

GEOHERITAGE

GSA members are invited to submit comments and suggestions regarding the following *Position Statement draft* by **16 May 2011** at www.geosociety.org/geopolicy/. Go to www.geosociety.org/positions/ to learn more.

Position Statement: The Geological Society of America (GSA) supports the conservation of geoh heritage sites to meet present and future educational, scientific, aesthetic, cultural, and economic needs.

Purpose: This position statement (1) summarizes the consensus views of GSA on the conservation of geoh heritage sites; (2) describes what geoh heritage sites are and why they are important; (3) endorses U.S. participation in the Global Network of National Geoparks supported by UNESCO; and (4) advocates development of partnerships and strategies for conserving geoh heritage sites.

RATIONALE

“Geoh heritage” is a generic but descriptive term applied to sites or areas of geologic features with significant scientific, educational, cultural, or aesthetic value. *Scientifically and educationally significant geoh heritage sites* include those with textbook geologic features and landscapes, distinctive rock or mineral types, unique or unusual fossils, or other geologic characteristics that are significant to education and research. *Culturally significant geoh heritage sites* are places where geologic features or landscapes played a role in cultural or historical events. *Aesthetically significant geoh heritage sites* include landscapes that are visually appealing because of their geologic features or processes. Many geoh heritage sites can be tourist destinations and provide local and regional economic benefits.

Geoh heritage sites serve the public interest. Such sites are critical to advancing knowledge about natural hazards, groundwater supply, soil processes, climate and environmental changes, evolution of life, mineral and energy supplies, and other aspects of the nature and history of Earth. Such sites have high potential for scientific studies, use as outdoor classrooms, enhancing public understanding of science, recreation, and economic support to local communities.

Geoh heritage sites can be small but scientifically significant sites, such as a road cut, or named and managed sites of a few acres, such as Boiling Springs (a groundwater site of two acres in Cumberland County, Pennsylvania, USA). Geoh heritage sites can also be extensive areas with international recognition, such as the Grand Canyon (Arizona, USA) and Yellowstone

National Park (Wyoming, USA). Geoh heritage sites may be on privately owned land, on land in public ownership ranging from municipalities to the federal government, or on land of mixed ownership. Large or small, and regardless of ownership, many are vulnerable to urbanization, infrastructure development, agriculture, over-use, or erosion. Conservation strategies appropriate to the type of site and nature of ownership are important to protect geoh heritage sites from loss and maintain them for the long-term public interest.

PUBLIC POLICY ASPECTS

Geoh heritage sites in the United States include officially designated sites and areas with a high level of distinct conservation management, such as National Parks, National Monuments, World Heritage Sites, National Historic Landmarks, and National Natural Landmarks. Many of these areas were designated because of their special geologic features, geologic history, or a unique combination of both. Federal land management agencies, such as the National Park Service (NPS), Bureau of Land Management (BLM), and U.S. Forest Service, manage these sites to conserve their special features and characteristics for future generations. Through the public land management planning process, federal land management agencies also designate and apply conservation management objectives to other significant sites that in many cases have values related to geology.

Some geoh heritage sites, including those that may span different types of land ownership, are particularly significant based on unique and outstanding geologic characteristics and cultural history. Such sites may be suitable for inclusion in the Global Network of National Geoparks, supported by UNESCO. “Geopark” is an international designation serving to integrate the preservation of significant examples of geologic heritage within a strategy for sustainable and cultural development at a regional scale. None of the 77 Geoparks designated worldwide are in the United States. Geoh heritage sites with Geopark designation provide opportunities for geotourism, interpretation, research, connecting people to the landscape, and sustaining local economies¹.

Partnerships among state agencies, counties, municipalities, non-profit organizations, businesses, and other private parties can lead to innovative approaches to conserving geoh heritage sites on other types of publicly owned lands and, in some cases, private lands. Such efforts will ensure that even small geoh heritage sites can be preserved in perpetuity and managed for the use, enjoyment, and scientific advancement of future generations. Geoh heritage conservation efforts can also result in a sustainable source of tourism income for communities.

¹Hill, Wesley, 2010, UNESCO’s Geoparks Initiative—Education, Conservation, Geotourism: Geological Society of America Abstracts with Programs, v. 42, no. 5, p. 662.



Horseshoe Bend, Colorado River, USA.

RECOMMENDATIONS

- *Recognize and support designation and appropriate management of geoh heritage sites.* By definition, all sites with some sort of geoh heritage designation have scientific, educational, aesthetic, or cultural value based on geologic characteristics. All such sites are not only scientifically important, but also offer the potential for supporting local and regional economies through tourism. Governing bodies, particularly those at a local level, can play a key role in conserving geoh heritage sites for the public benefit.
- *Encourage collaboration and partnerships to identify, designate, and manage geoh heritage sites.* Collaboration among the geologic community, local and regional governments, and private interests can be most effective in promoting appropriate designations and management strategies for both existing geoh heritage sites and areas in need of geoh heritage designation and management. Partnerships will ensure that designation and management of geoh heritage sites benefit both the broader community and a variety of interests and needs.
- *Support U.S. participation in UNESCO's Global Network of National Geoparks.* The formation of a U.S. National Committee for Geoparks under the auspices of the U.S. National Commission for UNESCO will further U.S. participation in the Geoparks network. In addition, the development of U.S. guidelines for Geoparks applications involving appropriate public and private interests will help streamline the application process and enhance the potential for U.S. Geopark designations. Geopark status not only ensures conservation of significant geologic features, but also gains worldwide recognition and provides scientific, educational, economic, and cultural benefits to local communities.
- *Respect and honor the needs and interests of private landowners with special geologic features on their land.* All or parts of some geoh heritage sites may be on private

land. GSA and its membership recognize and respect the autonomy of private land owners. All actions taken in response to this position statement must fully and respectfully accommodate the rights and desires of private land owners.

OPPORTUNITIES FOR GSA AND GSA MEMBERS TO HELP IMPLEMENT RECOMMENDATIONS

To facilitate implementation of the goals of this position statement, The Geological Society of America recommends that its members take the following actions:

- *Seek opportunities to communicate the value of geoh heritage sites to decision makers and the public.* Legislative bodies, government agencies, private developers, economic development corporations, professional land-use planners, chambers of commerce, professional forums, town hall meetings, and community groups all provide avenues for expanding knowledge of the value of geoh heritage sites. Use examples of how management of a geoh heritage site has added value to land-use planning, advanced understanding of geologic processes and potential for hazards, and/or contributed to economic growth. Use examples of how overlooking geoh heritage has resulted in costly and damaging land use, devastating consequences of natural disasters, or loss of tourist and tax revenues. An informed public can be a powerful force in identifying and designating geoh heritage sites and collaborating on long-term management strategies.
- *Initiate designation of or management strategies for a site in need of preservation.* Identify other parties that may benefit from designation of a site or enhanced management of an existing designated site. Promote collaboration and partnerships for determining appropriate designation (e.g., from local park to Geopark), developing management objectives, and sharing costs. Identify benefits for various interests, such

as the educational value for local secondary schools, research value for the geologic community or local planners, aesthetic value for outdoor enthusiasts, and economic value through tourism and local users.

- *Utilize print, electronic, and broadcast media in promoting the value of geoh heritage designations.* When appropriately utilized, the media are effective and efficient communication tools in addressing critical issues associated with geoh heritage conservation. If you are uncertain about how to make contact and work with the media, seek assistance and advice from other GSA members with that experience.
- *Be alert to local, state, and federal legislation and policy development relevant to geoh heritage or for designation of specific sites.* Get involved by offering expert assistance, commenting, contacting decision makers, sharing this position paper, or soliciting additional expertise. Seek advice from and share information about geoh heritage with GSA's Geology and Public Policy Committee (GPPC), GSA's Geology and Society Division, and GSA's Director for Geoscience Policy in Washington D.C.
- *Propose symposia, technical sessions, and workshops on geoh heritage issues at GSA Annual and Sectional meetings.* Sharing experiences, successes, and challenges with geoh heritage designations and management will help others in the geoscience community be more effective in their efforts to preserve geoh heritage sites for future generations.

- *Develop educational materials about geoh heritage.* Descriptive and explanatory documents, including drawings and pictures, would be helpful to interested parties for handouts, signage, websites, field trips, and communicating with decision and policy makers, and site managers.

REFERENCES AND RESOURCES

- Earth Sciences for Society, <http://www.unesco.org/new/en/natural-sciences/environment/earth-sciences/geoparks/>. This UNESCO site defines Geoparks and provides links to related information.
- Geoh heritage, Springer.com, <http://www.springer.com/earth+sciences+and+geography/geology/journal/12371>. This journal covers all aspects of geoh heritage and its protection.
- Global Geoparks Network, http://portal.unesco.org/science/en/ev.php-URL_ID=7384&URL_DO=DO_TOPIC&URL_SECTION=201.html. This site provides a link (English or French) to a 6-page brochure defining "Geopark," describing the Global Geoparks Network, explaining the relationship between the Global Geoparks Network and UNESCO, and laying out a strategy for geoconservation in the context of regional economic and cultural development.
- Global Network of National Geoparks (assisted by UNESCO), <http://www.globalgeopark.org/publish/portal1/tab59/>. This site provides a definition of "Geoparks," lists members of the Geoparks Network, provides information about and photos of the 77 designated Geoparks worldwide, and offers news about Geoparks.
- Join the Geoh heritage Movement, About.com:Geology, http://geology.about.com/od/geoh heritage/Join_the_Geoh heritage_Movement.htm. This site features articles (links) about geoh heritage, geoh heritage sites, geoconservation, world heritage sites, Geoparks, and geology-related forums.

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