stewardship practices with respect to specific conservation goals, especially on private lands. We note that billions of dollars are spent on private land conservation by USDA and other agencies annually but tracking and reporting overall gains in conservation goals (e.g., water quality, habitat, soil health) could be improved.
- Provide information about levels and types of protections using a standard, reportable geospatial unit, for example HUC 8, which would include benchmarking and then show change over time.
- Assess protected areas across a range of dimensions (e.g., benefits/goals that they contribute to) including temporal and spatial dimensions. In addition, the incorporation of information on the same benefit provisions for non-protected areas would help identify current versus future priorities.

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