

Preserve America Report

Bureau of Land Management

U.S. Department of the Interior

Historic Preservation Activities for Fiscal Years 2017 – 2019



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Table of Contents

Executive Summary	1
Introduction	2
The BLM Organization	2
Cultural Heritage Program Overview.....	2
Staffing Resources	3
The BLM Cultural Resources Program Budget	4
Budget Accountability.....	5
Reporting on Management Activities.....	6
Data Management.....	6
Cultural Resources Data Coordination and Sharing	6
Historic Structures and the Federal Real Property Profile	8
Museum Collections	9
Identifying Historic Properties - Inventory and Survey	9
Examples of Identification Efforts	10
Buck Rock Tunnel Cultural Investigations – Medford District (Oregon)	11
North Fork Passport in Time – Buffalo Field Office (Wyoming)	12
1881 “Nana’s Raid” – Understanding the Apache Wars – Socorro Field Office (New Mexico)	12
National Petroleum Reserve Coastal Erosion Mitigative Excavations (Alaska)	13
The Cooper’s Ferry Project – Cottonwood Field Office (Idaho)	13
Relocation of the “White Acorn” Steatite Quarry Site – Rock Springs Field Office (Wyoming).....	15
Horseshoe Grazing Coordinated Resource Management Plan (Arizona)	15
Tahini and Chilkat Rivers Region Field Survey – Glennallen Field Office (Alaska)	16
West Mojave Route Network Project – Barstow and Ridgecrest Field Offices (California).....	17
Protecting Historic Properties.....	18
Examples of Protecting Historic Properties	18
Long Stone Restoration – South Dakota Field Office (Montana)	18
Transforming Cultural Resource Information to the Digital World (Arizona)	19
Trinidad Lighthouse Restoration – Arcata Field Office (California).....	19
Graffiti Cleanup – Challis Field Office (Idaho)	20
ArchMonitor Statewide Site Stewardship Program – Utah State Office (Utah).....	21
GIS Modernization Project – Winnemucca District Office (Nevada)	21
Bonneville Estates Rock Shelter Stabilization – Elko District (Nevada)	21

Skinner Cabin Interpretation and Rehabilitation (Colorado)	22
Washington County Graffiti Removal – Red Cliffs National Conservation Area (Utah).....	22
Return of BLM Collections from the Tangle Lakes Archaeological District (Alaska).....	23
Permian Basin Programmatic Agreement – Carlsbad Field Office (New Mexico).....	24
National Register Listings.....	24
Using Historic Properties	25
Examples of Using Historic Properties.....	25
Archaeology Road Show – Burns, Northwest, and Prineville Districts (Oregon)	26
Three Rivers Petroglyph Site Desert Exposure Publication (New Mexico)	27
Eagle Creek Petroglyph Research – Lewistown Field Office (Montana)	27
Ethnographic Research – Canyons of the Ancients National Monument (Colorado)	28
Cortez Mining District Book – Battle Mountain District (Nevada).....	28
Great American Eclipse – Lander Field Office (Wyoming)	29
Natural Resource Conservation Workshop – Kingman Field Office (Arizona)	29
Rough Canyon Service Day and Ute Heritage Day – Grand Junction Field Office (Colorado)	30
Collections Management – Ukiah Field Office (California)	30
Final Thoughts.....	31

List of Figures

Figure 1. NCRIMS Interface.....	7
Figure 2. Field Crew Outside One Entrance to Buck Rock Tunnel.	11
Figure 3. Crew Documenting the Interior of Buck Rock Tunnel During the FY 2018 Field Season....	11
Figure 4. Chinese Bamboo Pattern Porcelain Fragment Located During the Survey.....	11
Figure 5. Retired National Park Service Archaeologist Demonstrating Use of a Metal Detector.	12
Figure 6. Artifacts Identified by Metal Detecting.....	12
Figure 7. Cadaver Dogs Identifying Historic Burials.	13
Figure 8. Fire Hearth in a Concave Shaped Depression.....	14
Figure 9. Western Stem Projectile Point Found In-Situ in Pit Feature.....	14
Figure 10. Nez Perce Tribal Intern Excavating Circular Pit Feature.	14
Figure 11. OSU Graduate Explaining Excavation Process.	14
Figure 12. Interpretive Activities at the Cooper’s Ferry Site.....	15
Figure 13. Steatite Bowl Blank from the White Acron Locality.....	15
Figure 14. The Steatite Boulder at the Benge Steatite Locality.....	15
Figure 15. LiDAR Imagery of Proposed Range Improvement.....	16
Figure 16. WEMO Interns Conducting Archaeological Excavations.....	17
Figure 17. WEMO Interns Conducting Archaeological Survey.	17
Figure 18. New Window Glass Being Installed at the Trinidad Head Lighthouse.	20

Figure 19. Before and After Graffiti Removal.	21
Figure 20. ArchMonitor App in iTunes Store.....	21
Figure 21. Intern Studying Archaeological Records.....	21
Figure 22. Completed Rehabilitation Work at Skinner Cabin.	22
Figure 23. Rehabilitation Work in Progress on Skinner Cabin.....	22
Figure 24. Professional Conservator and Volunteers Working at the Red Reef Shelter Site.....	23
Figure 25. Area Map the Permian Basin Programmatic Agreement in Southeast New Mexico.	24
Figure 26. Rogue River Ranch Restoration Showing Hunting and Fishing Equipment.	26
Figure 27. BLM Prineville District Archaeologist and Event Participants.	26
Figure 28. Report Cover.....	27
Figure 29. Hopi Tribe Cultural Advisors at the “Jumping Man” rock art panel	28
Figure 30. Publication Cover.	28
Figure 31. Lander Field Office Archaeologist Providing Site Interpretation.	29
Figure 32. NRCWAY Students Participating in Hands-on-Site Documentation.....	29
Figure 33. Mt. Garfield Middle School Students Clean Graffiti off Canyon Walls.	30

List of Tables

Table 1. Summary of Activities on Public Lands.....	1
Table 2. Summary of Appropriated Funding for the Cultural Resource Program.	5
Table 3. Performance Metrics for FY 2017-2019.	5
Table 4. Cultural Program Workload Measures (Performance Elements).	5
Table 5. Program Accomplishments Funded by the Cultural Resources Management Subactivity.	6
Table 6. Program Accomplishments Funded by the National Monuments Subactivity.....	6
Table 7. BLM Historic Structures and Properties.....	8
Table 8. Summary of Literature Reviews, Inventory, Sites Discovered, and Permits in Effect.....	10
Table 9. List of National Register of Historic Places BLM Properties.....	24

Executive Summary

Section 3(c) of Executive Order 13287 “Preserve America,” signed by President George W. Bush on March 3, 2003, requires each Federal agency with real property management responsibilities to prepare a progress report on identifying, protecting, and using historic properties in its ownership every three years. The Bureau of Land Management (BLM) prepares these reports for the Secretary of the Interior and the Advisory Council on Historic Preservation (ACHP). This report represents BLM’s seventh submission and covers fiscal years (FY) 2017, 2018, and 2019.

The BLM manages more than 245 million acres of public land—the most of any Federal agency— most of which is located in the 11 western states and Alaska. The BLM also administers 700 million acres of subsurface mineral estate throughout the nation. The mission of the BLM is to sustain the health, diversity, and productivity of America’s public lands for the multiple use, sustained yield, and enjoyment of future generations. The BLM is responsible for managing the public lands for a variety of uses such as energy development, livestock grazing, recreation, and timber harvesting while ensuring natural, cultural, and historic resources are maintained for present and future use. The BLM’s cultural resource management program addresses identification, protection, and use of historic properties in a manner consistent with the BLM’s multiple-use mission.

The 2020 Preserve America Progress Report provides updated information on BLM activities (Table 1) that fall under Sections 106 (54 U.S.C. § 306108) and 110 (54 U.S.C. § 306101 - 306114) of the National Historic Preservation Act (NHPA), as well as related statutes. Programmatic highlights include implementation of the 2012 national Programmatic Agreement between the BLM, the ACHP and the National Conference of State Historic Preservation Offices (NCSHPO) with 11 BLM State Offices completing protocol agreements with State Historic Preservation Offices (AK, AZ, CA, CO, ID, MT, NV, NM, OR, UT and WY). The BLM Utah State Office protocol, signed in January of 2020, is the most recent addition.

Moreover, the BLM continues to build partnerships with other Federal and state agencies, Indian tribes, and nongovernmental organizations to protect resources, engage youth, and provide economic development opportunities, especially by way of heritage tourism. Through site stewardship and Respect and Protect programs, the BLM provides opportunities for the public to be a part of the protection of cultural resources on public lands. We appreciate the opportunity to provide this update on BLM’s Cultural Heritage Program through the Preserve America report.

Table 1. Summary of Activities on Public Lands.

Activity	FY 2017	FY 2018	FY 2019
Estimated number of NHPA Section 106 undertakings	7,211	8,080	9,464
Acres surveyed for historic properties	640,657	683,347	645,611
Cultural resources recorded	9,469	9,164	9,011
Properties listed in the NRHP	29	7	6
Properties determined NRHP eligible	3,810	2,008	2,612
Properties determined not NRHP eligible	5,258	4,881	5,547
Properties protected	3,402	4,272	7,238
Properties monitored	3,988	4,327	3,282
Properties where potential adverse effects were avoided	5,164	5,866	2,578

Introduction

The BLM 2020 Preserve America presents the “status” of the bureau’s efforts to identify, protect, and use historic properties on public lands. The report responds to questions and prompts in the ACHP Guidelines for Section 3 reports.

The report provides general overview information about the BLM and the bureau’s Cultural Heritage Program, characterizes cultural resources under bureau management, and summarizes bureau staffing and budget. The main body of the report is organized into three sections: Identifying Historic Properties, Protecting Historic Properties, and Using Historic Properties. These three sections include relevant statistics and case studies from the field that illustrate the scope and extent of work accomplished on public lands.

The BLM Organization

The BLM is a multiple-use land management agency with the mission “to sustain the health, productivity, and diversity of America’s public lands for the use and enjoyment of present and future generations.” BLM is an agency within the U. S. Department of the Interior that was established in 1946, with the merging of the U.S. Grazing Service with the General Land Office (GLO); however, its roots began with the founding of the Republic. The Federal Lands Policy Management Act of 1976 (FLPMA), or BLM Organic Act, mandates the BLM manage resources on these public lands for a variety of uses, such as energy development, livestock grazing, recreation, and timber harvesting, while protecting a wide array of natural, cultural, and historical resources.

Today, the BLM manages 245 million acres, most of which are located in the 11 western states and Alaska, and 700 million acres of sub-surface mineral estate throughout the nation. The BLM is a tiered organization, with 12 state offices, under which there are district and field offices. In 2019, the BLM underwent a reorganization to comply with Executive Order 13781, “*Comprehensive Plan for Reorganizing the Executive Branch*”. Objectives of this restructure, which addressed eight bureaus within the Department of Interior, include improving government efficiency, effectiveness, and accountability to the public. BLM administrative units now fall within one or more of 12 “Unified Interior Regions” with the goal of improving collaboration and consistency across bureaus, facilitating problem-solving and coordination, and enhancing customer service. BLM Headquarters (HQ) staff and program leadership have moved from Washington D.C., primarily to BLM state offices, bringing them closer to the resources that they manage, and encouraging delegation of decision-making authority to the field. HQ Cultural Heritage Program staff now reside at the BLM New Mexico State Office (Unified Interior Region 7: Upper Colorado Basin). The newly formed HQ Division of Education, Cultural and Paleontological Resources includes specialists overseeing cultural and paleontological resources, as well as the bureau’s education, youth, and volunteer programs.

Cultural Heritage Program Overview

The cultural resources managed by the BLM represent all major periods, events, and communities in the broad sweep of human activity in the western United States over the

last 16,000 years. The BLM manages these resources to benefit the public, ensuring the cultural, educational, aesthetic, inspirational, and scientific values are preserved and the recreational and economic benefits are realized for today's communities as well as future generations consistent with Federal laws and regulations.

The BLM is responsible for the largest, most diverse, and scientifically important aggregation of cultural and historical resources on public lands, as well as the museum collections and data associated with these heritage resources. The Cultural Heritage Program coordinates conformance with the National Historic Preservation Act (NHPA), Archaeological Resources Protection Act (ARPA), Native American Graves Protection and Repatriation Act (NAGPRA), and FLPMA, among other statutes addressing management of the nation's cultural heritage.

FLPMA provides, "the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; that, where appropriate, will preserve and protect certain public lands in the natural condition..." This includes the identification and management of cultural resources. The BLM 8100 Manual series is the primary source for policy and procedure guiding bureau compliance with Federal laws, regulations, and orders pertinent to cultural resources.

The program provides expertise and capabilities to facilitate compliance with Section 106 of the NHPA, which requires the BLM to take into account the effects of its actions on historic properties, and avoid, minimize, or mitigate adverse effects. Annually, the BLM reviews an estimated 8,250 land use proposals for energy development, mining, recreation, vegetation restoration, grazing, and other activities for potential affects on properties listed, or eligible for listing on, the National Register of Historic Places.

The BLM's national Programmatic Agreement with the ACHP and the NCSHPO is a critical mechanism for achieving efficiencies in the Section 106 review process. In addition, the tools and processes developed by the Cultural Heritage Program streamline compliance processes, providing flexibility and cost-savings for the bureau and land-users.

Staffing Resources

BLM State Directors, District Managers, and Field Managers are responsible for primary operational compliance with the NHPA, advised by professional staff. Each BLM state office employs a Cultural Program Lead, or Deputy Preservation Officer, with one or more archaeologists in district and field offices. BLM has 191 permanent Federal archaeology positions within the organization. Twenty-three of these positions are currently vacant. This is a small number of employees tasked with the management of cultural resources across 245 million acres of BLM-administered land, averaging 1.3 million acres of public land per cultural specialist. The focus of the BLM's management of cultural resources is directed toward NHPA Section 106 compliance review, on-the-ground inventory, monitoring, and stabilization of archaeological sites and historic properties. Most cultural resource work completed to comply with statutory requirements outside of the NHPA section 106

review process is accomplished through cost-share partnerships with state, local, tribal, educational, and non-profit organizations. Section 106 compliance work includes reviewing reports associated with Federal undertakings tied to applications from various industries (oil and gas, mineral extraction such as coal and bentonite, and renewable resources such as geothermal, wind, and solar). BLM also conducts work for in-house projects such as water guzzlers for the wildlife program, range improvements for grazing leases, gathers of wild horses, and maintenance of recreation sites and campgrounds. Cultural resource management reports are produced primarily by archaeological consultants. Over the reporting period BLM received and processed 943 cultural resource permit applications; most of these are for compliance activities, though some are for research work. BLM permits in effect averaged 734 for the FY 2017-2019 period while permits under which work was conducted averaged 442.

The BLM Cultural Resources Program Budget

The BLM employs a benefitting subactivity model to fund all aspects of Cultural Heritage Program work. Bureau actions implemented for the purpose of monitoring or stabilizing the condition of cultural sites, conducting NAGRPA compliance, performing ARPA investigations, or managing museum collections are supported with funds from the L1050 subactivity. Bureau authorizations initiated by other program areas such as oil and gas leasing, infrastructure projects, and grazing permit renewals fund identification, evaluation, and resolution of adverse effects on historic properties necessary for completion of the NHPA section 106 process with funds specifically assigned to those functions. The BLM's accounting system does not enable reliable calculation of the cost for completing NHPA section 106 work where program areas outside the Cultural Heritage Program (L1050 subactivity) initiate the action.

Figures for management actions initiated by the Cultural Heritage Program are available and are apportioned to the BLM through the Land Resources Activity, Cultural Resources Subactivity (L1050). Table 2 presents BLM Cultural Heritage Program appropriations for the L1050 Subactivity for FY 2017-2019.

The BLM Cultural Heritage Program implements multiple streamlining mechanisms that introduce time and cost savings into the NHPA Section 106 compliance process for BLM programs and land use proponents. These innovative tools and alternative processes support the compliance process and overall bureau objectives. Program support includes implementation of the national programmatic agreement for compliance with the NHPA. This national agreement establishes a framework for developing "protocols" between the BLM and State Historic Preservation Offices. Protocols establish expedited consultation procedures for grazing permits renewals, timber harvest, and other types of land use authorizations. Collectively, protocols also identify dozens of authorizations that do not require the BLM to conduct case by case NHPA section 106 consultation.

Table 2. Summary of Appropriated Funding for the Cultural Heritage Program (L1050 Subactivity).

Fiscal Year	2017	2018	2019
Enacted Budget	\$16,131,000	\$17,131,000	\$17,131,000

Budget Accountability

Through the distribution of funds for Cultural Heritage Program activities, including Section 110 actions, the BLM identifies and reviews budget accomplishments to ensure compliance with program directives and appropriate funding usage.

The Department of the Interior Strategic Plan for Fiscal Years 2018-2022 tracks protection of cultural and heritage resources under Mission Area 1: Conserving Our Land and Water. The BLM tracks condition of archaeological sites, historic structures, and museum collections to report on three performance goals. Data for the reporting period is provided in Table 3.

Table 3. Performance Metrics for FY 2017-2019.

Performance Measure	FY 2017	FY 2018	FY 2019
% of Archaeological Sites in Good Condition	75%	92%	91%
% of Historic Structures in Good Condition	49%	48%	48%
% Museum Collections in Good Condition	83%	81%	94%

The BLM uses an activity-based system for collecting data on labor and operation costs, through a combination of the Federal Business Management System (FBMS), which manages financial data and the Performance Data Management System (PDMS), which manages units of accomplishment. Activities conducted by the BLM are assigned a program element code to record the cost of work activities and outputs. Program elements connect costs to strategic goals, performance goals, and workload measures. These workload measures are summarized below (Tables 4, 5, and 6).

Table 4. Cultural Program Workload Measures (Performance Elements).

Code	Workload Measure	Metric
AE	Heritage Resources Education and Outreach	Number of presentations or educational products
BC	Acres Inventoried for Heritage Resources	Number of acres
FD	Heritage Resources Intensively Recorded, Evaluated and Studied	Number of sites
HF	Heritage Resources Stabilized, Managed and Protected	Number of sites
KO	Historic Structures Managed	Number of structures
MY	Heritage Resources Monitored	Number of sites

Table 5. Program Accomplishments Funded by the Cultural Resources Management Subactivity.

Fiscal Year (FY)	Heritage Education & Outreach (AE-1050)	Acres Inventoried for Heritage Resources (BC- 1050)	Heritage Resources Intensively Recorded, Evaluated and Studied (FD-1050)	Heritage Resources Stabilized, Managed and Protected (HF-1050)	Historic Structures Managed (KO-1050)	Heritage Resources Monitored (MY-1050)
<i>2017</i>	2377	75501	709	212	125	3244
<i>2018</i>	2391	66758	1200	213	85	3165
<i>2019</i>	1358	81133	867	9337	74	3073

Table 6. Program Accomplishments Funded by the National Monuments Subactivity.

Fiscal Year (FY)	Heritage Education & Outreach (AE-1711)	Acres Inventoried for Heritage Resources (BC- 1711)	Heritage Resources Intensively Recorded, Evaluated and Studied (FD-1711)	Heritage Resources Stabilized, Managed and Protected (HF-1711)	Historic Structures Managed (KO-1711)	Heritage Resources Monitored (MY-1711)
<i>2017</i>	32196	3895	57	95	35	709
<i>2018</i>	16484	4793	59	70	29	761
<i>2019</i>	11823	3129	64	56	27	652

Reporting on Management Activities

The program informs on activities annually through assorted reports, including the report to Congress on the Federal archaeology program collated by the National Park Service; reports to State Historic Preservation Officers produced under state protocols; reports delivered to the ACHP to fulfill the terms of the BLM National Programmatic Agreement; annual BLM public lands statistics reports; the DOI performance and accountability report; the annual interagency report on the National Trails System; and the collectible and non-collectible heritage assets portion of the BLM financial statement. These reports typically contain statistics about inventory, evaluation, data recovery, permits, law enforcement activities, education and outreach, and tribal consultation. In addition, other reports discuss BLM's museum collections; the status of trails (changes in length, protection, monitoring of high potential sites and segments); budget information; and changes in BLM's land base. The information in these reports typically go to BLM management, as well as to the Department of the Interior and often, on to Congress or other entities interested in how the Federal government uses its funding.

Data Management

Cultural Resources Data Coordination and Sharing

The Bureau's 22 year data sharing partnership with western State Historic Preservation Offices, now known as the Cultural Resource Data Partnership (CRDP), continues to make data available to scholars, consultants, other agencies, and tribes, by supporting the

development of SHPO databases and online systems. Through the partnership, BLM has provided over \$7,000,000 in financial support to SHPOs. The BLM data representatives in each state work with SHPO staff to manage the exchange system, keeping the flow of GIS shapefiles, geodatabases, and other cultural resource information going between offices.

In July of 2018, the BLM released a policy defining a National Cultural Resource Management Data Standard. Development and maintenance of the standard and resultant data is due in large part to the enduring Cultural Resource Data Partnership. The BLM data standard establishes consistent data fields that must be documented for cultural heritage sites and inventories on BLM-administered lands in 11 western states. The standard is implemented through the National Cultural Resource Information Management System (NCRIMS), a geospatial database and on-line web application maintained by the BLM National Operations Center (Figure 1). NCRIMS constitutes a significant shift in BLM data management, introducing cost savings and measurable efficiencies into the BLM's project review process and land use planning. Cultural resource data are more broadly available, aiding large-scale analyses, enabling predictive modeling, enhancing the BLM's response to wildfire and other emergency situations, improving the accuracy of project budgets, and enabling national level access to key program reporting metrics.

NCRIMS is populated from a variety of sources. In some cases, data are uploaded directly from geodatabases maintained by BLM state offices. In others, data are derived from State Historic Preservation Offices or other state-managed geodatabases. NCRIMS data are currently only accessible to BLM Cultural Heritage Program employees, but can be exported for use by contractors and partners as appropriate.

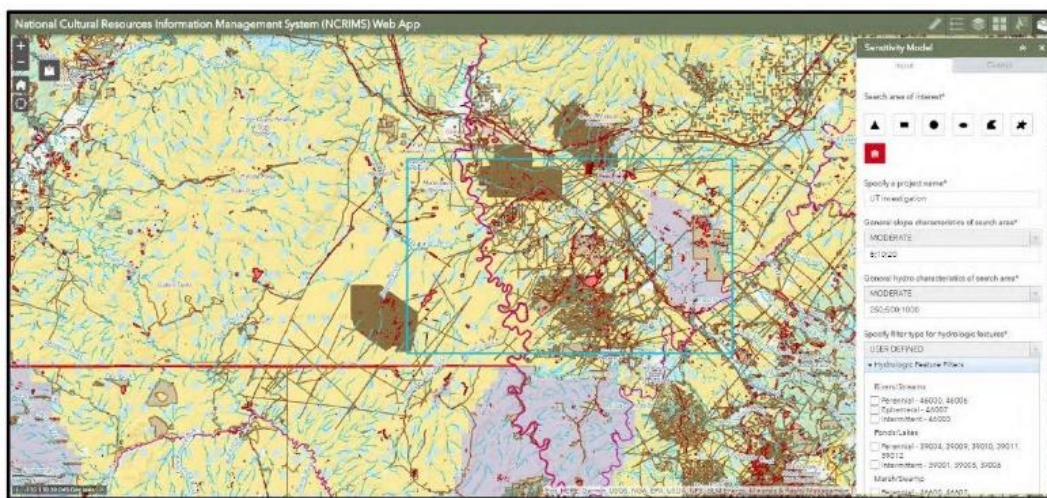


Figure 1. NCRIMS Interface.

In addition to the NCRIMS geodatabase, individual BLM offices maintain a variety of data bases for tracking information about the NHPA Section 106 process, site conditions, museum collections, and other fields pertinent to cultural site management. Offices also maintain hard copy site records, photographs, maps, and reports, many of which are being digitized and added to the NCRIMS database to improve accessibility.

Historic Structures and the Federal Real Property Profile

BLM reporting for historic structures on public lands is based on combined data from the Federal Real Property Profile (FRPP) and records maintained by the Cultural Heritage Program. Real property managed by the BLM is reported to the Federal Real Property Profile Management System (database) consistent with Executive Order 13327, "Federal Real Property Asset Management". For the purpose of BLM reporting to the FRPP, database content is determined by the BLM engineering program, which establishes criteria for inclusion in the database. Because not all historic structures maintained by the BLM meet these criteria, not all 405 structures managed by the BLM as of the end of the FY 2019 reporting period are listed in the FRPP.

To supplement FRPP data, the BLM Cultural Heritage Program maintains a list of historic structures that can be cross referenced with the FRPP. The list includes historic-period structures on which maintenance dollars have been spent, and maintains fields such as site name, site type (structure and district), condition (good, fair, poor, unknown), determination of National Register of Historic Places eligibility, jurisdictional location, and locational information, such as latitude and longitude.

Table 7 shows the number of historic structures reported by BLM for the years FY 2017-2019. A structure may be removed from the list for a variety of reasons that include: a determination that the structure is not historic or that the structure was destroyed by wildfire, for example. If a historic structure is located on public lands, it can be added to the list and the BLM continues to do so.

Table 7. BLM Historic Structures and Properties.

State	Number of Historic Structures		
	FY 2017	FY 2018	FY 2019
Alaska	22	22	22
Arizona	45	47	49
California	51	51	51
Colorado	60	61	62
Eastern States	3	3	3
Idaho	63	63	63
Montana (+SD/ND)	25	26	26
Nevada	30	31	32
New Mexico (+OK, TX, KS)	11	4	4
Oregon/Washington	39	39	40
Utah	12	12	12
Wyoming	39	40	41

Museum Collections

The BLM manages more than 10 million artifacts recovered from significant cultural and historical resources located on public lands. Collections are primarily derived from research projects and regulatory compliance work for proposed land-use activities, and are managed in three BLM repositories, two Federal sites managed by the National Park Service, and about 154 non-federal museum and university repositories. The BLM's goals for these collections are to preserve artifacts for the benefit of future generations, to document them to provide intellectual access and inventory accountability, and to provide opportunities for researchers and the public to enjoy and use the collections.

The BLM repositories are each unique and were developed to accommodate a specific regional need. The Canyons of the Ancients Visitor Center and Museum in Dolores, Colorado, is a museum of the Ancestral Puebloan, Native American, and historic cultures in the Four Corners region. The Billings Curation Center is located within the BLM Montana/

Dakotas State Office in Billings, Montana, and curates collections from Montana and the Dakotas. The National Historic Oregon Trail Interpretive Center (NHOTIC) in Baker City, Oregon, houses collections related to the historic Oregon Trail migration story, preservation of the National Historic Trail, and topics of early settlement and mining, and the Native American interface with emigrants and early settlers along the trail route.

Many artifacts from public lands are housed in non-federal repositories as a result of the permitting requirements under the Antiquities Act and ARPA. The BLM typically does not maintain internal facilities for managing collections and instead partners with museums and universities with the requisite expertise and capacity for managing collections. These partnerships have the added benefit of facilitating public access to collections. As of FY 2019, about 7.5 million objects recovered from BLM lands are known to be housed in non-federal repositories. Over 3 million objects within BLM collections have been inventoried. Progress to improve inventory levels is continually made by repository staff through use of grants, agreements, and contracts.

Identifying Historic Properties - Inventory and Survey

As of FY 2019, the BLM has cumulatively surveyed approximately 27 million acres (11 percent of BLM surface lands) for historic properties, with an average of 627,005 acres surveyed annually from FY 2017 through FY 2019¹. As in previous years, the majority of inventory work was funded by land use applicants and performed by one of the more than 734 consultants permitted by the BLM (Table 8). The BLM has recorded more than 27,644 cultural sites on BLM-administered surface lands during the past three reporting years (FYs 2017-2019).

¹ This figure combines survey conducted for both NHPA Section 106 and Section 110 compliance purposes. The majority of inventory is performed to fulfill Section 106 review requirements.

Table 8. Summary of Literature Reviews, Undertakings Requiring Inventory, Acres Inventoried, Sites Discovered, and Permits in Effect.

Fiscal Year	Literature Reviews	Undertakings with Inventories	Acres Inventoried (BLM Lands)	Acres Inventoried (non-BLM Lands)	New Sites Discovered (BLM Lands)	New Sites Discovered (non-BLM Lands)	Total Cultural Resource Use Permits in Effect
2017	7,211	4,431	640,657	96,801	9,469	1,419	775
2018	7,483	4,916	683,347	209,330	9,164	1,232	816
2019	6,537	4,361	557,012	206,634	9,011	1,695	611

The BLM recorded and designated 8,430 historic properties during the reporting period (FYs 2017-2019), bringing the total number of historic properties on BLM public lands to 63,995. This figure represents roughly 14% of the total number of cultural resources documented on BLM lands to date². During the same period, the BLM added 42 historic properties to the National Register of Historic Places, including a combined 208 sites, buildings, and structures representing individual properties and contributing properties within National Register districts. Cultural resources are predominantly recorded due to activities occurring as a result of NHPA Section 106 compliance work. These activities include applicant-sponsored oil and gas wells and associated infrastructure such as pipelines and roads, wind turbines, mining activities for coal, bentonite, gravel and other extractive industries, transmission lines, and telecommunications facilities and arrays. Undertakings are also associated with in-house projects such as recreation developments like campgrounds, projects associated with grazing and range management, and wildland fire and vegetation management efforts.

BLM states typically require all cultural resources within an area of potential effect to be evaluated under the National Register of Historic Places criteria for evaluation at 36 CFR part 60; however, sometimes sites are left unevaluated. During the reporting timeframe, approximately 3,987 sites were left unevaluated.

Examples of Identification Efforts

Examples of cultural resource identification efforts follow. These projects were promoted by the BLM field office that sought funding to complete the project, either through BLM funds or through partnerships with Federal, state, tribal, educational, or non-profit entities.

² As of FY 2019, slightly more than 445,000 cultural resource sites have been documented on BLM lands. 63,995 of these sites are listed on the National Register of Historic Places as individual properties or contributing elements within districts, have been determined eligible for the National Register through consensus determinations between the BLM and a SHPO, or have been determined eligible by the Keeper of the National Register.

Buck Rock Tunnel Cultural Investigations – Medford District – Cascade Siskiyou National Monument (Oregon)

BLM Oregon partnered with Southern Oregon University Laboratory of Anthropology (SOULA) to explore and document the Buck Rock Tunnel in southern Oregon (Figures 2 and 3). This historic railroad grade was originally surveyed by engineers in 1863 as a potential route through the Siskiyou Mountains between Oregon and California. While



Figure 2. Field Crew Outside One Entrance to Buck Rock Tunnel.



Figure 3. Crew Documenting the Interior of Buck Rock Tunnel During the FY 2018 Field Season.

construction of the line and tunnel occurred intermittently through 1884, the effort was eventually abandoned.

In addition to exemplifying developments in engineering and logging history in the region, the Buck Rock Tunnel site illustrates contributions made by Chinese laborers to the economy and industrial development in the state of Oregon during the mid to late 19th century. Work in FYs 2017 - 2019 produced extensive documentation of the tunnel, including three-dimensional imagery; accomplished survey and archaeological testing around the two tunnel portals; and located artifacts such as opium tin fragments, square nails, a porcelain piece with a “Bamboo” design, brown glazed ware fragments, glass fragments and oil lamp pieces that confirm the presence of Chinese work camps (Figure 4).



Figure 4. Chinese Bamboo Pattern Porcelain Fragment Located During the Survey.

North Fork Passport in Time – Buffalo Field Office (Wyoming)

The **BLM Wyoming** conducted its 10th Passport in Time (PIT) fieldwork project in the south Bighorn Mountains. Six volunteers, accompanied by two BLM archaeologists, donated 270 hours to identify and document cultural sites. Volunteers successfully relocated 16 cultural sites originally recorded in 1974, and produced detailed documentation for each. Crews also found several new sites, which were evaluated for National Register of Historic Places eligibility. This valuable work allows the BLM to manage the sites appropriately in the future, and aids land use planning in the area.

1881 “Nana’s Raid” – Understanding the Apache Wars Through Metal Detectors and Cadaver Dogs – Socorro Field Office (New Mexico)

BLM New Mexico examined several sites associated with a month-long campaign (“Nana’s Raid”) in southern New Mexico headed by Apache leader “Nana” in 1881. Exploration of these sites was aided by use of metal detectors and “cadaver docs” trained to locate human remains. The BLM partnered with a retired National Park Service archaeologist to investigate the historic House of Miguel Chaves, associated grave sites, and several nearby historic sites. Research goals included determining occupation dates for these resources and whether grave sites are from the 1881 raid. Use of a metal detector (Figure 5) enabled identification of several historic artifacts (Figure 6). While these discoveries did not confirm whether sites date to the Spanish Colonial period, field work did build on existing data.



Figure 5. Retired National Park Service Archaeologist Demonstrating Use of a Metal Detector to Locate Artifacts.



Figure 6. Artifacts Identified by Metal Detecting.

The BLM New Mexico also explored apparent grave sites on a newly acquired parcel of land using an elite team of cadaver dogs, a non-intrusive method for locating human remains (Figure 7). The dogs identified two potential historic grave sites in an area thought to be associated with “Nana’s Raid”, one of which is in a previously undocumented location. The dogs also identified an addition 15 potential sets of human remains at a prehistoric site. Information gathered will be helpful in deciding how to manage sites in an area that is easily accessible to the public. Dogs and handlers came from Missouri, Ohio, and Illinois, and were made available to the BLM through a partnership with the U.S. Forest Service.



Figure 7. Cadaver Dogs Identifying Historic Burials.

National Petroleum Reserve, Coastal Erosion Mitigative Excavations – Arctic District Office (Alaska)

BLM Alaska took steps to document two sod houses and a reindeer corral important to local Alaska Native tribes on Alaska's North Slope. The BLM partnered with Iñupiat tribal members and living descendants of individuals who built and used these structures to excavate and document the sites, which are at risk of eroding into the Beaufort Sea along Alaska's north coast. Alaska Native tribal members who assisted BLM crews with excavation offered unique and personal insights into life at these early 20th century structures, two of which are on BLM-administered lands. The third site, a well preserved, partially standing sod house, is located within an Alaska Native allotment, and was occupied until the 1940s.

The Cooper's Ferry Project - Salmon River Archaeology Partnership with Oregon State University and Public Outreach – Cottonwood Field Office (Idaho)

The Cooper's Ferry archaeological site, managed by the **Idaho BLM**, is making some of the most significant contributions to understanding ancient human habitation in the western U.S. in recent years, and is a model for promoting public, tribal, and scientific collaboration. The site contains storage features and fire pits, living surfaces, abundant artifacts representing the Western Stemmed Point Tradition, and faunal and other types of remains (Figures 8 and 9). Research efforts between 2017 and 2019 produced reliable dates for human occupation extending back more than 16,000 years, making the site one of the



Figure 8. Fire Hearth in a Concave Shaped Depression.



Figure 9. Western Stem Projectile Point Found In- Situ in One of the Pit Features.

earliest in North America, producing data about prehistoric subsistence and landscape use, and adding to evidence supporting theories about human migration to the North American continent along the Pacific coast. These scientific contributions are realized through a multi-decade partnership with researchers at Oregon State University, more recent collaborative efforts between the BLM and the Nez Perce Tribe, and other public partnerships.

In addition to educational opportunities for Oregon State University students, recent excavations at the site included Nez Perce tribal interns. The interns participated in the project for the entire field season, contributing to all facets of excavation, and learning data recovery methods on a complex archeological site (Figures 10 and 11). This partnership hosting a seasonal intern from the Nez Perce Tribe has occurred each year since 2016.



Figure 10. Nez Perce Tribal Intern Excavating Circular Pit Feature.



Figure 11. OSU Graduate Explaining Excavation Process.



Figure 12. Interpretive Activities at the Cooper's Ferry Site.

Members of the public were also granted access to the site for educational purposes. In FY 2018, personal tours were given to 704 individuals representing 34 states and eight foreign countries (Figure 12). Since 2012 there have been over 115 videos posted on the Cooper's Ferry YouTube channel with over 197,000 views. Some of these videos are used in classrooms across the country. This channel URL is: <https://www.youtube.com/user/CoopersFerrySite>.

Relocation of the "White Acorn" Steatite Quarry Site – Rock Springs Field Office (Wyoming)

The **Wyoming BLM** located a steatite source known as the "White Acorn", along with previously unrecorded quarry pits and artifacts. The White Acorn site was initially found in the 1990s but not formally documented at the time. After extensive archival research and several unsuccessful attempts to find the site in the field, the White Acorn site was relocated in 2017. BLM Wyoming and staff from the Wyoming State Historic Preservation Office identified and recorded three quarry pits and a steatite bowl blank at the site (Figure 13). The team also found a new steatite source, the "Benge Steatite Locality", comprising thirteen quarry pits around a large steatite-bearing boulder, and engraved tablets (Figure 14). This work expands the number of known steatite sources in the area, contributing to the understanding of resource procurement and exchange in the region.



Figure 13. Steatite Bowl Blank from the White Acorn Locality.



Figure 14. The Steatite Boulder at the Benge Steatite Locality.

Horseshoe Grazing Coordinated Resource Management Plan – Hassayampa Field Office – Agua Fria National Monument (Arizona)

The **BLM Arizona** used LiDAR imagery to aid historic properties identification efforts in support of the NHPA Section 106 (54 U.S.C. § 306108) process for the Horseshoe Grazing Coordinated Resource Management Plan within the Agua Fria National Monument (Figure 15).

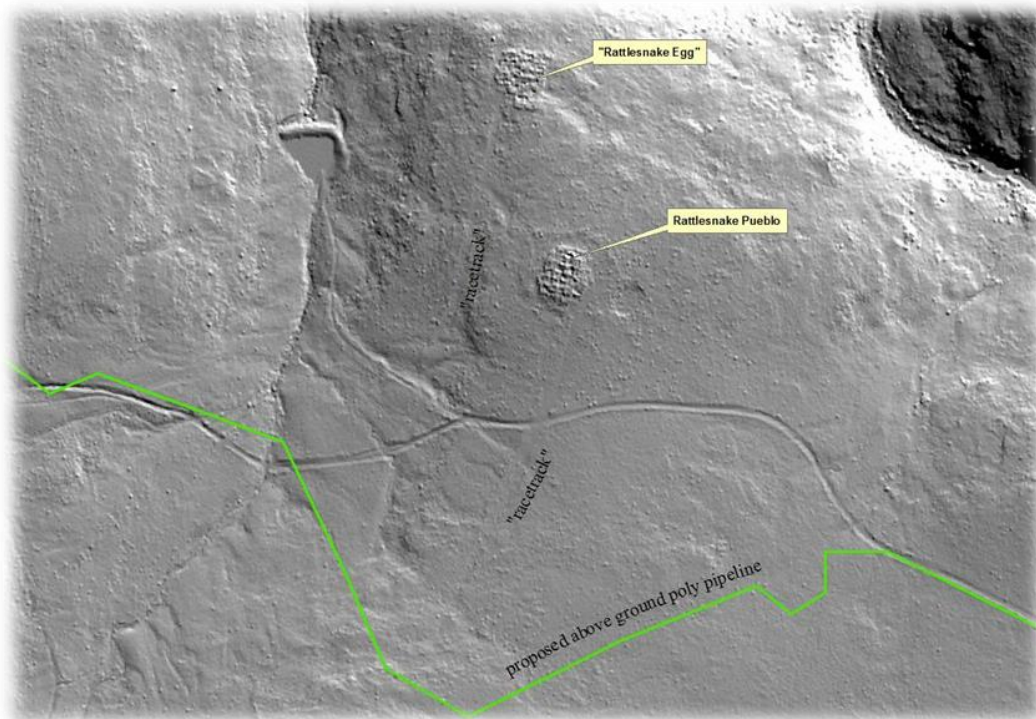


Figure 15. LiDAR Imagery of Proposed Range Improvement within the Agua Fria National Monument.

Imagery identified 17 previously undocumented prehistoric archaeological sites. With the exception of one site attributed to an earlier time period, the newly identified sites exemplify what archaeologists refer to as the “Perry Mesa Tradition”, a central Arizona tradition encompassed almost entirely within the Agua Fria National Monument. In consultation with the Arizona State Historic Preservation Office, all sites were determined eligible for the National Register under criterion “d”, as properties likely to yield information important to prehistory, and are considered contributing elements to the Perry Mesa Archaeological District. Use of LiDAR technology expedited identification efforts for NHPA section 106 consultation, streamlining the approval process for a much needed range improvement project.

Tahini and Chilkat Rivers Region Field Survey – Glennallen Field Office (Alaska)

BLM Alaska, in partnership with members of the Chilkat Indian Village, completed detailed documentation of several rare rock shelters with Tlingit pictographs. These cultural resources occur in a short section of the Tahini and Chilkat Rivers near Haines, Alaska, and are important to members of the Chilkat Indian Village community. One of these rock shelters was identified during a limited survey of the Tahini River conducted by the BLM in the late 1980’s. In 2017, BLM employees and a Student Conservation Association intern accessed the area by helicopter and jet boat and conducted aerial and ground surveys. Planning for inventory of the area was enhanced by consultation with members of the Chilkat Indian Village. Surveys of the short segment of the river visited in 2017 located three rock shelters, two of which contained fading red paintings.

Data from the project and additional consultation with local tribes will guide BLM planning efforts in the future, aiding determination of whether unique cultural and wildlife values warrant establishment of an Area of Critical Environmental Concern (ACEC)³, a special management unit established to protect important conservation values. Since this project covered only a small portion of the BLM managed Chilkat and Tahini Rivers, future surveys along these rivers will likely yield more significant archaeological resources.

West Mojave Route Network Project - Building Trust and Providing Access – Barstow and Ridgecrest Field Offices (California)

The West Mohave Route Network Project (WEMO) is a largescale planning area encompassing 3.1 million acres of public land administered by the **BLM California**. In 2019, the BLM authorized the WEMO project, and amended the California Desert Conservation Area Plan to permit implementation of nine travel management plans that will improve access to public lands for recreation and other purposes, as well as addressing livestock grazing needs in the area. To ensure cultural resources within the planning area are managed properly, the BLM worked with consulting parties including Native American tribes, the Off Highway Vehicle community, avocational groups interested in historic preservation, and recreation advocates to create a multi-faceted strategy for identification and evaluation of historic properties. The BLM developed a GIS predictive model based on cultural site locations and public use intensity to guide needed cultural resource inventory and evaluation within the planning area, eliminating the need to complete field survey for the entire management unit (Figures 16 and 17).



Figure 16. WEMO Interns Conducting Archaeological Excavations.



Figure 17. WEMO Interns Conducting Archaeological Survey.

³ FLPMA authorizes the BLM to designate public land as ACECs as part of land management planning. BLM policy (Manual Section 1613 – Areas of Critical Environmental Concern) provides, “ACESs highlight areas where special management attention is needed to protect, and prevent irreparable damage to, important historic, cultural and scenic values, fish, or wildlife resources...” Such designations demonstrate the BLM recognizes a given area possesses significant values, and has established management measures to protect those values.

The accuracy of the model improves as new inventory data is added annually and affords application of adaptive management methods that benefit resource management. An evaluation plan containing a prehistoric research design for the area and a historic trails context study are in development. These documents will reduce consultation timeframes for completing National Register of Historic Places eligibility determinations for cultural sites.

Protecting Historic Properties

BLM's Cultural Heritage Program strives to protect heritage resources from natural or human-caused impacts or deterioration so that their values can be fully realized over time. The program assesses potential vulnerabilities of heritage resources and develops strategies to avoid, minimize, and mitigate potential adverse impacts from various sources. This includes monitoring heritage resources to assess trends in condition related to natural and human caused impacts. Once identified, BLM implements the appropriate physical or administrative conservation measures.

In FY 2017, the BLM implemented protection measures at 3,402 cultural properties. This number rose slightly to 4,272 in 2018, and again more significantly to 7,238 in 2019. From FY 2017 through FY 2019, the BLM installed 591 new signs, 175 new gates or fences, completed 258 stabilization actions, and implemented 597 maintenance actions. The BLM assigned an additional 3,710 properties some form of administrative protection, such as closure, withdrawal from mineral leasing, or designation as an ACEC.

Eleven of the BLM's 12 state offices have some kind of volunteer site stewardship program. Some states like Arizona and California have been working with volunteer stewards for decades, while others are building base programs. Steward volunteers are trained in field and recording techniques, such as pedestrian inventory strategies and intensive site recordation. They record new sites and monitor previously discovered sites, providing important support to the BLM NHPA Section 110 compliance program as well as information about changes in the physical condition of sites used in prosecuting ARPA violations.

BLM law enforcement rangers add to the Cultural Heritage Program's monitoring and protection efforts. In 2018 alone, Law Enforcement Officers spent approximately 134,507 hours protecting archaeological resources.

Examples of Protecting Historic Properties

The following examples illustrate the BLM's accomplishments in actively protecting historic properties between FY 2017 and FY 2019. These projects were promoted by the applicable field office that sought funding for the project, either through BLM funds or through partnerships.

Long Stone Restoration – South Dakota Field Office (Montana)

The **Montana/Dakotas BLM**, South Dakota Field Office partnered with the U.S. Forest Service Region 1 Historic Preservation Team to restore the Long Stone Building, a historic

munitions structure within the Fort Meade Military Fort Historic District. Fort Meade was established in 1878 to protect gold prospecting and European immigrants in the Black Hills region and remained an active military installation until 1944. Recent preservation measures at the building include replacing the deteriorating tin roof tin and rotted support boards and repointing historic rock and concrete stairs leading to the nine room building. Rehabilitation of this structure will contribute to promotion of public education and recreational experiences at this historic site into the future.

Transforming Cultural Resource Information to the Digital World – Arizona State Office (Arizona)

In 2017, the **BLM Arizona** initiated the process of converting cultural resource data to a digital, geospatial format. This effort will bring Cultural Heritage Program data into conformance with the BLM's National Cultural Resource Management Data Standard, providing a common digital data set accessible to BLM Cultural Heritage Specialists across the country. The pilot project focused on scanning and geo-referencing USGS 7.5 minute quadrangles, digitizing geometry for site and survey data from existing BLM records and a database managed by the Arizona State Museum (AZSITE), and populating attribute data from content in paper records housed at the Sonoran Desert National Monument. Work associated with the pilot project was completed by a Geographic Information System (GIS) intern through the Arizona Conservation Corps (AZCC) and guided by several BLM cultural resource and geospatial program subject matter experts. The BLM Arizona is in the process of adding data from the Arizona Strip District and the Lake Havasu Field and Yuma Field Offices. Completing this work will align BLM Arizona Cultural Heritage Program data with BLM policy and national data standards, and support land use planning to realize BLM's multiple use and sustained yield mandate.

Trinidad Lighthouse Restoration – Arcata Field Office (California)

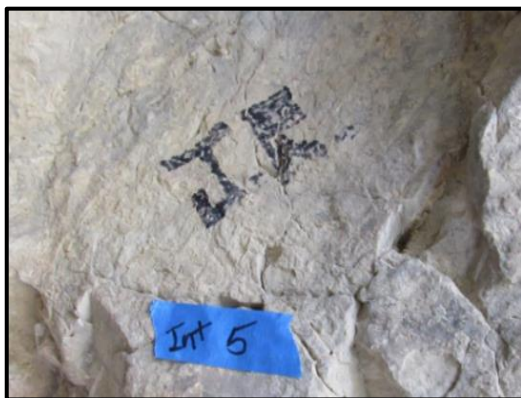
The **BLM California** completed restoration work at the Trinidad Lighthouse. Restoration was guided by the Trinidad Head Lighthouse Management Plan with the aid of volunteer partners from the Trinidad Museum. The lighthouse, built in 1871, still functions as a maritime navigational aid, and serves as a focal point for local community events. The site is open to the public the first Saturday of each month. Docents are on hand to provide tours of the still operating lighthouse. A condition assessment completed in 2017 noted several needed repairs at the facility. In 2018 windows were replaced and metal window casements were carefully removed, painted, and installed following the Secretary of Interior guidelines for historic places (Figure 18). A volunteer with the Trinidad Museum monitors the condition of the exterior paint and applies fresh paint when needed. Other improvements to the property include removal of a sidewalk that does not contribute to the National Register eligibility of the site. Additional restoration efforts address reestablishment of native grasses, construction of a crushed gravel pathway, and bench allowing visitors to enjoy ocean views, and sightings of marine and avian wildlife.



Figure 18. New Window Glass Being Installed at the Trinidad Head Lighthouse.

Graffiti Cleanup – Challis Field Office (Idaho)

In FY2018, the **BLM Idaho**, completed a graffiti cleanup project at a rock shelter containing Native American pictographs (Figure 19). In developing the site restoration plan, BLM Cultural Heritage Program staff met with tribal representatives and rock art specialists to determine the best method for removing the graffiti while also protecting the prehistoric images. The tribes consulted were supportive of the graffiti removal process, and rock art specialists offered information about effective graffiti removal methods. Since that time, BLM archaeologists and law enforcement officers have conducted monthly site visits, and no further incidents of vandalism have been reported.



Before Cleaning



After Cleaning

Figure 19. Before and After Graffiti Removal.

ArchMonitor Statewide Site Stewardship Program – Utah State Office (Utah)

The **BLM Utah** continued its partnership with Friends of Cedar Mesa to develop a statewide site stewardship program. During fiscal year 2018, Friends of Cedar Mesa developed a mobile site stewardship application, ArchMonitor (Figure 20). The application allows site stewards to collect monitoring information digitally on their own mobile devices. Friends of Cedar Mesa and BLM staff beta-tested the app within their own organizations and with the support of existing site stewards. Staff and stewards are excited about the app's ability to seamlessly collect photographic and narrative monitoring information, while also allowing users to review previous monitoring data. After completing a monitoring visit, stewards can digitally submit their information using either an LTE connect or a wi-fi hotspot.

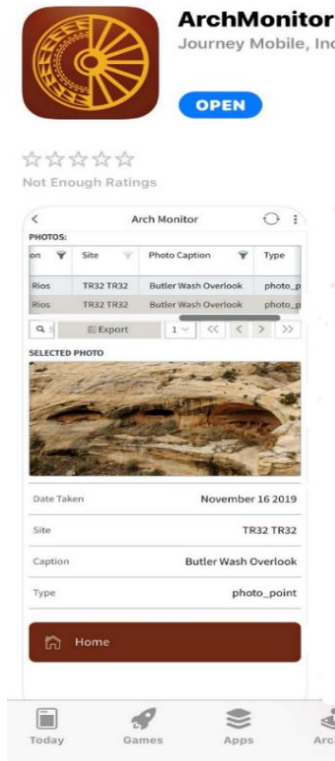


Figure 20. ArchMonitor App in iTunes Store.

GIS Modernization Project – Winnemucca District Office (Nevada)

The BLM Nevada made strides toward digitizing hard copy records, increasing access to cultural resource site information, and bringing geospatial data closer to meeting the BLM National Cultural Resource Management Data Standard. An intern with a graduate degree in GIS, employed by the BLM through the Bureau's Direct Hire Authority, digitized over 500 archaeological site records from with Winnemucca District Office (Figure 21), adding content to the BLM's GIS database.



Figure 21. Intern Studying Archaeological Records.

Bonneville Estates Rock Shelter Stabilization – Elko District (Nevada)

In 2019, six archaeologists from **BLM Nevada** and Texas A&M University stabilized Bonneville Estates Rockshelter (BER) in the eastern portion of the Elko District. BER represents the oldest and best stratified archaeological site in Nevada. Activities completed in FY 2019 stabilized trenches excavated from 2000-2009 during an archaeological field school at the site. Because the site had been left open for a decade, wind and water erosion had caused trench walls to slough and collapse. Archaeologists cleaned up cultural material from areas that had collapsed in the past decade, placed geotextile fabric over the exposed trench faces, and secured the fabric and exposed areas with sandbags. These actions effectively stabilized all the areas that were covered and sand-bagged until further stabilization work and backfilling can be carried out. This work reduced potential safety hazards associated

with the open trenches and preserves remaining intact cultural deposits for future research.

Skinner Cabin Interpretation and Rehabilitation – McInnis Canyon National Conservation Area (Colorado)

In partnership with HistoriCorps, the Museum of the West, and Colorado Canyons Association, **BLM Colorado** completed stabilization of the Skinner Stone Cabin in the McInnis Canyon National Conservation Area (MCNCA) (Figures 22 and 23). The cabin was constructed from local stone sometime in the first decade of the 20th century, and the public frequently requests information about the cabin from the BLM. Over the last 40 years, the wood and sod roof collapsed, causing some of the walls to fall as well. The BLM contacted HistoriCorps with a proposal to rebuild the walls and roof, and in the fall of 2016, HistoriCorps spent three weeks stabilizing the site with master masons and volunteers. To complete the project, BLM also partnered with the Museum of the West to research the cabin and produce informational kiosks for recreational visitors to the site. The project was aided by Colorado Canyons Association, which organized a National Public Lands Day event to construct a fence around the site, further protecting it from deterioration. This project was such a success that MCNCA and partners were awarded a Heritage Preservation Award from the Museum of Western Colorado.



Figure 22. Completed Rehabilitation Work at Skinner Cabin.



Figure 23. Rehabilitation Work in Progress on Skinner Cabin.

Washington County Graffiti Removal – Saint George Field Office and Red Cliffs National Conservation Area (Utah)

Washington County, Utah, is one of the fastest growing counties in the nation and an international tourist destination. A consequence of this growth and visitation is an increase in the incidents of graffiti and vandalism. Numerous studies suggest that visitors ascribe value to a site based on the condition of the site. Graffiti and vandalism lower public perception of value, and often invite further damage. **BLM Utah** staff and volunteers regularly remove and minimize the appearance of graffiti, but removing graffiti near and overlying sensitive rock imagery, like pictographs, petroglyphs and historic inscriptions, requires specialized techniques best completed under the supervision of a professional conservator.

The Saint George Field Office and Red Cliffs National Conservation Area hired a professional conservator to work with staff and volunteers to minimize the impacts of graffiti at the Red Reef Shelter, White Reef Panel, and Land Hill Heritage Area (Figure 24). These three sites are within or adjacent to heavily used public areas that receive as many as 120,000 documented visits a year. The BLM coordinated over 20 volunteers to work with the conservator over a three-week period to perform treatments that eradicated and obscured graffiti at these highly visible sites. The project not only improved the visual condition and perceived value of these three sites, but also trained volunteers about the importance of stewardship and the use of appropriate methods for removing graffiti around sensitive rock imagery. These conservation efforts combined with an active site steward program will help minimize future incidents of vandalism.



Figure 24. Professional Conservator and Volunteers Working at the Red Reef Shelter Site.

Return of BLM Collections from the Tangle Lakes Archaeological District to the University of Alaska Museum of the North – Alaska State Office, Eastern Interior Field Office, and Glennallen Field Office (Alaska)

Archaeologists from **BLM Alaska** worked with the University of Alaska, Fairbanks (UAF) Museum of the North, the late Dr. Fredrick West's estate, and the University of Maine, Orono (UMaine) to return archaeological collections from the Tangle Lakes Archaeological District to a curation facility in Alaska. Dr. West worked in the Tangle Lakes from the 1960s through the 1980s, publishing a number of peer reviewed articles and books on the prehistory of the area and the early peopling of Alaska. During that time, he accumulated a large volume of artifacts under BLM permits, but had been reluctant to return the artifacts to Alaska until his final publications were finished. After the deaths of Dr. West and his co-author, Dr. Brian Robinson, the UAF and the UMaine began working together to return Dr. West's collections. Subsequently in November of 2017, two pallets containing approximately 12,000 artifacts and several boxes of documentation totaling more than 2,000 lbs. and roughly 70 cubic feet, were shipped by the BLM from Orono to the Museum of the North. The cost of shipment was funded by the BLM and Dr. West's estate. Funding also allowed the museum to begin processing the large collection.

Permian Basin Programmatic Agreement – Carlsbad Field Office (New Mexico)

The Permian Basin Programmatic Agreement (PBPA) offers an optional, standardized mechanism for resolving adverse effects on historic properties resulting primarily from oil and gas exploration and production in the Permian Basin of southeastern New Mexico (Figure 25). This agreement between the **New Mexico BLM**, the NM State Historic Preservation Officer, the Advisory Council on Historic Preservation, the Mescalero Apache Tribe, the New Mexico Archeological Council (NMAC), the New Mexico Oil and Gas Association (NMOGA), and the Independent Petroleum Association of New Mexico, was recently updated to address new drilling methods such as hydraulic fracturing, and horizontal and direction drilling of wells. The revised PBPA organizes groups of Federal undertakings associated with oil and gas development into two broad classes: “block project space” for clusters of well pads, frac ponds, drill islands, and other projects that are normally designed with square footprints; and “linear project space” for projects such as pipelines, access roads, flow lines, and others that are normally designed using linear measurements for their footprints. These changes make it easier to apply the PBPA to current projects, specifically regarding contributions for large pads with multiple wells associated with horizontal and direction drilling.

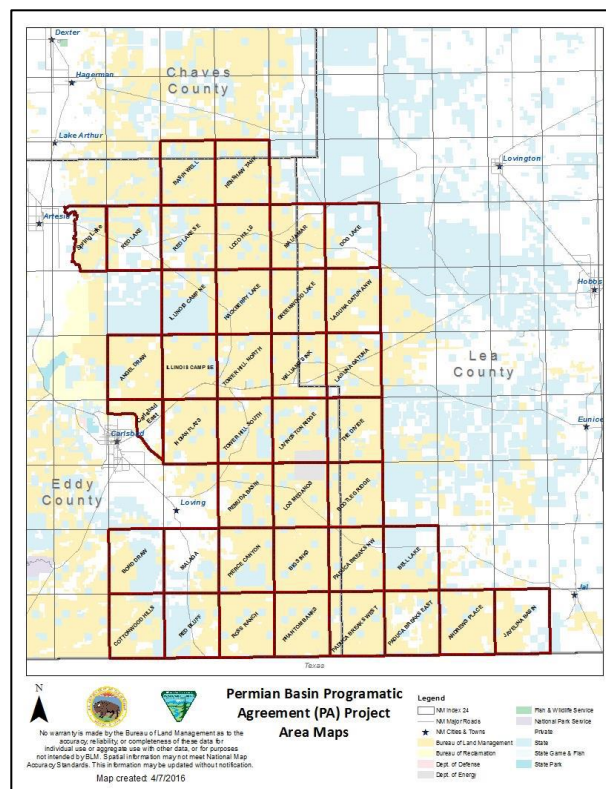


Figure 25. Area Map the Permian Basin Programmatic Agreement in Southeast New Mexico.

National Register Listings

During the reporting period 24 historic properties on BLM lands were listed in the National Register of Historic Places (Table 9). These new listings enhance the BLM historic preservation program, ensuring significant properties are preserved and available for use by future generations.

Table 9. List of National Register of Historic Places BLM Properties.

Fiscal Year	State	Property Name
2017	California	Upper Klamath River Stateline Archaeological District
2017	Nevada	Bahsahwahbee
2017	New Mexico	Bat Cave (Boundary Increase)
2017	New Mexico	Apodaca, Martin, Homestead
2017	New Mexico	Dogie Canyon School
2017	New Mexico	El Buen Pastor Cemetery
2017	New Mexico	Martinez, Margarita, Homestead

Fiscal Year	State	Property Name
2017	New Mexico	Miera, Luciano,Store--Homestead
2017	New Mexico	Vigil, Senon S., Homestead
2018	Colorado	Ute--Ulay Mine and Mill
2018	Colorado	Tarryall Rural Historic District
2018	Montana	Lewistown Satellite Airfield Historic District (Boundary Increase IV)
2018	New Mexico	El Camino Real de Tierra Adentro--La Bajada North Section
2018	New Mexico	El Camino Real de Tierra Adentro--La Bajada South Section
2018	Utah	Johnson Ranch House
2018	Utah	Ballard--Sego Coal Mine Historic District
2018	Utah	Moon House Complex
2018	Wyoming	Medicine House Site
2019	Colorado	Henry Huff Cabin
2019	Montana	Canyon Resort Airways Beacon
2019	Montana	Henneberry, William F., Homestead
2019	Montana	Cow Creek Skirmish Historic District
2019	Montana	Cow Island Landing Skirmish Site
2019	Montana	Lookout Cave

Using Historic Properties

In FY 2019, the BLM recorded 2,221,508 visits to cultural sites. This is an increase of more than a quarter of a million visitors compared with visitation rates in FY 2018, which totaled 1,876,038, and FY 2017, which confirms 1,876,038 visits to archaeological and historical sites. This general trend in visitation at recreation sites on public lands is consistent with overall recreation data for the bureau. While precise figures for the contribution visits to cultural sites make to local economies are difficult to calculate, local economies are certainly affected through employment, as well as taxes to state and local governments.

Although cultural resources are not typically found within town or city centers, BLM offices often are, and serve as gateways to public land venues. Local communities are also part of all resource management and planning efforts and economic development is assessed in BLM Resource Management Plans. Stakeholders are invited to scoping meetings for environmental documents, as well as for planning efforts affecting field offices and districts.

Examples of Using Historic Properties

The BLM promotes appropriate use of historic properties for public education, research, interpretation, and recreational experiences. A few examples illustrating these uses follow. Development of cultural heritage sites for use by the public is promoted by the field office that sought funding to complete the project, either through BLM funds or through partnerships.

Rogue River Ranch Museum Upgrades – Medford District Office (Oregon)

The Rogue River Ranch, administered by **BLM Oregon/Washington**, is one of Oregon’s most cherished historic properties. Built in the early 1900s, it is a stunning visual reminder of the rich history of the Rogue River Canyon. Recent renovation of the main ranch house addressed long-standing maintenance issues and greatly improved the aesthetics of the home’s interior. The improvements have provided a unique opportunity to update collections management practices and enhance the overall experience of visitors through development of new exhibits and interpretive materials. Restoration activities at the main Rogue River Ranch house were completed in June of 2017, and development of permanent museum exhibits and interpretive materials is ongoing (Figure 26).



Figure 26. Rogue River Ranch Restoration Showing Hunting and Fishing Equipment.

Archaeology Road Show – Burns, Northwest, and Prineville Districts (Oregon)

In 2019, BLM archaeologists from three **Oregon/Washington BLM** districts participated in Portland State University’s eighth annual Archaeology Roadshow, traveling to Portland, OR (June 1), Bend, OR (June 8), and Hines, OR (June 29) to share information about the agency’s Cultural Heritage Program with more than 800 members of the public. Event exhibitors and sponsors included multiple Federal and state agencies, Native American tribes, consultants from the private sector, the Oregon Cultural Trust, and the Deschutes County Historic Museum.



Figure 27. BLM Prineville District Archaeologist and Event Participants.

BLM staff-based exhibits and outreach activities featured Oregon’s ancient Native American cultural history and highlighted historic settlement of the Oregon Territory, as well as commerce, and exploration of Oregon and the Pacific Northwest. The “Wagon Wheels Across Central Oregon” display detailed the history of the many early military and wagons roads that led immigrants from the eastern United States to areas such as central Oregon. In Bend, people visiting the BLM exhibit played a game of “History Blinko” and won

prizes such as junior ranger guides, postcards, and Frisbees (Figure 27). The Hines venue featured demonstrations from local artisans (tradition keepers) carrying on the traditions of their crafts—from silver working to basket weaving. Collectively, these events allow BLM staff to share information about BLM cultural resource stewardship with community members who value local history.

Three Rivers Petroglyph Site Desert Exposure Publication – Las Cruces District Office (New Mexico)

The Three Rivers Petroglyph site, administered by the **New Mexico BLM**, is a unique recreation site that features 21,000 significant archaeological petroglyphs. The facility also features two established trails, a visitor center, and tent and RV camping, offering ample public education opportunities. In 2019, the site was featured in the publication “Desert Exposure”, a free monthly magazine widely distributed to the public throughout Southwestern New Mexico. Public exposure about this unique heritage resource contributes to societal appreciation and understanding of cultural resources and serves as an example of how BLM manages these resources.

Eagle Creek Petroglyph Research – Lewistown Field Office (Montana)

In 2017 the **BLM Montana/Dakotas** hosted rock art specialist Dr. Jim Keyser and members of the Oregon Archaeological Society to document and interpret petroglyphs along Eagle Creek, a tributary of the Missouri River located within the Upper Missouri River Breaks National Monument. In the three decades since it was first recorded, the Eagle Creek Canyon site has gone from an essentially uninterpretable enigma, to a readily understandable expression of Plains Biographic rock art, complete with relative chronology and ethnic affiliation for the artists responsible. We can now understand the site as a “calling card,” originally started by a Crow horse raider who entered Blackfoot country and taunted his foes with a petroglyph documenting his presence as an intruder. Later a Blackfoot warrior “cancelled” that taunt by drawing his own horse directly atop that first one. This is typical of the retaliatory “tagging” behavior well documented in historic times for such imagery. That exchange—taunt and retaliation to reclaim the site—did not end the interchange. Exactly as reported in the ethnohistoric literature, Crow warriors came again and again to the Eagle Creek Canyon site on their way north to raid Blackfoot camps, and seeing this “cancellation,” made sure to further taunt their enemies by recording their own successes at the site. Additionally, one Crow warrior also apparently sought supernatural aid at the site by appealing to a powerful spirit bear emerging from its den. Such a depiction was a common protective device on Crow shields of the period. This research resulted in the 2018 publication of *Horse Raiders in the Missouri Breaks: Eagle Creek Canyon Petroglyphs, Montana* (Figure 28).

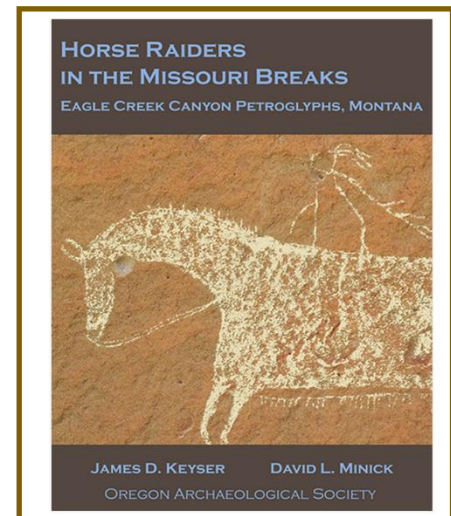


Figure 28. Report Cover.



Figure 29. Hopi Tribe Cultural Advisors at the “Jumping Man” rock art panel in CANM. Photograph by Maren P. Hopkins, Anthropological Research, LLC.

Ethnographic Research – Canyons of the Ancients National Monument (Colorado)

The **BLM Colorado’s** Canyons of the Ancients National Monument (CANM) collaborated with Anthropological Research, LLC to acquire grant funding from Canyonlands Natural History Association’s Discovery Pool, allowing finalization of a report and handbook on ethnographic research. The report documents an extensive review of existing, accessible ethnographic and archaeological literature and BLM archives, and presents primary ethnographic information provided by the

tribes that participated in fieldwork (Figure 29). Goals of the publications are to document the broad traditional homelands of the tribes with connections to the area, to elucidate tribal values and ongoing traditions related to ancestral areas and the natural environment, and finally, to advise the BLM on future tribal engagement. Additionally, the project compiles shortened summaries of non-sensitive tribal information for a Visitor's Handbook that will be disseminated to visitors at Canyons of the Ancients Visitor Center and Museum.

Cortez Mining District Book – Battle Mountain District (Nevada)

The **BLM Nevada** released a report titled *Historical Archaeology in the Cortez Mining District: Under the Nevada Giant* by Erich Obermayr and Robert W. McQueen in FY 2017 (Figure 30). This publication is part of Section 106 mitigation measures implemented in Barrick’s Cortez Hills Expansion Project, which included treatment to over 140 sites in Lander and Eureka Counties. The book tells the story of the Cortez Mining District from the first discovery of gold in 1863 up to WWII in a publicly accessible format. The book is published by the University of Nevada Press.

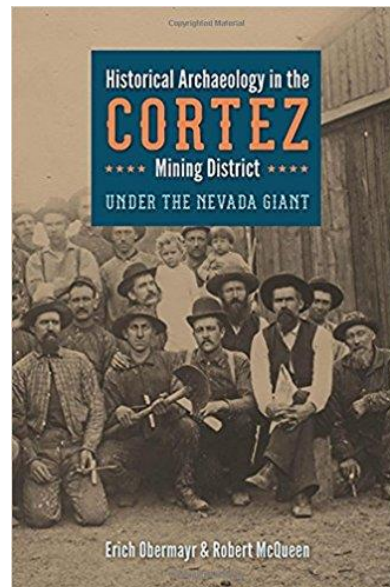


Figure 30. Publication Cover.

Great American Eclipse – Lander Field Office (Wyoming)

During the Great American Eclipse on August 21, 2020, thousands of national and international visitors took advantage of the prime viewing opportunity at the Castle Gardens Rock Art Site along the path of totality, a site managed by the **Wyoming BLM**. Castle Gardens received between 5,000-7,000 visitors from August 17 to August 22, 2017. (Figure 31). Lander Field Office employees were stationed at Castle Gardens to help ensure public lands visitors practiced shared conservation stewardship. BLM archaeologist conducted extensive resource patrols in the area to ensure that educational and interpretive opportunities were provided to members of the public. Visitors were happy with the outreach and interpretation provided by the BLM staff and the overall reaction to viewing the eclipse in the remote Wyoming countryside was overwhelmingly positive. After the eclipse, follow up patrols were conducted to assess any impacts the large amount of visitation may have caused during the event. No new vandalism was found at Castle Gardens during the follow-up patrols. During this eclipse, the BLM Wyoming saw people recreating in areas across Wyoming that rarely see visitation, let alone in such high numbers.



Figure 31. BLM Lander Field Office Archaeologist Providing Site Interpretation at Castle Gardens Rock Art Site.

Natural Resource Conservation Workshop – Kingman Field Office (Arizona)

In July 2017, **BLM Arizona**, participated in the Natural Resource Conservation Workshop for Arizona Youth (NRCWAY). This camp is an opportunity for middle and high school age students to experience natural science professions in a hands-on outdoor environment (Figure 32). The event hosted 33 students from a variety of backgrounds. A BLM



Figure 32. NRCWAY Students Participating in Hands-on Site Documentation.

archaeologist provided students with introductory information about the science of archaeology and an explanation of the importance of BLM resource management. Students participated in various archaeological site documentation activities including site mapping, site and artifact photography, and artifact sketch drawing, which provided students with a hands-on learning experience. The activities gave the students a greater understanding of the importance of artifact provenience, site history, and site documentation methods. Perhaps best summed up by one camper's journal entry, "I never knew I

shouldn't pick those things up. I go camping at my grandfather's cabin in the Chiricahua Mountains and I find all kinds of old stuff. Now I know that I should leave it in place and just take a picture or tell an archaeologist." The NRCWAY Workshop for Arizona Youth is an excellent example of getting youth outdoors and fostering a preservation ethic among the public.

Rough Canyon Service Day and Ute Heritage Day – Grand Junction Field Office (Colorado)



Figure 33. Mt. Garfield Middle School Students Clean Graffiti off Canyon Walls.

The **Colorado BLM** hosted the third cleanup and education event in Rough Canyon (Figure 33). Mt. Garfield Middle School eighth grade students contacted the BLM for a cleanup day in 2017 after observing vandalism occurring at rock art and canyon walls in this popular recreation area. The event continued in 2018 and 2019. Each event was a full day and was coordinated by the BLM Grand Junction Field Office, the Mount Garfield Middle School 8th Grade Class, the Ute Indian Tribe of

the Uintah and Ouray Reservation, the Colorado Archaeological Society - Grand Junction Chapter, Colorado Canyons Association, and the Great Old Broads for Wilderness. Activities included cleaning charcoal graffiti from canyon walls, removing recently applied charcoal and trash, and removing a social trail to the rock art site. A representative from the Ute Indian Tribe of the Uintah and Ouray Reservation taught the students about native cultural landscapes and the importance of rock art sites within these landscapes, while BLM archaeologists and a geologist taught students about the importance of leave no trace ethics and the significance of historic preservation. The partners received a State Historical Fund Grant that expanded the project to include a Ute Heritage Day for the Mount Garfield 8th Grade students. The Ute Heritage Day included several classes and stations where students learned about flintknapping, ethnobotany, rock art, traditional beading, and more. BLM and partners were awarded the 2019 Stephen H. Hart Award from the History Colorado for this project.

Collections Management – Ukiah Field Office (California)

In FY 2017, the **California BLM** received \$3,000 to help complete the write-up of an orphaned collection for an archaeological site excavated by California State University (CSU) Chico in 2000 and 2002. University students excavated several test units at the site, taking field notes, photographs, and maps, and making a partial accession. Unfortunately, no artifact analysis or comprehensive report had been produced and artifacts were not

accessioned to Federal archival standards. While the project is still on-going, accomplishments include GPS data for the site using modern sub-meter GPS technology not available in 2000 and 2002, a draft site form, washed artifacts, re-accessioning the collection with archival artifact tags with better provenience information, and creation of a Microsoft Access database for the collection. Future work will include final site forms and a report, as well as analysis of the collection to provide context to the excavation and the findings.

Final Thoughts

As the largest land managing agency in the United States, the BLM continues to excel and strive to improve management practices and develop creative solutions to new challenges. The Bureau made great progress in standardizing digital geospatial data through implementation of the National Cultural Resource Information Management System in 2018. This geodatabase provides a uniform data set for cultural sites on BLM lands across the western states, improving access to information, enhancing the bureau's ability to engage in large scale planning efforts, and making information available for emergency response. System refinements will improve our ability to conduct predictive modeling for project planning, thus reducing timeframes for completing the NHPA Section 106 process.

BLM states continued implementing state protocol agreements executed under the authority of the BLM's national Programmatic Agreement with the Advisory Council on Historic Preservation and the National Conference of State Historic Preservation Officers. Several states worked with SHPOs to renegotiate existing state protocols to improve their effectiveness and the BLM Utah State Office made strides toward developing a new state protocol agreement. State protocol agreements and other alternatives to the NHPA Section 106 process continued to offer expedited procedures for completing project reviews, for travel management, energy and infrastructure projects, and other land management actions.

The BLM delivered exceptional educational, recreational, and interpretive opportunities to communities and members of the public through valuable partnerships with volunteer groups, Native American tribes, educational institutions, and state and Federal agencies. These collective efforts have the added benefit of increasing the BLM's inventory and documentation for cultural sites, and restoring historic structures, rock art sites, and other types of historic properties.

Thank you for this opportunity to share our great work over the past three years. The BLM's recent headquarters office realignment and relocation brings new expertise in education, youth, and volunteer programs, and will greatly enhance the Bureau's ability to deliver recreational and educational experiences to the public into the future.