America's Geoheritage: Identifying, Developing, and Preserving America's Natural Legacy

Distinguished Speaker Webinar Series, Fall 2020




Geoheritage Management on Federal Lands
Tuesday, September 22; 11 am ET/8 am PT

"US National Park Service Inititatives to Promote Geologic Heritage and Geodiversity in 2020" — **Tim Connors (NPS)** (far left)

"Preserving America's Paleontological Heritage within the U.S. National Park System" — **Vince Santucci (NPS)** (center left)

"Stories in Stone: Geologic Features of our National Forests and Grasslands" — **Tim Stroope (USDA Forest Service)** (center right)

"Geoheritage on Bureau of Land Management Lands" — **Gregory McDonald (BLM)** (far right)

Register here: https://www.nationalacademies.org/event/09-22-2020/geoheritage-management-on-federal-lands

Organized by:

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U.S. National Committee for Geological Sciences
The National Academies of
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Sponsored by American Association of State Geologists, American Geosciences Institute, Geological Society of America, National Association of Geoscience Teachers, National Earth Science Teachers Association, National Park Service, U.S. Geological Survey.
Supported by the National Science Foundation.
For more information on additional webinars: https://www.nationalacademies.org/our-work/americas-geoheritage-initiative-2020-2021

Presenters

U.S. National Park Service Initiatives to Promote Geologic Heritage and Geodiversity in 2020

Timothy Connors
NPS

Tim is with the U.S. National Park Service, Natural Resource Science and Stewardship Directorate, Geologic Resources Division in Lakewood, CO. He develops digital GIS-based geologic maps and supports databases on the unique geologic features and issues of park areas.

Preserving America's Paleontological Heritage within the U.S. National Park System

Vincent Santucci
NPS

Vince is the Senior Paleontologist and Paleontology Program Coordinator for the U.S. National Park Service. He is a leader in paleontological resource management, education, and stewardship, publishing over 200 articles and reports related to NPS paleontology.

Stories in Stone: Geologic Features of our National Forests and Grasslands

Tim Stroope
USDA

Tim is a hydrogeologist with the USDA Forest Service's National Groundwater Program. He provides project level assistance, outreach and training for all things groundwater related.

Geoheritage on Bureau of Land Management Lands

Greg McDonald
BLM

Greg is a regional paleontologist for the Bureau of Land Management, with special interests in vertebrate paleontology. Prior to the BLM, he served in multiple positions with the National Park Service.

America's GeoHeritage Initiative, 2020-2021

GeoHeritage Management on Federal Lands

U.S. National Park Service Initiatives to Promote Geologic Heritage and Geodiversity in 2020

Tim Connors
Tim_Connors@nps.gov
U.S. National Park Service
Natural Resource Stewardship and Science
Geologic Resources Division
12795 West Alameda Parkway, Denver, CO 80225

Numerous National Park Service Conservation Assistance Programs (National Heritage Areas (NHAs), National Natural Landmarks (NNLs)), and World Heritage Site programs can help promote Geoheritage and Geodiversity initiatives.

Preservation partnerships are likely to be successful when a bottom-up approach is used, and grassroots organizations are the major proponents of promoting a specific geologic heritage area.

This presentation will discuss these mechanisms, supply URLs and NPS contacts and bring awareness to these initiatives.

Bio Sketch

Timothy B. Connors is a Geologist with the U.S. National Park Service, Natural Resource Science and Stewardship Directorate, Geologic Resources Division in Lakewood, Colorado and has been with them since 1998.

His main duties have involved developing digital GIS-based geologic maps of US National Park areas, as well as supporting databases on the unique geologic features, issues and processes of these park areas. He is very active in promoting the concept of Geologic Heritage Conservation and promoting areas rich in geologic features. He has worked in park areas in Alaska, Hawaii, Virgin Islands, and the whole lower 48 states, allowing him to become quite familiar with numerous geologic terranes, processes and features of this planet.

He served on the Board of Directors for "The Friends of Dinosaur Ridge" in Morrison, Colorado, a local non-profit that supports the Morrison-Golden Fossil Areas National Natural Landmark from 1999-2014. He has taught geology courses at the University of Colorado (Denver) and Red Rocks Community College (Lakewood, Colorado).

He earned both Bachelor of Science (1991) and Master of Science (1996) degrees in Geology from the University of Toledo (Ohio).

National Park Service (NPS)

The National Park Service preserves unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education, and inspiration of this and future generations

The Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.

Geologic Resources Division (GRD)

- assists the National Park Service and Partners in the servicewide coordination, support, and guidance necessary to understand and implement science-informed stewardship of geologic and associated park resources;
- reduce impacts from energy, mineral, and other development; and
- Protect visitor values

Existing NPS Designations

- **420** National Park Service Units
  (*Eisenhower just added September 18, 2020*)

Dwight D. Eisenhower Memorial Joins the National Park System

AGENCY UPDATES | NPS MEDIA TEAM | SEPTEMBER 18, 2020

The National Park Service formally welcomed the Dwight D. Eisenhower Memorial as America's 420th unit of the National Park System on Sept. 18, 2020. The memorial honors Eisenhower's legacy as the World War II Supreme Allied Commander and nation's 34th president.

"As the commanding general in World War II, Dwight Eisenhower forever changed the course of human history in leading the United States to victory. After being persuaded to run for President a few years after the war, he was a transformational leader, peacemaker, rebuilder, civil rights advocate and fiscal hawk who helped make our country a beacon of freedom and hope for the world," **said Secretary of the Interior David L. Bernhardt.** "As the stewards of our nation's monuments, memorials and historical sites, we enthusiastically welcome the Eisenhower Memorial to the National Park System as our 420th unit. We will forever tell the inspiring story of President Eisenhower and his unparalleled legacy through this iconic memorial in Washington D.C."

"As our nation commemorates the 75th anniversary of the end of World War II, we are pleased to welcome the Eisenhower Memorial to the National Mall," **said Margaret Everson, Counselor to the Secretary, exercising the delegated authority of the NPS Director.** "In addition to honoring Eisenhower's presidential legacy, this memorial recognizes his significant contributions to the Second World War and joins a nationally significant group of parks, monuments, and memorials that help tell these stories and will be protected for the enjoyment of generations to come."

Designed by architect Frank Gehry, the memorial features three bronze statues of Eisenhower by sculptor Sergey Eylanbekov, one featuring General Eisenhower with troops from the 101st Airborne the day before the invasion of Normandy, another sculpture depicting President Eisenhower in the White House surrounded by civilian and military advisors, and a third portraying "Little Ike" in his boyhood.

The stone bas-relief images and inscription panels highlight passages from notable Eisenhower addresses and give context to the memorial's sculptures. Framing the entire memorial is a first-of-its-kind stainless steel woven tapestry by artist Tomas Osinski, which depicts the cliffs at Pointe du Hoc on the Normandy coastline.

The memorial is located in a newly created, four-acre public park along Independence Avenue SW between 4th Street SW and 6th Street SW, across from the Smithsonian National Air and Space Museum. The site is surrounded by several federal agencies that have roots in the Eisenhower administration, including the Department of Education; Department of Health and Human Services (formerly Health, Education and Welfare); Department of Transportation; Federal Aviation Administration; NASA and Voice of America.

"Commemorating both Dwight D. Eisenhower's role as Allied Supreme Commander during World War II and 34th President of the United States, this memorial takes its rightful place among the National Mall's memorials that pay tribute to great American figures and military achievements," **said National Mall and Memorial Parks Superintendent Jeff Reinbold.** "The National Park Service is honored to serve as the keeper of America's story, and to care for this incredible venue from which to honor Eisenhower and his unique achievements in service to America."

The Dwight D. Eisenhower Memorial is administered as part of the NPS's National Mall and Memorial Parks and is open to the public 24 hours a day, seven days a week. NPS rangers provide programs for visitors and answer questions. For more information and photographs of the new memorial, visit http://www.nps.gov/ddem .

NPS Designations. . ...420 NPS Units

- National Battlefield - National Battlefield Park - National Battlefield Site
- National Cemetery
- National Historical Park and Preserve
- National Historical Reserve - National Historic Site
- National Lakeshore
- National Memorial
- National Monument
- National Military Park
- National Park
- National Preserve
- National River
- National Recreation Area
- National Recreation River
- National River and Recreation Area
- National Reserve
- National Seashore
- National Scenic River/Riverway
- National Scenic Trail

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- National River
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- National Recreation River
- National River and Recreation Area
- National Reserve
- National Seashore
- National Scenic River/Riverway
- National Scenic Trail

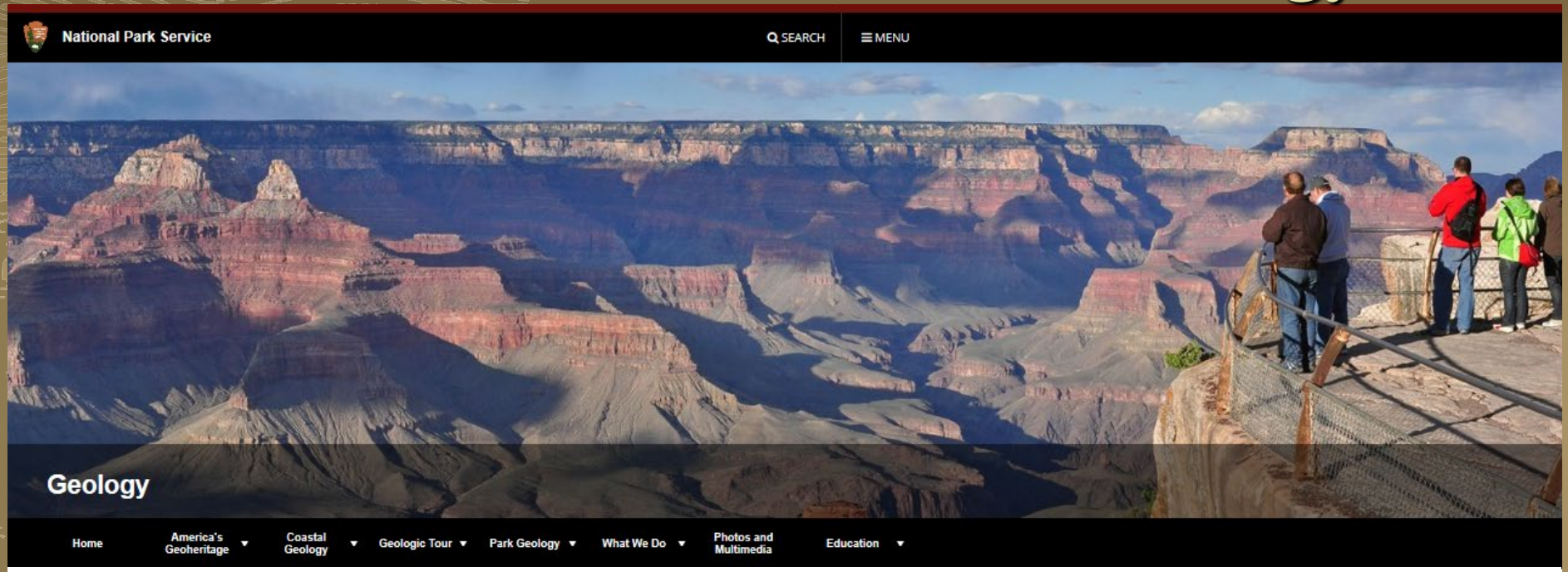
GEOLOGIC HERITAGE IS CAPTURED IN MANY OF THESE DESIGNATIONS

https://www.nps.gov/carto/app/#!/maps/alphacode/NPS

https://www.nps.gov/carto/hfc/carto/media/NPSmap2.pdf

EXPERIENCE YOUR AMERICA

National Park Service Geology



America's Geologic Legacy

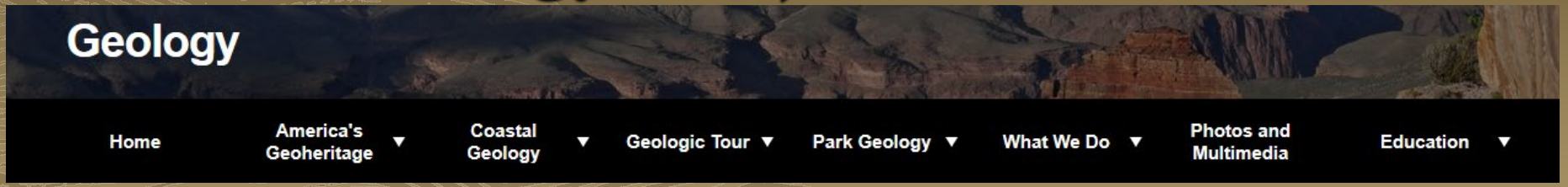
Come and explore the world's most magnificent rock collection—your National Parks.

The science of geology will help you to better understand park scenery and Earth systems.
The National Park Service uses science-based conservation methods to ensure that geologic features and systems are protected and remain as a legacy for future generations.

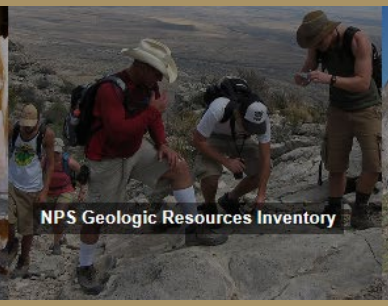
But, our treasured geologic sites need everyone's help and respect—most have developed through natural processes over millions of years and are irreplaceable. Learn about geology, visit the parks, and discover your Geologic Heritage.

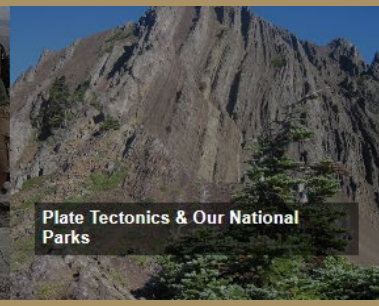
https://www.nps.gov/subjects/geology/index.htm

NPS Geology Subject Sites



- America's Geoheritage
- Coastal Geology
- Geologic Tour
- Park Geology
- What We Do
- Photos & Multimedia
- Education
- Conserving Abiotic Nature: Geodiversity
- Discover America's Geoheritage
- NPS Geologic Resources Inventory
- Plate Tectonics and Our National Parks





NPS Geology Subject Sites (continued)

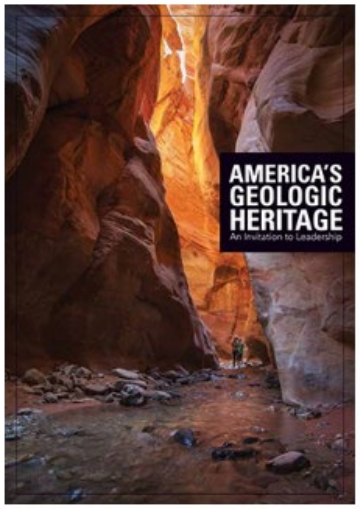
- Geologic Tour
- Park Landforms
- Geologic Wonders
- NPS Geodiversity Atlas
- Rocks and Minerals

America's Geoheritage

Our Shared Geoheritage

In 2015, the National Park Service's Geologic Resources Division staff in cooperation with the American Geosciences Institute published a booklet introducing the American experience with geoheritage, geodiversity, and geoconservation: "America's Geologic Heritage: An Invitation to Leadership". This publication introduces key principles and concepts of America's geoheritage which are the focus of ongoing collaboration and cooperation on geologic conservation in the United States.

- Download America's Geologic Heritage: An Invitation to Leadership [PDF 3MB]
  Note: Available for download from an American Geosciences Institute webpage.
  (File removed from this NPS site—email us to request a PDF or print copy.)



Examples of Geoheritage Sites

A wide range of diversity can be seen in the natural, cultural, and historic resources within geoheritage sites. To get an idea of the types of geoheratage sites we have designated, see Geoheritage Sites—Examples on Public Lands, Natural Landmarks, Heritage Areas, and The National Register of Historic Places.

encompasses significant geologic features, landforms, and landscapes characteristic of our Nation which are preserved for the full range of values that society places on them

sites are conserved so that their lessons and beauty will remain as a legacy for future generations

great potential for scientific studies, use as outdoor classrooms, and enhancing public understanding and enjoyment.

fundamental to understanding dynamic earth systems, succession and diversity of life, climatic changes over time, evolution of landforms, and the origin of mineral deposits

https://www.nps.gov/subjects/geology/americas-geoheritage.htm

America's Geoheritage: Identifying, Developing, and Preserving America's Natural Legacy

Distinguished Speaker Webinar Series, Fall 2020



A Survey of Geoheritage Initiatives in the U.S.

Tuesday, September 15; 11 am ET/8 am PT

"Geoheritage in the United States" — **Tom Casadevall (USGS)** (left)

"America's Geologic Heritage: An Invitation to Leadership" — **Tim Connors (NPS)** (center)

"Geoheritage and UNESCO Global Geoparks: International Cooperation and Initiatives" — **Asier Hilario (IUGS Geoheritage Commission)** (right)

Register here: https://nasem.zoom.us/webinar/register/WN_1XqPJNGaSUunq1D7VXm0Lg

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Board on International Scientific Organizations
U.S. National Committee for Geological Sciences
The National Academies of
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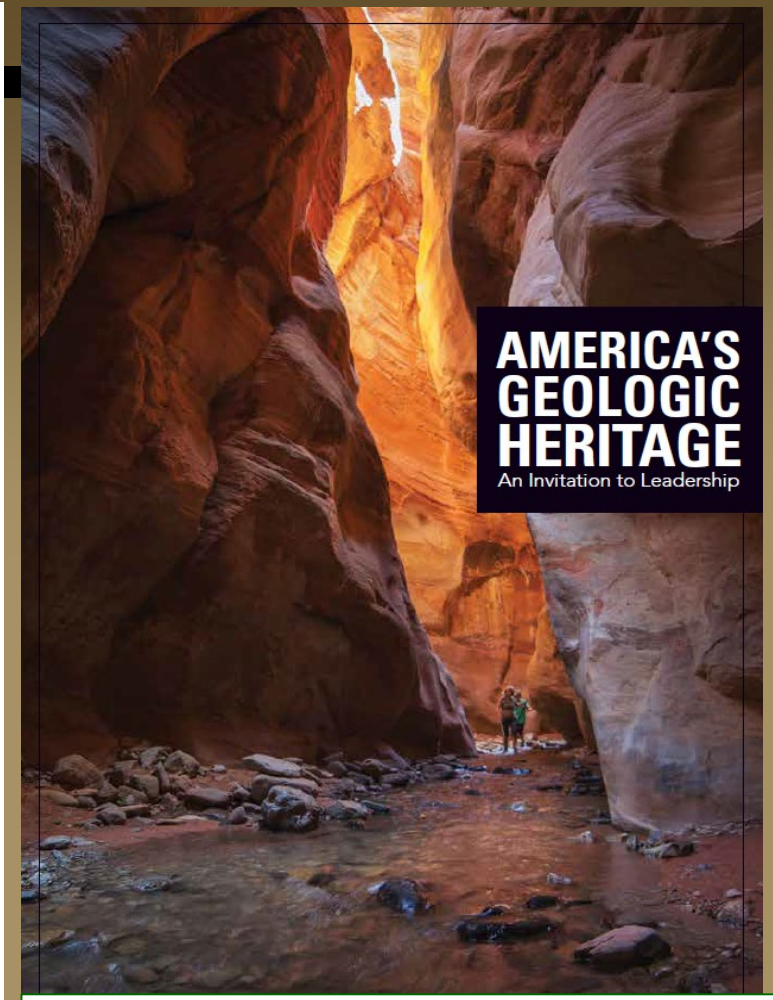
Sponsored by American Association of State Geologists, American Geosciences Institute, Geological Society of America, National Association of Geoscience Teachers, National Earth Science Teachers Association, National Park Service, U.S. Geological Survey.
Supported by the National Science Foundation.
For more information on additional webinars: https://www.nationalacademies.org/our-work/americas-geoheritage-initiative-2020-2021



AMERICA'S GEOLOGIC HERITAGE:
An Invitation to Leadership
revisiting the 2015 joint National Park Service - American Geosciences Institute Publication

https://vimeo.com/459107323

EXPERIENCE YOUR AMERICA

Geoheritage Sites on Public Lands

Geoheritage Sites—Examples on Public Lands, Natural Landmarks, Heritage Areas, and The National Register of Historic Places

Showing results 1-10 of 41 Show 10 per page Sort by: Recently Updated

DEATH VALLEY NATIONAL PARK
Eureka Dunes

The Eureka Dunes lie in the remote Eureka Valley, an enclosed basin at 3000 foot elevation located northwest of Death Valley. The dunes cover an area only 3 miles long and 1 mile wide, yet they are the tallest sand dunes in California, possibly the tallest in all of North America. They rise suddenly more than 680 feet above the dry lakebed at their western base. As tall as these dunes are, they are dwarfed by the impressive limestone wall of the Last Chance Mountains.

DEATH VALLEY NATIONAL PARK
Badwater Basin

The lowest point in North America is a surreal landscape of vast salt flats. The basin sits 282 feet (86 m) below sea level where a temporary lake may form after heavy rainstorms

WRANGELL - ST ELIAS NATIONAL PARK & PRESERVE
Malaspina Glacier

Malaspina Glacier, located primarily within Wrangell-St. Elias National Park, is the largest piedmont glacier in North America and one of the largest outside the ice cap regions of the world.

WRANGELL - ST ELIAS NATIONAL PARK & PRESERVE
Kennecott Mines National Historic Landmark

A vestige of an early 20th-century copper mining camp, Kennecott represents the mining techniques of the era. The mines here were among the nation's largest and contained the last of the great high-grade copper ore deposits of the American West.

GATES OF THE ARCTIC NATIONAL PARK & PRESERVE
Arrigetch Peaks

Located within Gates of the Arctic National Park, the Arrigetch Peaks, meaning "fingers of the hand extended," have long been a landmark to the Nunamiut people of northwest Alaska.

Leffingwell Camp Site National Historic Landmark

The European discovery of Alaska opened a land that was unknown to science. Explorers filled in the geography of the new country and scientists came to study Alaska's environment and its geology, flora and fauna at sites like Leffingwell Camp Site.

KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK
Chilkoot Trail and Dyea National Historic Landmark

From 1897 to 1899, thousands of prospectors and "boomers" used the Chilkoot and White Pass Trails to reach the Klondike and Upper Yukon Valley during the Klondike gold rush.

Langford Hot Springs

The Langford Hot Springs have an impressive history of use from Native Americans to J.O. Langford's healing resort.

Cape Nome Mining District Discovery Sites National Historic Landmark

The discovery of gold at Anvil Creek on September 20, 1898, was the first large gold placer strike to be made in Alaska proper. The resulting rush to Nome in 1899-1900 was Alaska's greatest gold stampede.

LAKE CLARK NATIONAL PARK & PRESERVE
Redoubt Volcano

An active stratovolcano that rises 10,197 feet from nearby sea level. Ash fall during recent eruptions have disrupted air traffic and have fallen in southcentral Alaska communities including the state's largest city, Anchorage.

https://www.nps.gov/subjects/geology/geoheritage-sites-listing-element.htm

Unofficial National Register of Geoheritage Sites

Currently, there is no comprehensive national registry that includes all geoheritage sites in the United States. The list being developed here is meant to help strengthen the connections between geoheritage sites and encourage the sharing of best management practices nationwide.

Geoheritage Sites

- Designated Geologic Sites and Registries
- Undesignated Geologic Sites
- Geology Museums

Search by State

Alabama | Alaska | Arizona | Arkansas | California | Colorado | Connecticut | District of Columbia | Delaware | Florida | Georgia | Hawaii | Idaho | Illinois | Indiana | Iowa | Kansas | Kentucky | Louisiana | Maine | Maryland | Massachusetts | Michigan | Minnesota | Mississippi | Missouri | Montana | Nebraska | Nevada | New Hampshire | New Jersey | New Mexico | New York | North Carolina | North Dakota | Ohio | Oklahoma | Oregon | Pennsylvania | Rhode Island | South Carolina | South Dakota | Tennessee | Texas | Utah | Vermont | Virginia | Washington | West Virginia | Wisconsin | Wyoming

Colorado

Geoheritage Sites

- No Data

Multi-site Registry Links

- National Natural Landmarks in Colorado

Multi-site General Links

- National Park Geodiversity in Colorado
- BLM National Conservation Lands in Colorado
- National Forests by State
- Congressionally Designated Special Areas
- Colorado State Parks

Related Links

- Colorado Geological Survey

Geology Quick Facts

- **State gemstone:** Aquamarine
- **State mineral:** Gold
- **State fossil:** *Stegosaurus stenops* (Jurassic age, plated dinosaur)
- **State highpoint:** Mount Elbert (14,433')
- State geologic map
- State Soil—Seitz [SSSA]

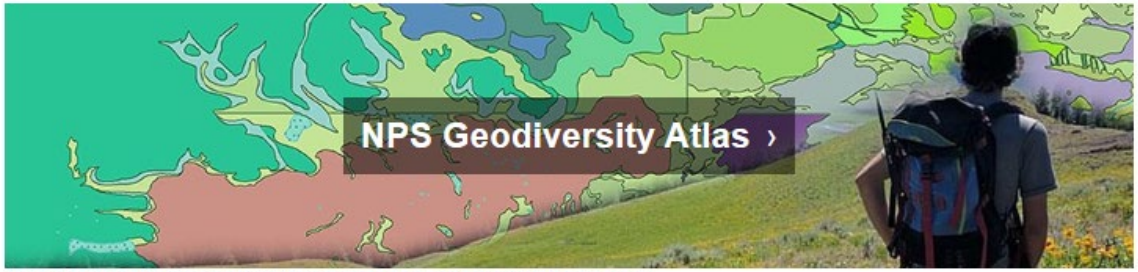
https://www.nps.gov/subjects/geology/unofficial-register.htm

NPS Geodiversity Atlas

NPS.gov / Home / Park Geology / NPS Geodiversity Atlas

NPS Geodiversity Atlas

Continue to NPS Geodiversity Atlas ›



Check out the largest collection of NPS geoscience information ever compiled.

Geodiversity Atlas pages—by Inventory & Monitoring Network

Geodiversity Atlas—Inventory & Monitoring Network Indexes

Geodiversity Atlas pages—by State, U.S. Commonwealth, and Territories

Geodiversity Atlas—State Indexes

Geodiversity Atlas pages—by Unified Interior Regions

Geodiversity Atlas—Interior Region Indexes

2019 Geologic Resources Inventory Poster For Colorado National Monument

2015 Digital Geologic Map of the Colorado National Monument and Vicinity, Colorado (NPS, GRD, GRI, COLM, COLM digital map) adapted from a U.S. Geological Survey Geologic Investigations Series Map by Scott, et. al. (2001) and a U.S. Geological Survey Miscellaneous Field Studies Map by Scott et. al. (2002)

2015 Digital Geologic Map of the Grand Junction Quadrangle, Colorado (NPS, GRD, GRI, COLM, GRJU digital map) adapted from a U.S. Geological Survey Miscellaneous Field Studies Map by Scott, Carrara, Hood and Murray (2002)

2015 Unpublished Digital Geologic Map of the Colorado National Monument and Adjacent Areas, Colorado (NPS, GRD, GRI, COLM, CNMO digital map) adapted from a U.S. Geological Survey Geologic Investigations Series Map by Scott, Harding, Hood, Cole, Livaccari, Johnson, Shroba and Dickerson (2001)

2009 Geologic Resources Inventory Project for Colorado National Monument

2006 Colorado National Monument Geologic Resource Evaluation Report

NPS Geodiversity Atlas—Colorado National Monument, Colorado

Colorado National Monument

Geodiversity refers to the full variety of natural geologic (rocks, minerals, sediments, fossils, landforms, and physical processes) and soil resources and processes that occur in the park. A product of the Geologic Resources Inventory, the NPS Geodiversity Atlas delivers information in support of education, Geoconservation, and integrated management of living (biotic) and non-living (abiotic) components of the ecosystem.

Geologic Features and Processes

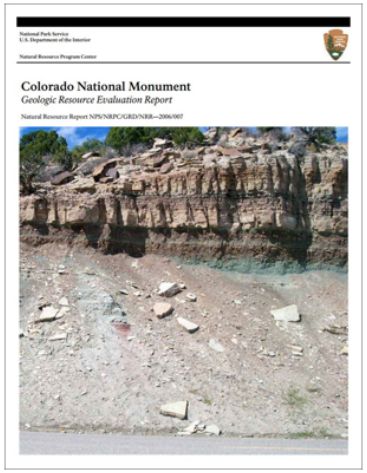
[Site Under Development]

Paleontological Resources

All NPS fossil resources are protected under the Paleontological Resources Preservation Act of 2009 (Public Law 111-11, Title VI, Subtitle D; 16 U.S.C. §§ 470aaa - 470aaa-11).

Abandoned Mineral Lands

NPS AML sites can be important cultural resources and habitat, but many pose risks to park visitors and wildlife, and degrade water quality, park landscapes, and physical and biological resources. Be safe near AML sites—Stay Out and Stay Alive!



In-depth geologic information is contained in the baseline inventory products of the Geologic Resources Inventory, see table below.

https://www.nps.gov/subjects/geology/nps-geodiversity-atlas-link.htm

Directory of NPS Community Assistance Programs

EXPERIENCE YOUR AMERICA

https://www.nps.gov/getinvolved/upload/NPS_CAP_Directory_June01_pdf.pdf

Directory

This directory is not a comprehensive list of every program the NPS administers. Instead, it is a focused list of national and regional programs that interact with community groups in and outside the boundary of park units.

The Directory will be updated periodically to reflect changes in the programs of the NPS.
Please send questions and comments to communityassist@nps.gov.

Contents

National Heritage Areas (NHA's)

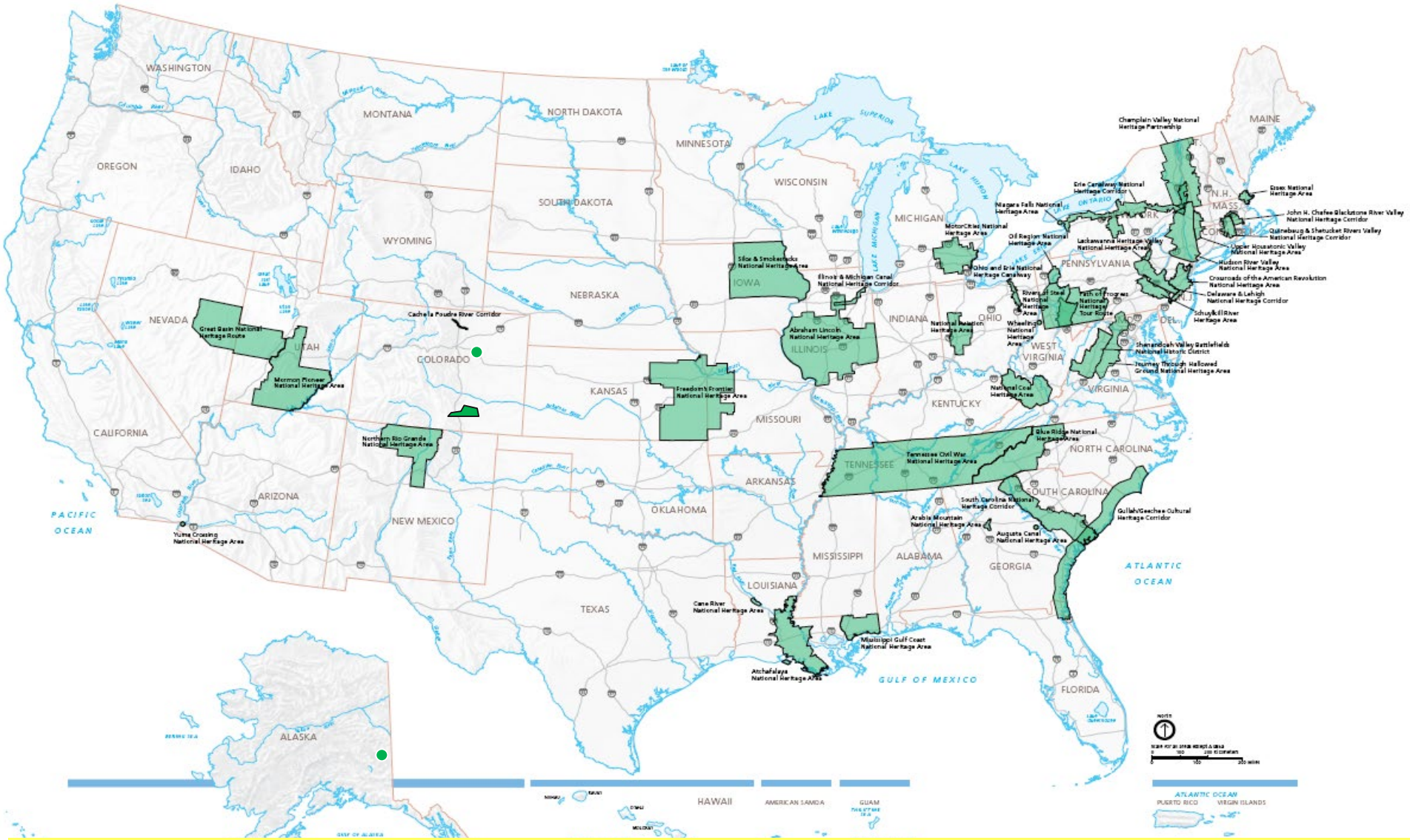
Community-Led Conservation and Development

National Heritage Areas are places where historic, cultural, and natural resources combine to form cohesive, nationally important landscapes. Unlike national parks, National Heritage Areas are large lived-in landscapes. Consequently, National Heritage Areas entities collaborate with communities to determine how to make heritage relevant to local interests and needs.

In 1984, the first National Heritage Area, Illinois and Michigan Canal National Heritage Area, was signed into law by President Ronald Reagan. In his dedication speech, Reagan referred to National Heritage Areas "a new kind of national park" that married heritage conservation, recreation, and economic development. Today, the program includes **55 National Heritage Areas** across the country.

https://www.nps.gov/subjects/heritageareas/index.htm

55 NHAs Across the USA!



https://www.nps.gov/subjects/heritageareas/discover-nhas.htm

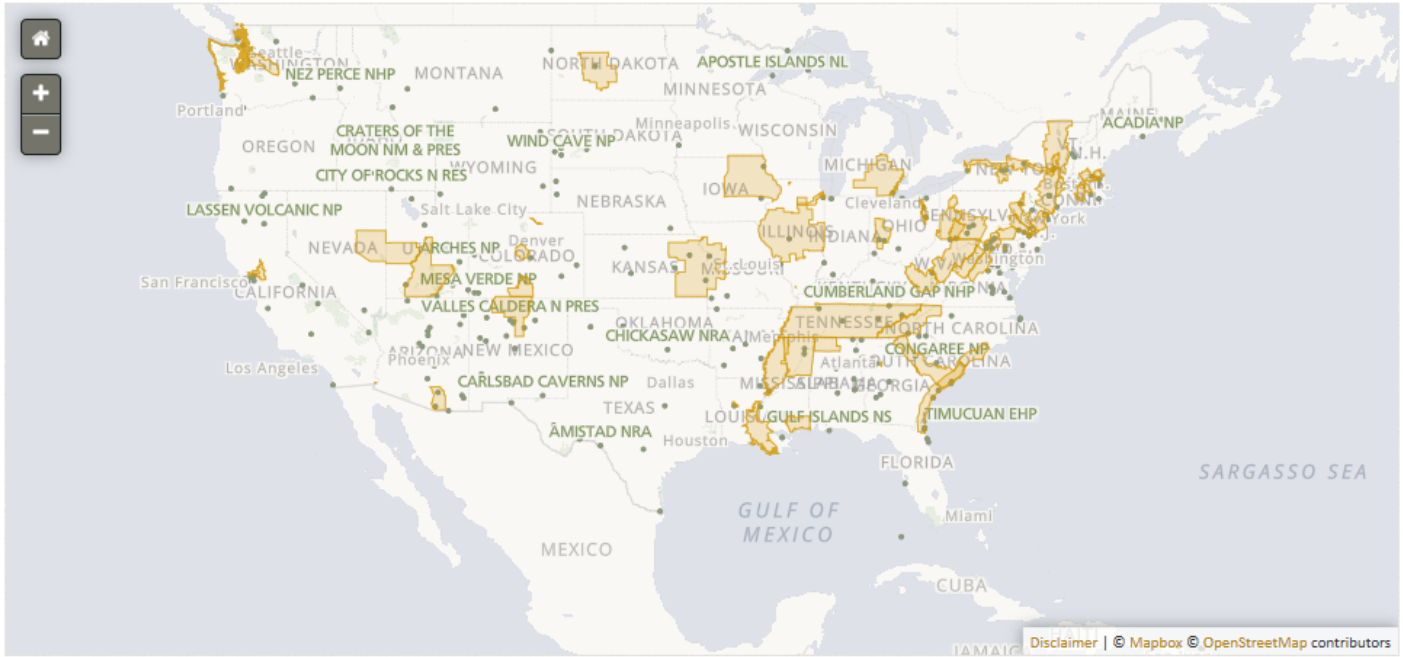
NPS.gov / Home / Learn About the NHAs / Map

Map - Discover NHAs

Find a National Heritage Area Near You

There are 55 designated National Heritage Areas in 34 states across the country that support a diversity of conservation, recreation, education, and preservation activities.

National Heritage Areas



A map of all the National Heritage Areas.

https://www.nps.gov/subjects/heritageareas/discover-nhas.htm

NHA Feasibility Studies: FAQs

- *How does my region become an NHA?*
- *This sounds like an interesting program, what should we do to get started?*
- *What is a Feasibility Study?*
- *Who leads the NHA Feasibility Study process?*
- *How are NHA Feasibility Studies funded?*
- *How do we figure out the main nationally important story and themes of the region?*

https://www.nps.gov/subjects/heritageareas/upload/NHA-Feasibility-Study-Process-FAQ-2.pdf

NHA Feasibility Studies: FAQs (continued)

- *How is a boundary for an NHA identified?*
- *Who should we reach out to in the community?*
- *Who is "in charge of an NHA?*
- *What kind of financial and human resources are necessary for success?*
- *What makes a national designation different from a state or local designation?*
- *We have documented our process, determined that designation is the right approach and have begun writing a report; what do we do next?*

https://www.nps.gov/subjects/heritageareas/upload/NHA-Feasibility-Study-Process-FAQ-2.pdf

National Heritage Area Feasibility Study Process
Frequently Asked Questions

How does my region become a National Heritage Area?

National Heritage Area (NHA) designation begins with a grassroots, community-driven process called a "feasibility study," rather than with an application or a nomination. This is an exciting process that examines a region's history and resources in depth and also provides a strong foundation for eventual success as a National Heritage Area.

Ultimately, it is the United States Congress that designates regions of the country as National Heritage Areas. The National Park Service, as the federal body charged with managing the National Heritage Areas program, testifies at the request of Congress as to whether or not a region has the resources, national importance, and local financial and organizational capacity to carry out the responsibilities that come with designation.

This sounds like an interesting program, what should we do to get started?

When the residents of a region come together to consider whether designation as a National Heritage Area (NHA) is appropriate, there are certain key questions that they should discuss. These might include:

- What is nationally important about our region and how do we want to share our unique history, culture and landscape with others?
- Are there documented historic, cultural and natural resources that are associated with a nationally important story?
- What stories, themes or places unite the region?
- Are other groups in the region working on a similar idea and how might we pool our resources?
- Is National Heritage Area designation the right strategy to achieve the goals and outcomes desired by residents?
- Are we ready to begin exploring the feasibility of seeking the national heritage area designation for our region?
- Is it realistic at this point to seek designation - do we have or can we obtain Congressional support and local support and funding to carry out the responsibilities associated with designation?

Upon completion of a feasibility study, some regions may discover that National Heritage Area designation is not the right strategy for the future goals they have in mind. Alternately, a community may decide that though NHA designation is appropriate, it is not the best approach *at this time* because all the necessary elements are not yet in place to ensure success. A region may thus choose to spend additional time building partnerships and community support before ultimately seeking recognition through Congress.

What is a Feasibility Study?

A feasibility study is a report that documents the processes undertaken by the residents of a region to determine whether their landscape has the distinctive resources associated with a nationally important story and local capacity necessary for designation as a National Heritage

Area. It examines whether authorization as a NHA is an appropriate strategy for achieving a region's resource conservation, education, recreation, and economic development goals. The feasibility study process explores a number of important factors that inform whether national designation is the best way to achieve a region's conservation, education, recreation, and economic development goals; it also provides Congress with information regarding the appropriateness of designating the landscape as an NHA.

Who leads the National Heritage Area Feasibility Study process?

In some cases, Congress directs NPS to conduct a feasibility study in conjunction with local participants. In most cases, though, supporters of the NHA work within the region to develop the study, with the NPS serving in an advisory capacity.

There is no one formula for successfully completing a study process. When Congress directs the NPS to undertake a study, a team will work with residents as they determine whether National Heritage Area designation is an appropriate strategy. Funds for this approach are allocated directly by the National Park Service and made available as the budget process allows – which can take a number of years.

In other cases, a local non-profit may take the lead in reaching out to stakeholders. The NPS offers guidance, but does not provide funding to these efforts. A state or local government can also facilitate planning and public involvement, with NPS guidance but, once again, without the possibility of financial support from the agency. However, NPS strongly recommends frequent contact with staff people at the park unit (if applicable), regional office and national office level – NHA experts at NPS will help make the study process more understandable and useful for you.

How are National Heritage Area Feasibility Studies funded?

As noted above, funds for the feasibility process can come from a variety of sources. In some cases, Congress will pass a bill directing NPS to complete a study. Under these circumstances, resources are made available as the budget process allows.

If a study is undertaken by an entity other than the NPS, funding is often obtained through state or local government, universities or private foundations. In these cases, the NPS provides guidance, but not direct support to interested communities. Partner organizations can assist with key pieces of the study process, such as resource inventories and interpretive themes. In this way, feasibility studies can serve as a partnership-building process that increases local buy-in and reduces costs.

How do we figure out the main nationally important story and themes of the region?

Every region is filled with great stories. How do you focus on just a few without ignoring others?

While it may be difficult, the identification of a nationally important story (the specific event, movement, cultural group, etc. that is of national importance) and theme development process provides a unique opportunity to think about the physical, cultural and even emotional connections between the places, stories and people that make your region special. One possible starting point is to ask the questions, "What makes this landscape different from similar or adjacent regions?" "Why did this happen here as opposed to other places?" "How does our

https://www.nps.gov/subjects/heritageareas/upload/NHA-Feasibility-Study-Process-FAQ-2.pdf

Economic Impact Studies

Economic Impact Studies

The economic benefits of NHAs are realized primarily through tourism and visitation. Each NHA coordinating entity serves as a catalyst for economic development within the regions they operate, which can be seen with annual Economic Impact Studies.

2017 Reports:

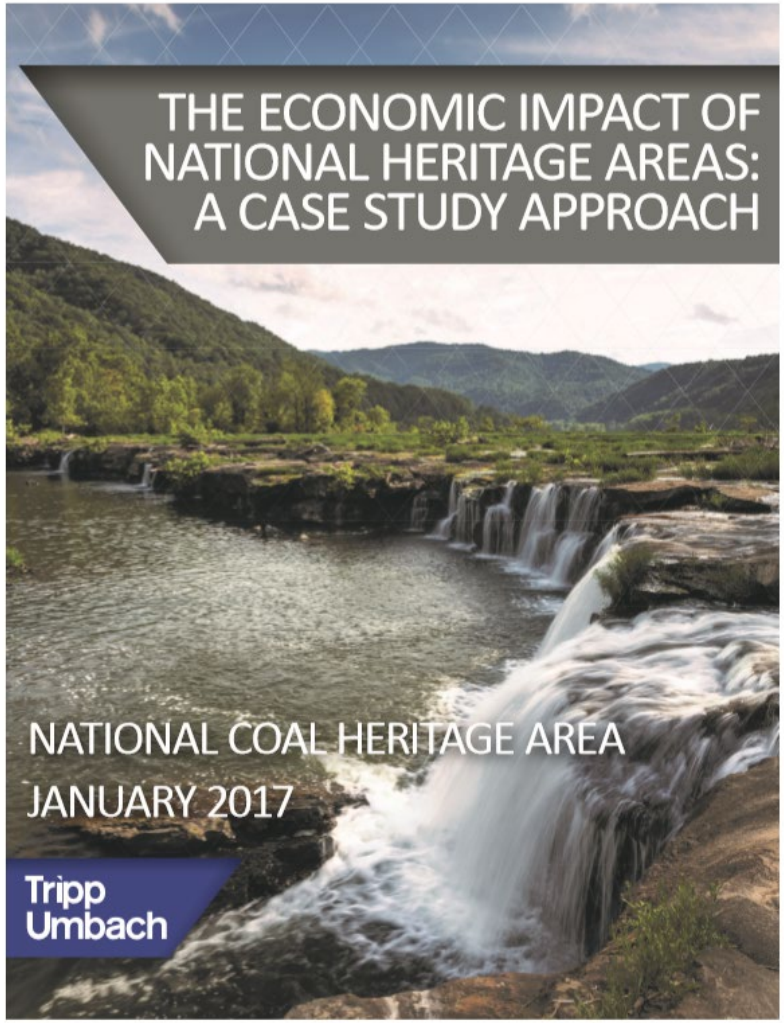
The Economic Impact of National Heritage Areas: A Case Study Approach - These reports have been prepared to provide information demonstrating the economic benefits supported by National Heritage Areas in the United States.

- Abraham Lincoln National Heritage Area - January 2017
- Baltimore National Heritage Area - August 2017
- Blue Ridge National Heritage Area – Economic Impact Brochure
- Crossroads of the American Revolution - March 2017
- Hudson River Valley National Heritage Area - June 2017
- National Coal Heritage Area - January 2017
- Shenandoah Valley Battlefields National Heritage District - July 2017
- The Last Green Valley National Heritage Corridor - January 2017
- Wheeling National Heritage Area - June 2017

2015 Reports:

The Economic Impact of National Heritage Areas - A Case Study Analysis of Six National Heritage Areas in the Northeast and Midwest Regions - This report has been prepared to provide information demonstrating the economic benefits supported by National Heritage Areas in the United States. Sites examined include Erie Canalway, The Journey Through Hallowed Ground, Schuylkill River, Upper Housatonic, MotorCities, and Ohio & Erie Canalway.

- A Case Study Analysis of the Erie Canalway National Heritage Corridor



https://www.nps.gov/subjects/heritageareas/economic_impact_studies.htm

National Heritage Areas in the Intermountain Region

NHAs typically focus on….

Heritage Tourism

Historic Preservation

Environmental Conservation

Steps to Designating an NHA

1. Congressional Authorization of a Special Resource Study or Community-Led Feasibility Study, which examines:

Significance	Suitability	Feasibility	Widespread Public Support	Commitment from stakeholders

2. Congressional Authorization / Legislation establishes new Heritage Area

Management Entity Produces Management Plan & Implements Projects Using Federal Financial Assistance (1:1 Ratio of Matching Funds)

National Heritage Areas Program Office

Contact Us

National Heritage Areas Program Office

Interested in learning more about the National Heritage Areas Program? Please contact the program office in Washington, DC. or in a regional office.

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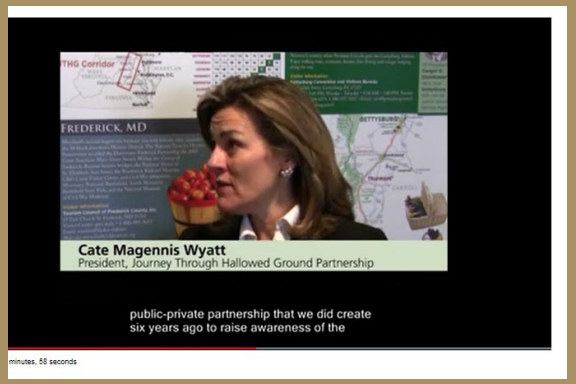
https://www.nps.gov/subjects/heritageareas/contactus.htm

NHA Video "Journey Through Hallowed Ground" Partnership



https://www.nps.gov/subjects/heritageareas/multimedia.htm

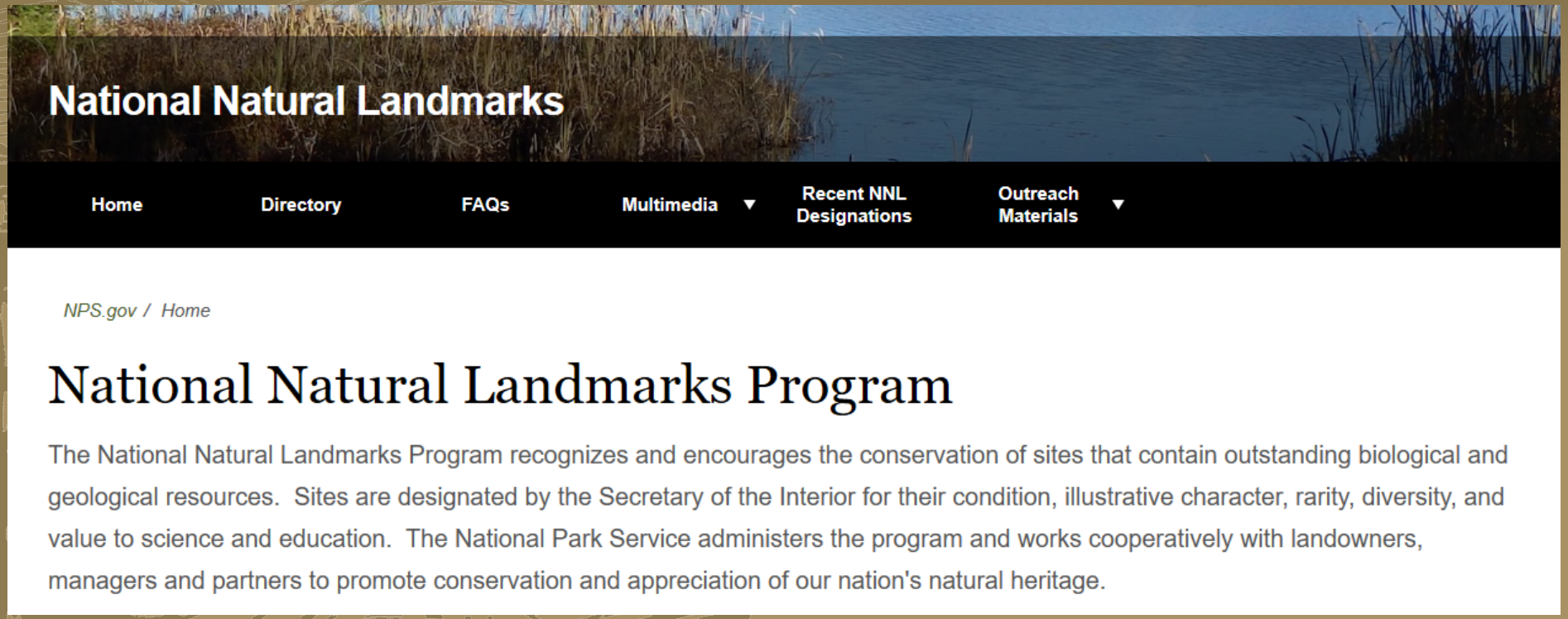
NPS Director Quote on NHA's

I'm very excited about the growing relationship between the National Park Service and the National Heritage Area system.

While we provide assistance and work cooperatively within the boundaries of these national heritage areas, we reap extraordinary benefit from that partnership as nonprofits and communities expand the story and raise public awareness about the history of this country.

Jonathan Jarvis
National Park Service Director
2009-2017

National Natural Landmarks (NNLs)



https://www.nps.gov/subjects/nnlandmarks/index.htm

NNL FAQs (1/3)

What is a National Natural Landmark (NNL)?

It is a natural area that has been designated by the Secretary of the Interior in recognition that the site contains significant examples of the nation's biological and/or geological features.

How is national significance for NNLs defined?

The site must be one of the "best" examples of a type of biological community or geological feature in its biophysiographic province. "Best" is gauged primarily on illustrative value and condition of the resource

When and how was the National Natural Landmarks Program established?

It was established in 1962 by administrative action relying on authority provided by the Historic Sites Act of 1935. Three other laws subsequently referenced the program. The first NNLs were designated in 1964.

Who manages the NNL Program?

The NNL Program is managed by the National Park Service, Department of the Interior. For questions please contact the appropriate NNL Coordinator as determined by state.

What are the goals of the NNL Program?

The goals are to encourage the preservation of sites illustrating the geological and ecological character of the United States, to enhance the scientific and educational value of sites thus preserved, to strengthen public appreciation of natural history, and to foster a greater concern for the conservation of the nation's natural heritage.

https://www.nps.gov/subjects/nnlandmarks/faq.htm

NNL FAQ's (2/3)

What types of natural features are considered for NNL designation?

Natural features include terrestrial and aquatic ecosystems;geological features, exposures, and landforms that record active geological processes or portions of earth history;and fossil evidence of biological evolution. Features fall within major natural history "themes" that can be further subdivided into various sub-themes. For example, subthemes for the overall theme "Lakes, Ponds, and Wetlands" include large deep lakes, large shallow lakes, lakes of complex shape, crater lakes, kettle lake and potholes, oxbow lakes, dune lakes, Sphagnum-bog lakes, lakes fed by thermal streams, tundra lakes and ponds, sinkhole lakes, unusually productive lakes, lakes of high productivity and high clarity, swamps, marshes, bogs, fens, wet meadows, and springs.

Why are NNLs important?

Besides fostering the basic program goals of natural heritage protection and advancing science and education, some NNLs are the best remaining examples of a type of feature in the country and sometimes in the world.

Are lands excluded from NNL consideration based on ownership?

No. Lands under almost all forms of ownership or administration have been designated--federal, state, county, municipal, tribal, and private.For example, federal lands with NNLs include those administered by the National Park Service, U.S. Forest Service, Bureau of Land Management, Bureau of Reclamation, Fish and Wildlife Service, Air Force, Marine Corps, Army Corps of Engineers, Navy, and others.Some occur on lands held by Native Americans or tribes. NNLs occur on state lands with various existing management designations--forest, park, game refuge, recreation area, and preserve. Private lands with NNLs include those owned by universities, museums, scientific societies, conservation organizations, land trusts, commercial interests, and private individuals.Approximately 52% of NNLs are administered by public agencies, more than 30% are entirely privately-owned, and the remaining 18% are owned or administered by a mixture of public agencies and private owners.

How many NNLs are there?

As of November 2016, there are 599 NNLs that have been designated within the United States and American Territories.

https://www.nps.gov/subjects/nnlandmarks/faq.htm

NNL FAQs (3/3)

How are NNLs selected?

The process to identify candidate sites, evaluate, and designate them as NNLs includes the following steps:

1. An inventory of a natural region is completed to identify the most promising sites.
2. Landowners within the area identified for evaluation are notified and their permission obtained prior to evaluation of the site.
3. A detailed site evaluation is conducted by qualified scientists.
4. The evaluation report is peer-reviewed by an additional three qualified scientists to ensure its soundness.
5. The report is reviewed by the National Park Service, and if the site appears to meet the criteria for national significance, the site owners are notified and comment is sought from the public on the proposal to designate the site as an NNL.
6. The National Park System Advisory Board reviews the evaluation report and public comments and makes a recommendation on the proposed designation.
7. All materials and recommendations are sent to the Secretary of the Interior, who may then designate the site as an NNL.
8. Landowners and the public are notified of the NNL designation by letter and publication of a Federal Register Notice.

Are NNLs designated as a first step in becoming units of the National Park System?

No. The criteria for designating NNLs and National Park System units are different. For an area to become a unit of the National Park System, it must pass National Park Service criteria of suitability and feasibility. Furthermore, Congress would have to authorize the unit's establishment. Of the 599 NNLs, only 25 are located within 20 different units of the NPS.

National Natural Landmarks Program Office

Contact Us

National Natural Landmarks Program

Program Manager

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Phone: 303-969-2945

https://www.nps.gov/orgs/1211/contactus.htm

NPS NNL DOI Regional Contacts

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DOI Regions 5, 6, 7 & parts of 4, 8 & 9

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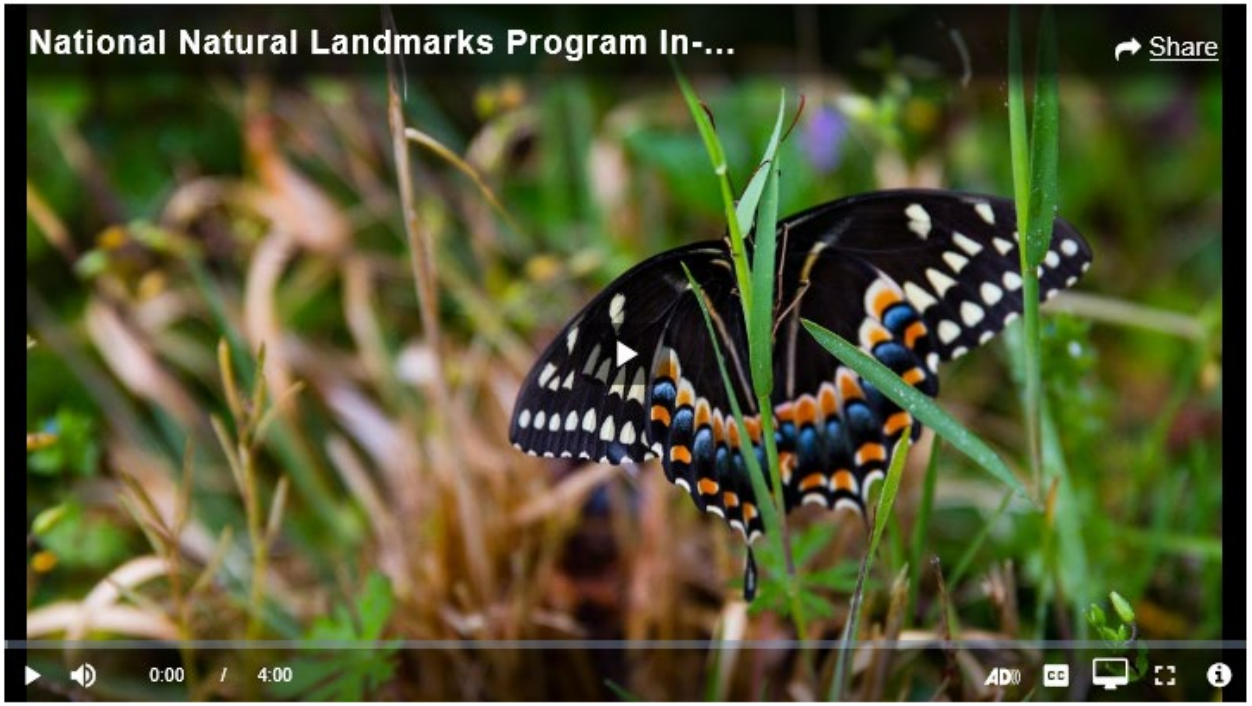
https://www.nps.gov/orgs/1211/contactus.htm

EXPERIENCE YOUR AMERICA

National Natural Landmarks Program

NNL Program Video

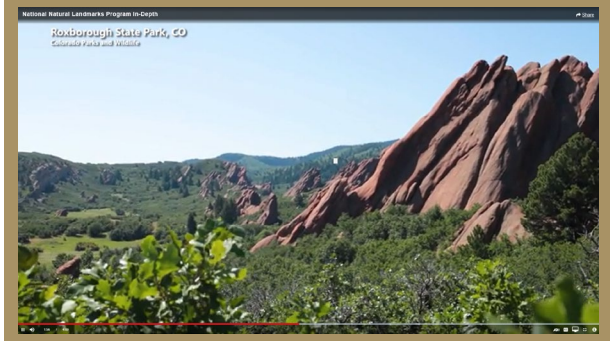
National Natural Landmarks Program In-Depth



DURATION: 4 minutes

Watch this short video that explains what the National Natural Landmarks Program is and how it works.

Created by Mackenzie Reed



https://www.nps.gov/subjects/nnlandmarks/nnlvideo.htm

https://www.nps.gov/subjects/nnlandmarks/dinostoryseries.htm

Telling the Dinosaur Story (NNL style)

Part 1: Triassic Period ›

This video is the first in a series about the dinosaur story. Learn about the Triassic Period, a time 252-201 millions years ago that saw the rise of the first dinosaurs.

https://www.nps.gov/subjects/nnlandmarks/dinostorypart1.htm

Part 2: Jurassic Period ›

This video is the second in a series about the dinosaur story. Learn about the Jurassic Period, a time when dinosaurs dominated the land and the earliest known birds took to the skies.

https://www.nps.gov/subjects/nnlandmarks/dinostorypart2.htm

Part 3: Cretaceous Period ›

This video is the last in a series about the dinosaur story. Learn about the Cretaceous Period. By the end of this period, 66 million years ago dinosaurs will be extinct.

https://www.nps.gov/subjects/nnlandmarks/dinostorypart3.htm

U.S. World Heritage Sites (24)

Cultural (11)

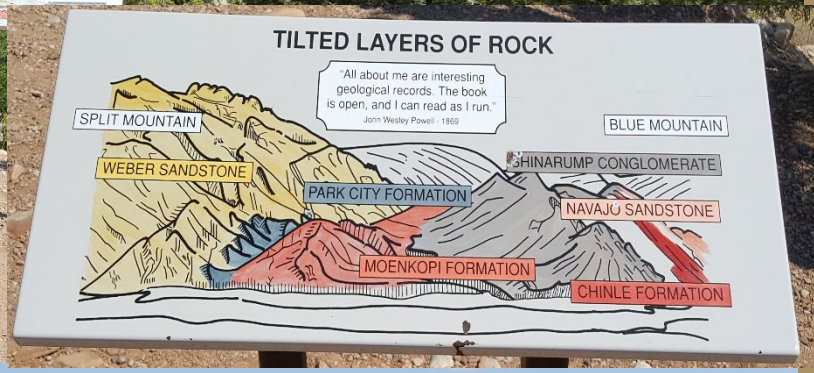
- Cahokia Mounds State Historic Site (1982)
- Chaco Culture (1987)
- Independence Hall (1979)
- La Fortaleza and San Juan National Historic Site in Puerto Rico (1983)
- Mesa Verde National Park (1978)
- Monticello and the University of Virginia in Charlottesville (1987)
- Monumental Earthworks of Poverty Point (2014)
- San Antonio Missions (2015)
- Statue of Liberty (1984)
- Taos Pueblo (1992)
- The 20th-Century Architecture of Frank Lloyd Wright (2019)

Natural (12)

- Carlsbad Caverns National Park (1995)
- Everglades National Park (1979)
- Grand Canyon National Park (1979)
- Great Smoky Mountains National Park (1983)
- Hawaii Volcanoes National Park (1987)
- Kluane / Wrangell-St. Elias / Glacier Bay / Tatshenshini-Alsek (1979,1992, 1994)
- Mammoth Cave National Park (1981)
- Olympic National Park (1981)
- Redwood National and State Parks (1980)
- Waterton Glacier International Peace Park (1995)
- Yellowstone National Park (1978)
- Yosemite National Park (1984)

Mixed (1)

- Papahānaumokuākea (2010)



Tim Connors explaining the Split Mountain Anticline to his family at Dinosaur National Monument, 2020