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**REQUEST FOR
INFORMATION TO
INFORM INTERAGENCY
EFFORTS TO DEVELOP
THE AMERICAN
CONSERVATION AND
STEWARDSHIP ATLAS**

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To:

Secretary Deb Haaland
Office of the Secretary
U.S. Department of the Interior

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Exercising the Delegated Authority of the
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ENVIRONMENTAL POLICY
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CENTER FOR
**GEOSPATIAL
SOLUTIONS**



EXECUTIVE SUMMARY

Traditionally, we have viewed environmental data as a static product and our ability to monitor conservation progress as a yearly exercise. There has been substantial progress in evolving processes and technologies that enable a paradigm shift from static to dynamic systems. This shift is critically needed in the government and nonprofit sectors so we can update and track environmental data and evaluate conservation status in real time.

It will be next to impossible to meet the goals set forth in America the Beautiful if we do not embrace a more modern and dynamic data and technology systems, and we will also lose a unique moment in time to create the infrastructure needed for cross-agency and partner collaboration for management and monitoring for conservation purposes. A more integrated system will make it easier to connect to and use data from other non-DOI agencies and partners to achieve multiple goals related to health, environmental justice and other positive outcomes for the American people. The development and long-term maintenance of the American Conservation and Stewardship Atlas (Atlas) is a ripe opportunity to embrace a modern, dynamic data infrastructure and we offer three targeted recommendations to realize it's potential:

- 1 Government does not need to own, deliver, or control the mechanisms by which basic environmental or climate data are collected, stored, and transmitted to users. Nor does the government doing so ensure long-term continuity or success.**
- 2 The Atlas is an inherently data-intensive initiative. We must invest in digital infrastructure modernization, adjust procurement processes, and prioritize hiring leadership that understands technology to maximize environmental stewardship.**
- 3 To meaningfully reflect the conservation work underway across the US, the Atlas needs to adopt and operationalize a set of definitions and monitoring techniques to inform more rapid and proactive environmental stewardship of a variety of landscapes.**

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Third party non-government partners are adept and experienced with the development, improvement, and dissemination of data sets that depend upon sophisticated technology and automated services to be useful. We strongly recommend that the America the Beautiful partnership include the development of digital infrastructure, data sharing agreements and a collaborative environment to leverage data development and aggregation services from trusted third-parties.

For example, agency staff frequently rely on Google or Apple maps for their work. These tools are private applications that integrate separate federal, state and local road data sets, construction data sets, and real-time user information (e.g. traffic) to provide a stable and successful service that has continuously evolved as technology has improved. Other examples include the National Conservation Easement Database managed by the Trust for Public Land and Ducks Unlimited, wildlife location data managed by the nonprofit NatureServe, and global forest data tools managed by the World Resources Institute that use data from public and private satellites. A government role does not ensure long-term continuity; what does is ensuring that the data and tools serve critical economic and community needs that are always in demand.



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Beyond the technical challenges of creating a shared system of accounting, attempting to centralize data collection and management within the federal government also runs the risk of creating a costly and ongoing task to essentially duplicate management tasks that are already being undertaken by organizations across the country. Identifying opportunities to standardize data collection at partner organizations by creating incentives for adopting a centralized data schema will likely create better outcomes and more timely data at a significantly lower overall cost.

A more formal national data and technology partnership between the government, NGOs and for-profit companies will strengthen the field at large by breaking down data and tool silos that exist and pooling efforts and investments for maximum efficiency, accountability, transparency that will help us increase the pace and scale of conservation and positive environmental impact.

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A critical capacity gap persists for environmental agencies: across governmental agencies that work on conservation, climate, wildlife, environmental justice and water, the primary technology focus is in core administrative work such as human resources and financial accounting, and not on program delivery. Agencies could recognize significant efficiencies and better actions based on shared data-informed insights by investing in shared data and technology systems. Environmental agencies' programmatic staffing is fragmented and lacks seniority in agency hierarchies. This lack of programmatically tailored technology staffing means that the White House and agency staff often rely on out-of-date information, operate in unnecessary silos, and/or suffer from an inability to collaborate due to an absence of a common digital infrastructure.

The Atlas necessitates increased investments to support the development and expansion of environmental data collection and innovative tool development. The fundamental conditions that should be imposed on any of those investments are not government ownership, but the principles of Findability, Accessibility, Interoperability, and Reuse that have been widely used around the world since 2016 for government and non-government investments in technology.



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Strengthening the digital foundations for environmental agencies would also have significant benefits for working with external partners. For example, agencies could both improve the procurement process for concrete data needs and streamline the process for reviewing and leveraging third-party data sets. One potential pathway for this would be creating RFPs or RFIs around specific data sets that the private sector could then provide. This would allow the agencies to set clear parameters and control the quality of external datasets, while also taking advantage of private sector innovation. Data flow and requirements will be a two-way process and will result in improved agency and public-sector data for all to use.

Lastly, the America the Beautiful and the Atlas pose a unique opportunity as many programs across differing agencies have overlapping sets of data and technology infrastructure needs, but currently operate largely without being able to effectively collaborate. All Department of Interior agencies should invest in hiring technology leaders in program - not operations - roles at agencies. Such leadership within the agencies would catalyze the design and management of necessary digital infrastructure and technology adoption, and build competencies across agencies to bolster the longevity and scale of these solutions. To support the development of the Atlas, environmental agencies should focus on recruiting outside experts who have significant technology management experience and are given roles that are focused on partnerships, collaboration, and contracting with third parties for data and technology tools, not government development of them.

Investments are needed in leadership at environmental agencies with strong data and digital infrastructure competencies, as well as upgrades to digital infrastructure for cross-agency collaboration of environmental data and conservation status.

3 Expanding the definitions of what is counted towards our national conservation goals and using established technologies that enable real-time environmental quality monitoring for key indicators will allow for a more accurate accounting of conservation in the United States. To meaningfully reflect the conservation work underway across the US, the Atlas needs to adopt and operationalize a set of definitions and monitoring techniques to inform more rapid and proactive environmental stewardship of a variety of landscapes.

Currently, PAD-US defines conserved lands by the GAP 1 and 2 status definition. This leaves out over a quarter of the country already in the GAP status 3 and 4 categories plus other public and privately owned and managed conservation lands that serve a conservation purpose but aren't formally recognized as contributors. Leaders and practitioners need to convene to create a set of definitions that better reflect the spectrum that sustainable land management can entail and identify new protocols for defining and counting lands that are currently not included but play a critical role in our conservation goals. With a changing climate, social and political threats and other pressures, we need to adopt a more expansive and integrative approach to classify and count lands that are important to both people and nature for conservation and resilience. Increasing the amount of durable conservation on the ground may require counting land that has been restored and/or is actively managed and stewarded in addition to placing additional acres under permanent protection.

In addition to more broadly defining what "counts" towards conservation, we also have the ability to take advantage of new tools that move conservation accounting from a static to dynamic process. This will be imperative as we find ways to better count the contributions that working lands provide. Currently, most agencies rely on yearly field visits to inform stewardship efforts and datasets may only be standardized and combined annually. This is costly, inefficient, and not necessary given the advances in remote sensing technologies and reporting capabilities. By standardizing and operationalizing new technology approaches like this, we can save tax dollars by targeting interventions more effectively, opening up much needed time for staff to focus on implementation, and counting conserved land based on how it's being managed. Satellites and mobile devices can allow for more dynamic monitoring for threats, critical land and water use changes, and the health and quality of natural resources.

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Changes to our communities and landscapes are happening on an increasingly accelerated time frame and as managers, practitioners, decision-makers and implementers, we need the best and most up to date data and technology systems to respond. The environmental data and process for evaluating conservation status need to be managed as dynamic systems because conservation priorities and decision making is adapting on a daily basis as agencies and local partners respond to and review new environmental challenges.

USGS will undoubtedly encounter challenges when coordinating the Atlas across agencies. The NGO and private sector should be consulted to provide best-in-class services to help agencies build and manage the integration tools and processes to ensure the Atlas is current and comprehensively reflect inter-agency plans and programmatic goals.

We need to adopt a more expansive and integrative approach to classify land conservation, and utilize more advanced technologies to evaluate the quality of conserved lands.

