

GAP Stewardship Program Goals and Protected Areas Database of the United States (PAD-US) Updates

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Protected areas are an essential component of the international effort to conserve biodiversity. These lands protect vital ecosystems and species. However, because they are owned and managed by a wide variety of federal, state and local agencies, non-profit organizations and even private individuals; it has been difficult to develop a clear picture of how much land is actually being saved. Creating a complete, current and accurate inventory of U.S. protected areas supports critical efforts to conserve biodiversity, improves strategic land acquisition, broadens public access to information on recreation, strengthens regional and multi-state collaboration, and builds a greater capacity for evaluating and defining open space protection accomplishments.

Accurate land stewardship information is also fundamental to achieving the USGS Gap Analysis Program's (GAP) goal of keeping common species common by identifying those species and plant communities not adequately represented in existing conservation lands. Unfortunately, disjointed sources of boundary information and changing management directives make it difficult to compile and maintain a comprehensive stewardship database. GAP is continually challenged to standardize and aggregate new information in a timely fashion.

In April, 2008, GAP and the Doris Duke Foundation funded the PAD-US Design Project to develop an overall strategy for improving protected land inventories in the United States. More information about this strategy is in the report, "A Map for the Future," published in July 2009 and available for download at www.protectedlands.net. As called for in the PAD-US design report, efforts have been made to expand federal funding available for implementing major improvements to data inventories. While current federal budget challenges have resulted in no immediate action, interest in improving the inventory of U.S. protected areas remains strong. The lack of expanded fund-

ing, however, means that substantial work on the project must be deferred.

Goals

GAP Stewardship Program goals for 2010 were generally focused on improving coordination with partners and increasing database management efficiency in order to provide more timely updates. We plan to continue publication of frequent database updates while implementing the primary recommendations summarized in "A Map for the Future."

Following the PAD-US Design Project our goals for 2011 are to:

- ◆ Improve federal agency coordination to increase the efficiency of data maintenance and to facilitate wider adoption of the data by federal managers.
- ◆ Support state efforts to greatly improve their data inventories and apply PAD-US standards
- ◆ Pilot proposed changes to database structure and content, including an assessment of user preferences and efficiencies gained.

Accomplishments

GAP's primary accomplishments in 2010 were:

- 1) Published PAD-US version 1.1. Updates to PAD-US version 1.1 follow standards to retain boundaries and attributes 'as is' from the data source (with duplicate records removed), which may include some overlaps in ownership and missing attribute information like parcel names. Significant effort was placed

into the reorganization, standardization and complete attribution of fields in the PAD-US schema. GAP made several primary updates between PAD-US versions 1 (April 2009) and 1.1 (May 2010), including:

- a) The northwest states (WA, OR, ID, WY, MT, CA) were updated in partnership with the BLM, USFS, GreenInfo Network and TNC's Washington and Wyoming field offices.
 - b) The northeast states (ME, VT, NH, MA, CT, RI, NY, NJ, DE, PA, OH, WV, MD, VA) were updated in partnership with The Nature Conservancy's Eastern Regional Office.
 - c) A complete national update from The Nature Conservancy's Conservation Data Information Systems (CDIS) Unit included nature preserves and publicly available conservation easements.
 - d) Development of a new core attribute schema with "Category" (Fee or Easement parcel), "Manager Name", "Secondary Designation Name" and "Status" (Designated or Proposed site) to complement existing fields in PAD-US version 1 such as "Owner Type", "Owner Name" and "Primary Designation Type".
 - e) IUCN Category conservation measures were updated. USGS GAP is the official source of IUCN Categories and GAP Status Codes.
- 2) Worked directly with UNEP-World Conservation Monitoring Center (WCMC) to incorporate IUCN categorized protected areas from PAD-US version 1.1 into the World Database for Protected Areas (WDPA) and increase the efficiency of annual updates.
 - 3) Reclassified the status of state data inventories to prioritize partnership efforts, starting with Tier 1 and Tier 2 states. Classification definitions are:
 - a) Tier 1: a state that is in the best position, relative to other states, to contin-

ually provide the data necessary for the success of PAD-US. States included in reliable regional datasets are Tier 2 due to the current challenge of integrating large regional data into PAD-US.

- b) Tier 2: a state whose data is reliable but needs revision, or collaboration among several data stewards, to fit properly into the PAD-US data set.
 - c) Tier 3: a state with some or little data, generally disaggregated and difficult to integrate into PAD-US.
- 4) Identified additional State Data Stewards, Data Coordinators or Data Contributors across the US and began developing these partnerships with the goal of improving state data inventories and use of PAD-US standards to increase the efficiency of future updates and provide capacity for local review. Roles are defined as:
 - a. Data Steward: The entity generally recognized by the state as the aggregated source for state data. Can be a federal/state agency, university or NGO with a presence in the state and substantial resources to maintain protected areas data for the state in a manner easily consumed by PAD-US.
 - b. Data Coordinator: The entity that collaborates with multiple state agencies to develop an aggregated state dataset following PAD-US standards.
 - c) Data Contributor: The landowner or management entity with independent data of varied extent or quality. These are the sources the coordinators or stewards compile.

We expect eight cooperative agreements with state entities to be in place by the end of September to jump start this work and hope to provide similar resources to other stewards each year. Several additional state entities or NGO's are voluntarily providing state data in accordance with PAD-US standards. Coordinators or Stewards have been confirmed in: Arizona, California, Colorado, Connecticut, Delaware, Florida, Hawaii, Idaho, Illinois, Indiana, Maine, Maryland, Massachusetts,

Michigan, Missouri, Montana, New Hampshire, New Jersey, New Mexico, New York, Ohio, Oregon, Pennsylvania, Puerto Rico, Rhode Island, Vermont, Virginia, Washington, West Virginia and Wisconsin.

- 5) Refined Master Stewardship List (MSL) of management designations for the nation and reassigned conservation measures (categorically assigned default GAP Status Codes and IUCN categories). This work is in review; additional reviewers are welcome.

Goals for the Upcoming Year

In general, GAP will continue to implement recommendations following the PAD-US Design

Project (2008-2009) as summarized in, “A Map for the Future”. Efforts include:

- 1) Current work on a significant federal lands update for PAD-US version 1.2, expected November 2010, with the Department of Defense (DOD), the National Parks Service (NPS), the Bureau of Land Management’s National Landscape Conservation System (NLCS) and NOAA Marine Protected Areas. Emphasis is placed on improving work flow between federal agency data updates and their aggregation into PAD-US. In addition, PAD-US version 1.2 will include additional US Territory updates such as Puerto Rico, the Virgin Islands and the Pacific Islands.

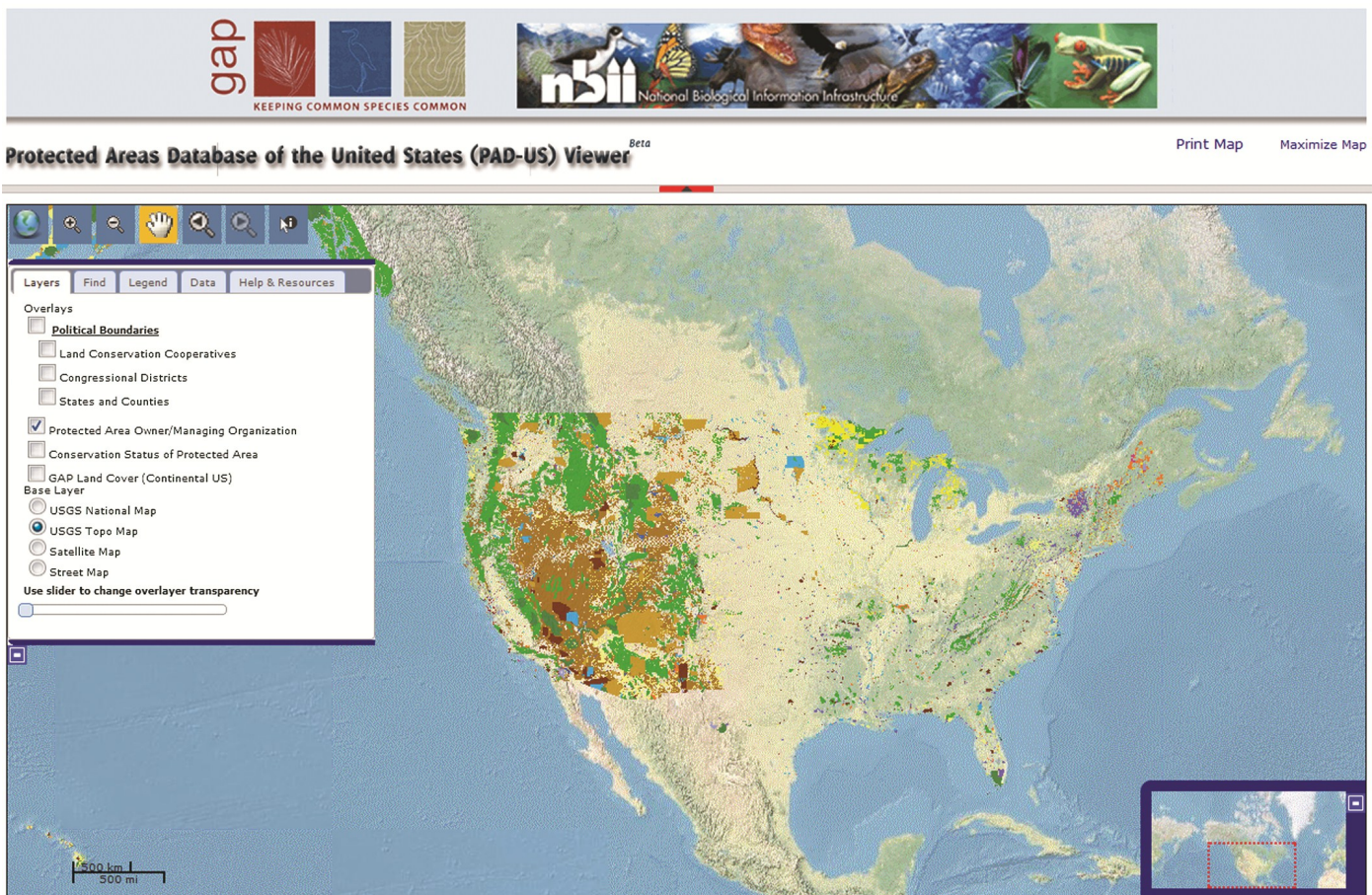


Figure 1. The Protected Areas Database Viewer facilitates exploration and use of GAP’s protected areas data.

- 2) Follow federal lands PAD-US update with a state data update in Summer 2011 building on cooperative agreements and other partnerships developed. Continue to identify and develop future data stewards.
- 3) Continue to test the implementation of a new PAD-US data structure, including multiple feature classes such as: Fee, Designations, and Easements with content organized as subtypes with applicable topology rules.

Outreach

A redesigned PAD-US viewer presented PAD-US version 1.1 to the public in May 2010. New functions, such as the ability to query by owner or designation were added. In addition, a layer showing land conservation cooperative units and a USGS national map layer were added. Once completed, the redesign made the application easier to navigate. The site continues to be popular with visitors from each state, numerous federal, state and local government personnel, private companies, educational institutions and foreign countries.