

# **Preserve America Report**

**Bureau of Land Management**

**October 2017**

**Historic Preservation Activities for Fiscal Years 2014 – 2016**

**Desert Training Center features from drone**

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## 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 every three years by September 30, on identifying, protecting, and using historic properties in its ownership. 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 sixth submission and covers fiscal years (FY) 2014, 2015, and 2016.

The BLM manages more than 245 million acres of public land—the most of any federal agency—located in 12 western states, including 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 2017 Preserve America Progress Report provides updated information on BLM activities that fall under Sections 106 and 110 of the National Historic Preservation Act (NHPA)(54 U.S.C. 300101, 306101-114), as well as related statutes (Table 1). 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 10 BLM State Offices completing protocol agreements with State Historic Preservation Offices (AK, AZ, CA, CO, ID, MT, NV, NM, OR, WY). In addition, BLM Utah signed a programmatic agreement with the ACHP and the Utah SHPO for small-scale undertakings.

The BLM also developed a new manual and handbook on tribal relations, presenting a comprehensive and coordinated approach to tribal consultation across all BLM program areas: Manual 1780, *Tribal Relations*, and handbook, 1780-1, *Improving and Sustaining BLM-Tribal Relations*.

In addition, the BLM continues to build partnerships with other federal and state agencies, Indian tribes, and nongovernmental organizations to protect resources, promote cultural diversity, engage youth, and provide economic development opportunities, especially through 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 resources program through the Preserve America report.

**Table 1. Summary of Activity on the Public Lands**

Activity	FY 2014	FY 2015	FY 2016
Estimated number of "undertakings"	8,973	6,939	6,808
Acres surveyed for historic properties	481,540	548,181	510,271
Historic properties recorded	7,717	8,202	7,337
Properties listed in the NRHP	7	25	8
Properties determined NRHP eligible	2,960	1,935	2,662
Properties determined not NRHP eligible	3,286	3,358	4,309
Properties protected	4,777	4,851	4,178
Properties monitored	3,965	5,569	3,857
Properties where potential adverse effects were avoided	4,938	4,373	4,281

## 1. Introduction

The BLM 2017 Preserve America presents a “status” update on the bureau’s efforts to inventory, protect, and use the historic properties on public lands. The report is organized following, generally, the ACHP Guidelines for Section 3 reports and is designed to be responsive to the questions and prompts in those guidelines.

The report first provides a general overview of the BLM, the Cultural Program, and resources, both 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 both 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). Mandated by the Federal Lands Policy Management Act of 1976 (FLPMA), the BLM must 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 11 Western states and Alaska, and 700 million acres of sub-surface mineral estate throughout the nation. BLM is a tiered organization, with 12 state offices, under which there are district and field offices.

### 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 12,000 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 in compliance with Federal laws and regulations.

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

FLPMA is BLM’s organic act. It states, “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. BLM policies specific to cultural resources are provided in the BLM 8100 Manual series as the primary policy and implementation guidance in response to federal laws, regulations and orders.

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 8,600 land use proposals for energy development, mining, recreation, vegetation restoration, grazing and other activities for potential effects 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 Resources Management Program streamline the compliance process, 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 of the State Offices employs a Cultural Program Lead, or Deputy Preservation Officer, with one or more archaeologists in district and field offices. BLM currently has 212 archaeology positions and approximately 18 vacancies across the program. This is a small number of employees tasked with the management of cultural resources across 245 million acres of BLM-administered land. With an average ratio of 1.5 million acres of public land per cultural specialist, the focus of the BLM’s management of cultural resources is directed toward Section 106 compliance review, on-the-ground inventory, monitoring, and stabilization of archaeological sites and historic properties. Most proactive cultural resource work is accomplished through cost-share partnerships with state, local, tribal, and non-profit organizations. Section 106 compliance work includes reviewing the reports associated with federal undertakings that are tied to applications from various industries (oil and gas, mineral extraction such as coal and bentonite, and renewable resources such as wind and solar). However, 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 predominantly produced by archaeological consultants. Over the reporting period BLM received and processed 881 cultural resource permit applications; most of these are for compliance activities, though some are for research work. BLM permits in effect averaged 739 for the FY 2014-2016 time period and permits under which work was actually conducted averaged 448.

### The BLM Cultural Resources Program Budget

Funds appropriated to the BLM through the Land Resources Activity, Cultural Resources Subactivity (L1050), are to support the bureau’s management activities, with the exception of project-level review, assessment, evaluation and mitigation required for compliance with Section 106 of the NHPA. The benefitting subactivity model employed by the BLM directs that the program initiating the Federal undertaking fund these compliance activities. Therefore,



Appropriations for the BLM Cultural Resources Management Program for FY 2014-2016 are presented in Table 2. A \$1 million increase in FY 2016 returned the program to the funding level from prior to the FY 2014 sequester decrease.

**Table 2. Summary of Appropriated Funding for the Cultural Resource Management Program**

<b>Fiscal Year</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Enacted Budget	\$15,131,000	\$15,131,000	\$16,131,000

The Cultural Resources Management Program helps streamline the NHPA Section 106 compliance requirements by applying alternative strategies that allow for a more efficient review process for other BLM programs and land-use proponents. While the benefitting program or the proponent funds project compliance costs, the innovative tools and alternative processes developed by the program support the compliance process, providing significant cost-savings and efficiencies. Support includes the negotiation and implementation of the national programmatic agreement, agreements with State Historic Preservation Offices, and training personnel on alternative compliance tools.

### **Budget Accountability**

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

The Department of the Interior Strategic Plan for Fiscal Years 2014-2018 tracks protection of cultural and heritage resources under Mission Area 1: Celebrating and Enhancing America's Great Outdoors. The BLM tracks condition of archaeological sites, historic structures and museum collections to report to three performance goals. Data for the reporting period is provided in Table 3.

**Table 3. Performance Metrics for FY 2014-2016**

<b>Performance Measure</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>
% of Archaeological Sites in Good Condition	85% 68,588/80,685	85% 70,000/82,350	86% 77,412/90,259
% of Historic Structures in Good Condition	51% 221/431	51% 225/435	51% 216/425
% Museum Collections in Good Condition	84% 132/158	85% 135/159	87% 144/165

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. Each activity conducted in the BLM is 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 (Table 4).

**Table 4. Cultural Program Workload Measures**

<b>Code</b>	<b>Workload Measure</b>	<b>Metric</b>
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

In some cases, workload is also supported by National Monuments funding (L1711). The tables below show the appropriations and accomplishments for both Cultural Resources Management (L1050) and National Monuments (L1711) programs (Table 5 and Table 6).

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

State	Heritage Education & Outreach (AE-1050)			Acres Inventoried for Heritage Resources (BC-1050)			Heritage Resources Intensively Recorded, Evaluated and Studied (FD-1050)		
	FY 2014	FY 2015	FY 2016	FY 2014	FY 2015	FY 2016	FY 2014	FY 2015	FY 2016
Alaska	70	50	46	5,124	3,120	3,852	46	22	33
Arizona	89	81	80	2,615	2,790	3,596	25	25	27
California	88	91	123	4,839	3,690	3,188	91	71	134
Colorado	59	65	94	3,574	2,492	1,703	17	31	29
Eastern States	7	7	7	83	45	44	0	0	0
Idaho	38	25	26	1,550	3,783	1,542	44	113	35
Montana	82	48	54	2,867	3,511	59,695	288	179	650
Nevada	26	69	266	2,505	285	3,820	31	40	76
New Mexico	107	25	46	384	6,100	1,437	43	17	26
Oregon	20	31	43	885	2,912	2,616	38	43	56
Utah	82	80	1,090	5,375	3,772	6,013	73	341	44
Wyoming	75	48	75	231	212	2,030	67	8	11

**Table 5. Continued**

State	Heritage Resources Stabilized, Managed and Protected (HF-1050)			Historic Structures Managed (KO-1050)			Heritage Resources Monitored (MY-1050)		
	FY 2014	FY 2015	FY 2016	FY 2014	FY 2015	FY 2016	FY 2014	FY 2015	FY 2016
Alaska	35	0	0	20	0	0	10	36	76
Arizona	56	31	26	11	19	17	228	205	147
California	9	65	94	7	12	10	367	302	317
Colorado	1	10	19	1	11	15	121	194	181
Eastern States	11	1	2	3	3	1	5	11	12
Idaho	10	16	3	43	6	4	202	395	199
Montana	7	8	9	3	39	35	91	112	211
Nevada	12	33	17	0	3	22	202	903	879
New Mexico	7	10	11	15	0	0	1038	246	241
Oregon	11	5	9	2	15	18	193	183	202
Utah	29	15	59	2	4	3	220	317	629
Wyoming	75	3	12	3	4	8	120	71	87

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

State	Heritage Education & Outreach (AE-1711)			Acres Inventoried for Heritage Resources (BC-1711)			Heritage Resources Intensively Recorded, Evaluated and Studied (FD-1711)		
	FY 2014	FY 2015	FY 2016	FY 2014	FY 2015	FY 2016	FY 2014	FY 2015	FY 2016
Alaska	0	0	0	650	0	0	7	0	0
Arizona	83	93	108	550	480	150	17	10	7
California	1,463	1,522	1,216	0	150	50	13	10	6
Colorado	428	482	476	460	220	528	22	3	6
Eastern States	300	2,908	2,808	0	0	0	0	0	0
Idaho	2	6	4	130	190	6,665	0	0	0
Montana	403	202	7,951	0	0	0	0	0	0
Nevada	38	15	31	250	250	208	0	0	0
New Mexico	27	2	31	10	10	165	0	0	0
Oregon	2		1515	0	0	0	0	0	0
Utah	219	149	209	3,283	3,752	3,455	57	112	36
Wyoming	0	0	0	0	0	0	0	0	0

Table 6. Continued

State	Heritage Resources Stabilized, Managed and Protected (HF-1711)			Historic Structures Managed (KO-1711)			Heritage Resources Monitored (MY-1711)		
	FY 2014	FY 2015	FY 2016	FY 2014	FY 2015	FY 2016	FY 2014	FY 2015	FY 2016
Alaska	0	0	0	0	0	0	0	0	0
Arizona	16	18	19	16	16	18	0	0	0
California	33	40	30	6	7	4	193	209	223
Colorado	5	3	4	0	0	0	65	43	32
Eastern States	0	2	0	2	3	4	194	95	516
Idaho	0	0	0	0	0	0	15	16	8
Montana	1	0	0	0	0	0	10	9	0
Nevada	1	1	2	0	0	0	8	0	20
New Mexico	19	0	5	0	0	0	7	7	17
Oregon	3	0	0	1	1	1	19	0	0
Utah	8	7	15	5	8	5	190	155	145
Wyoming	0	0	0	0	0	0	0	0	0

### Reporting on Management Activities

The program informs on activities annually under many reports, including the report to Congress on the federal archaeology program collated by the National Park Service; to the State Historic Preservation Officers under state protocols; to the ACHP under the national Programmatic Agreement; to the public lands statistics; to the DOI performance and accountability report; to the

museum collections management summary; to the annual interagency report on the National Trails System; and to the collectible and noncollectible 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; 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 dollars.

## Data Management

### Cultural Resources Data Coordination and Sharing

The Bureau's 20 year data sharing partnership with the western State Historic Preservation Offices continues to make data available to scholars, consultants, other agencies, and tribes. The partnership includes financial support to SHPOs, as well as technical support between SHPOs and BLM. The BLM data stewards in each state work with SHPO staff to manage the exchange system, keeping the flow of GIS shapefiles and other cultural resource information going between offices.

### Historic Structures and the Federal Real Property Profile

The Federal Real Property Profile (FRPP) is only used by the cultural program as part of the historic structures report. The FRPP program is managed by the engineering program. States complete a table identifying their historic structures (named sites, structures and districts) and include condition (good, fair, poor, unknown), determinations of eligibility for the National Register, jurisdictional location, and locational information such as latitude and longitude. The table below shows the number of historic structures reported by BLM for the years FY 2014-2016 and how many have a FRPP number (Table 7). A structure may be removed from the list for a variety of reasons which include: a determination that the structure is not historic or that the structure was lost due to wildfire or other destruction. If a historic structure is located on the public lands, then it can be added to the list. The BLM continues to identify historic structures and add them to the list.

**Table 7. BLM Historic Structures and properties with a FRPP number.**

State	Number of Historic Structures			# of properties with FRPP number		
	FY 2014	FY 2015	FY 2016	FY 2014	FY 2015	FY 2016
<b>Alaska</b>	22	22	22	8	8	8
<b>Arizona</b>	44	44	45	12	12	12
<b>California</b>	53	55	51	22	21	20
<b>Colorado</b>	64	60	60	6	6	6
<b>Eastern States</b>	3	3	3	1	1	1
<b>Idaho</b>	63	63	63	1	1	1
<b>Montana (+SD/ND)</b>	25	25	25	10	10	10
<b>Nevada</b>	31	31	31	11	12	12
<b>New Mexico (+OK, TX, KS)</b>	35	35	35	1	1	1



<b>Oregon/Washington</b>	39	39	39	20	20	20
<b>Utah</b>	14	14	12	2	2	2
<b>Wyoming</b>	38	38	39	1	1	1

The BLM complies with Executive Order 13327, “Federal Real Property Asset Management,” by reporting real property to the FRPP database. The BLM Cultural Resources Program maintains a list of Historic Structures, which includes historic-period structures on which maintenance dollars have been spent. This inventory is cross-referenced with the FRPP. Of the 425 historic structures reported to the Cultural Resources Program in FY 2016, 140 were included in the FRPP. The BLM Engineering Program provides the criteria for what should be listed in the FRPP. The 141 listings include 1 National Historic Landmark, 44 properties listed on the National Register, 57 properties determined to be eligible for the National Register, five properties determined not to be eligible, and 34 properties that have not been evaluated.

### Museum Collections

The BLM manages more than 10 million artifacts and specimens recovered from significant cultural and paleontological resources located on public lands. Collections are derived from research projects and regulatory compliance work for proposed land-use activities, and are managed in three BLM facilities, five other Federal sites managed by the National Park Service, and 158 non-federal museum and university repositories. The BLM’s goals for these collections are to preserve artifacts and specimens for the benefit of future generations, to document them in order to provide intellectual access and inventory accountability, and to provide opportunities for researchers and the public to enjoy and use the collections.

Most artifacts and specimens from the public lands are housed in non-federal repositories, a result of the permitting requirements under the Antiquities Act and ARPA. In general, the BLM does not maintain internal facilities for managing collections, and instead partners with museums and universities with the requisite expertise and capacity for managing collections. More than 5 million artifacts have so far been documented in non-federal repositories, and there are likely upwards of 15 million, based on projections and considering all collections made since 1906 when the Federal government first started regulating the gathering of objects from Federal lands.

The BLM does maintain three repositories, each unique and developed to provide a specific regional need. The Anasazi Heritage Center (AHC) in Dolores, Colorado, is a museum of the Ancestral Puebloan (or Anasazi) Cultural and other Native cultures in the Four Corners region. The Billings Curation Center is located at the BLM Montana State Office and curates collections from the region. The National Historic Oregon Trail Interpretive Center (NHOTIC) houses collections related to the historic Oregon Trail migration story, preservation of the National Historic Trail, and topics of early settlement and mining, natural history, and the Native American interface with emigrants and early settlers along the trail route. That facility is located in Baker City, Oregon.

## 2. Identifying Historic Properties: Inventory and Survey

Through FY 2016, the BLM cumulatively has surveyed more than 25 million acres (approximately 10 percent of BLM surface lands) for historic properties, with an average of 669,967 acres surveyed annually from FY 2014 through FY 2016. As in previous years, the majority of the inventory work was funded by land use applicants and performed by one of the more than 739 consultants permitted by the BLM (Table 8, Table 9 & Table 10).

**Table 8. Summary of Literature Reviews and Undertakings Requiring Inventory**

BLM State Office	Literature Reviews			Undertakings with Inventory		
	FY 2014	FY 2015	FY 2016	FY 2014	FY 2015	FY 2016
<b>Alaska</b>	138	131	140	20	23	18
<b>Arizona</b>	223	266	272	143	144	137
<b>California</b>	666	637	527	285	287	263
<b>Colorado</b>	414	576	455	244	264	233
<b>Eastern States</b>	36	6	0	1	0	0
<b>Idaho</b>	314	274	322	179	130	123
<b>Montana</b>	655	835	433	430	452	211
<b>Nevada</b>	310	349	315	165	156	248
<b>New Mexico</b>	2,363	1,008	1,512	1,678	1,460	1,277
<b>Oregon</b>	515	387	414	192	217	152
<b>Utah</b>	943	304	457	610	389	285
<b>Wyoming</b>	2,396	2,166	1,961	1,294	1,216	923
<b>Total by year</b>	8,973	6,939	6,808	5,241	4,738	3,870
<b>Total for period</b>	22,720 literature reviews			13,849 undertakings with inventory		

**Table 9. Summary of Acres Inventoried for Cultural Resources**

BLM State Office	Acres Inventoried BLM			Acres Inventoried non-BLM		
	FY 2014	FY 2015	FY 2016	FY 2014	FY 2015	FY 2016
<b>Alaska</b>	8,122	9,016	5,977	265	125	4
<b>Arizona</b>	13,477	13,513	15,217	34,091	1,761	3,002
<b>California</b>	62,994	74,177	34,211	10,799	15,855	3,598
<b>Colorado</b>	34,418	31,022	27,447	7,578	3,576	3,562
<b>Eastern States</b>	0	5	0	4	0	0
<b>Idaho</b>	31,379	20,842	78,203	949	6,701	982
<b>Montana</b>	18,773	18,954	24,860	25,200	36,350	7,391
<b>Nevada</b>	63,126	109,367	102,336	3,129	6,800	2,565
<b>New Mexico</b>	41,783	40,754	83,030	33,303	37,568	57,349
<b>Oregon</b>	39,049	53,584	32,694	615	464	0
<b>Utah</b>	104,265	112,502	71,586	18,568	22,825	6,732
<b>Wyoming</b>	64,154	64,445	34,710	50,906	38,202	29,089
<b>Total by year</b>	481,540	54,8181	510,271	185,407	170,227	114,274
<b>Total for period</b>	1,539,992 BLM acres inventoried			469,908 non-BLM acres inventoried		

Table 10. Summary of Sites Identified

BLM State Office	New Sites Discovered BLM			New Sites Discovered Non-BLM		
	FY 2014	FY 2015	FY 2016	FY 2014	FY 2015	FY 2016
Alaska	135	70	70	7	4	0
Arizona	213	260	181	248	36	93
California	769	1,577	896	391	527	60
Colorado	1,434	1,076	692	279	186	162
Eastern States	3	5	0	0	0	0
Idaho	395	375	1,307	7	35	2
Montana	143	240	199	331	367	38
Nevada	1,079	1,606	1,603	88	90	532
New Mexico	652	478	708	267	260	350
Oregon	335	655	335	77	23	0
Utah	1,713	1,326	775	259	171	66
Wyoming	846	534	571	651	408	245
Total by year	7,717	8,202	7,337	2,605	2,107	1,548
Total for period	23,256 sites discovered on BLM			6,260 sites discovered on non-BLM		

The BLM has recorded more than 381,771 cultural properties in surveys on BLM-administered surface lands through FY 2016.

The BLM recorded and designated 7,557 historic properties during the reporting period (FYs 2014-2016), bringing the total number of historic properties on BLM public lands to 57,291. During the same period, the BLM added 12 historic properties to the National Register of Historic Places, containing 204 individual contributing properties. Cultural resources are predominantly recorded due to activities occurring as a result of 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, wildland fire and vegetation management.

BLM states typically require all cultural resources within an area of potential effect to be evaluated under the criteria of eligibility found within the National Register. However, sometimes sites are left unevaluated. During the reporting timeframe, approximately 4,746 sites were left unevaluated. This is an increase of about 577 sites since the 2014 report.

### Examples of Identification Efforts

Following are examples of proactive identification projects. These projects were promoted by the applicable field office that sought funding to produce the project, either through BLM funds or through partnership opportunities.

## Unmanned Aerial Systems (UAS)

**BLM Nevada** coordinated with students and faculty from the University of Nevada Reno (UNR) archaeology and engineering programs to record and monitor archaeological sites using Unmanned Aerial Systems (UAS) (Figure 1). The UNR Nevada Advanced Autonomous Systems Innovation Center (NAASIC) used UAS (drones) to capture high resolution photography of an archaeological site on public land. The UAS recorded detailed and overview imagery of areas that contain prehistoric petroglyphs, rock rings, and other features. This study will allow UNR and BLM to discover methods that work well in the field and what improvements can be made to increase the field tools available for archaeologists. Products expected include the creation of three-dimensional (3D) maps of cultural landscapes and high quality imagery that can be used to digitally analyze and measure petroglyphs and archaeological features.



Figure 1. Drone being used to record and monitor sites.

In **BLM Montana**, prescribed fire work intersected with the Henry Smith Site, a large prehistoric archaeological site in mixed grass prairie with significantly dense stone features (Figure 2). Primarily designed to remove vegetation to allow for research work, the fire provided a clear view of an Avonlea period cultural resource complex. The site consists of numerous stone effigies, both anthropomorphic and zoomorphic, stone cairns, drive lines, and stone circles across several hundred acres. The resources were mapped using an unmanned aerial vehicle (UAV) that took aerial imagery and created a 3D map of the entire site (Figure 3). This was the first time UAV technology has been used for archaeology in the northern plains. In addition, during the prescribed fire, the Missoula Fire Sciences Laboratory placed temperature sensors within designated “mock” cultural sites which consisted of both faunal (bone) and lithic (stone) remains. The instruments gathered data that, after study, will allow BLM to better determine the grass-fueled fire’s maximum temperature and understand its interaction with cultural resources.



Figure 2. Henry Smith Site with stone feature in foreground and prescribed fire in background.



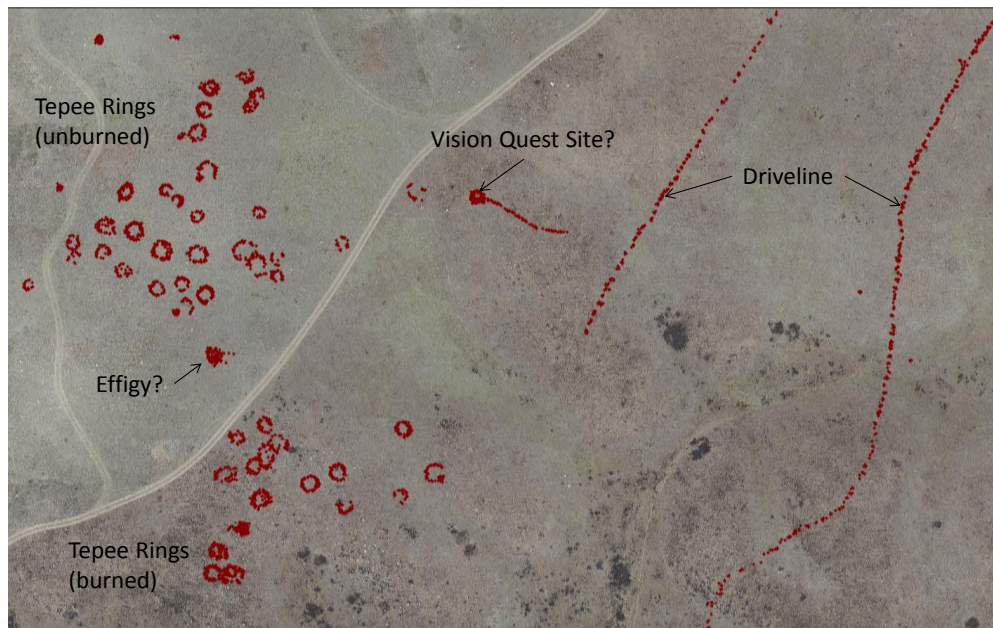


Figure 3. Aerial imagery of the Henry Smith Site with feature locations.

**BLM California** completed projects using UAS at the Desert Training Center (DTC) during the reporting period (Figure 4). The original proposal was designed to test the applicability and effectiveness of UAS to record large landscape-based historic archaeological sites, specifically the DTC's Iron Mountain Divisional Camp, which is also a BLM California Area of Critical Environmental Concern. The assessment will determine the value of the UAS work by comparing costs to benefits between traditional data collection methods and UAS collections methods, viability of images, and relevant labor factors such as time, risk and costs. The processed imagery is highly accurate and has excellent resolution. UAS is a very cost-efficient method to record the complex series of roads, paths, rock alignments and other features found at DTC.



Figure 4. Desert training center UAS work.

## Targeted Survey

Identification work continued in the Grand Staircase Escalante National Monument (GSENM) in **BLM Utah** and the BLM's work with the Colorado Plateau Archaeological Alliance. Archaeologists conducted inventories in grazing allotments lacking cultural resource information, as well as monitored known archaeological sites for grazing-related impacts. Using site forms with a "grazing impacts" check box, monitoring activities provided interesting results (Figure 5). While certain sites and classes of sites do suffer from livestock activities, the majority of monitored sites show cattle use, but no grazing-related adverse effects. This finding underscores the necessity for accuracy in describing aspects such as impacts to sites. The Utah site form check box should not be used to simply indicate signs of livestock, but for adverse effects to cultural resources from livestock. Consultants were informed of these findings and asked to be more accurate when describing the nature of grazing-related impacts. The photograph to the right shows a BLM archaeologist and a volunteer recording an archaeological site on the Kaiparowits Plateau in GSENM.



Figure 5. GSENM staff recording site and grazing impacts.

**BLM Colorado** focused on inventory of two aboriginal trail systems within the Colorado River corridor. These and other trails are historically significant to today's living descendants of the Ute people and the professional and public communities that value the study of Ute heritage and early western Colorado history.



Figure 6. Overview of aboriginal trail systems within the Colorado River Corridor.

Centrally located in the Ute Indian Tribes aboriginal territory, the two selected trail segments are part of the Sawatch Mountains system (Pisgah Mountain Section) and White River Plateau system (Dotsero Section) (Figure 6). A total of 2500 acres were included in a reconnaissance survey for cultural resources. Overall, 33 sites and 71 isolated finds were identified and documented during



the project. Sites located within the Pisgah Mountain Section of the trail are associated with springs and exhibit diagnostics from the Early Archaic (ca.5500-3750 BC) and possible Foothill-Mountain complex (ca.9500-700 BC), which indicated this trail was used for a long period of time. Newly recorded sites indicated an Early Numic and Protohistoric/ Historic Ute occupation of the area from artifacts such as diagnostic Desert side-notched and Cottonwood Triangular points and a Leaf-shape knife; a campsite with gun parts and Euroamerican tent poles associated with a metal lance point and other Ute artifacts; four brush game blinds associated with game trails, and several other sites with the configuration of Numic camps. The Dotsero Section proved less productive based on a low number of sites and isolates and a lack of diagnostic artifacts. The low site density may be attributed to the lack of springs in the immediate vicinity and to the high relief of the terrain. The photograph above provides a panoramic overview of the Pisgah study area looking south toward Pisgah Mountain.

### Photogrammetry

In partnership with Colorado State University (CSU), **BLM Colorado's** White River Field Office hosted a 12 day archeological field school in the Miller Creek Archeological District. The project provided teaching, training, and research opportunities for undergraduate and graduate



Figure 7. Miller Creek Archeological District rock shelter.

students and faculty from CSU. Approximately 24 students from CSU carried out minor systematic testing of a Fremont era pit structure and a previously looted rock shelter to locate intact buried cultural deposits (Figure 7). Students also learned photogrammetric (3-D) mapping at several of the better preserved corn storage granaries. Photogrammetric mapping will create 3-D models of features that can be used for public interpretation, condition assessment, and volumetric research on granary size. Lastly, students were able to participate in Class III survey to look for previously undocumented cultural resources alongside BLM archaeologists. Above is a photograph of a Fremont granary in Skull Creek rock shelter.

### Light Detection and Ranging (LiDAR)

**BLM New Mexico** Farmington Field Office archaeologists continue to be technical advisors with the BLM National Operations Center (NOC) regarding LiDAR acquisition efforts in the field office. Farmington Field Office requested additional funds through the unfunded needs request at midyear in 2016 and obtained additional funding from planning. The field office worked with the NOC to complete a Scope of Work for LiDAR acquisition for planning and cultural resources. The task order was issued for Geospatial Technical Data Support Services. Data acquisition for 1,486 square miles of coverage to identify prehistoric Chaco roads is expected to be completed by the end of September 2016. The photograph below shows a one meter resolution hillshade derived QL2 LiDAR acquisition, displaying a Chacoan Road in the Aztec Ruins National Monument Area (Figure 8). This image is similar to what BLM will obtain through the contract.

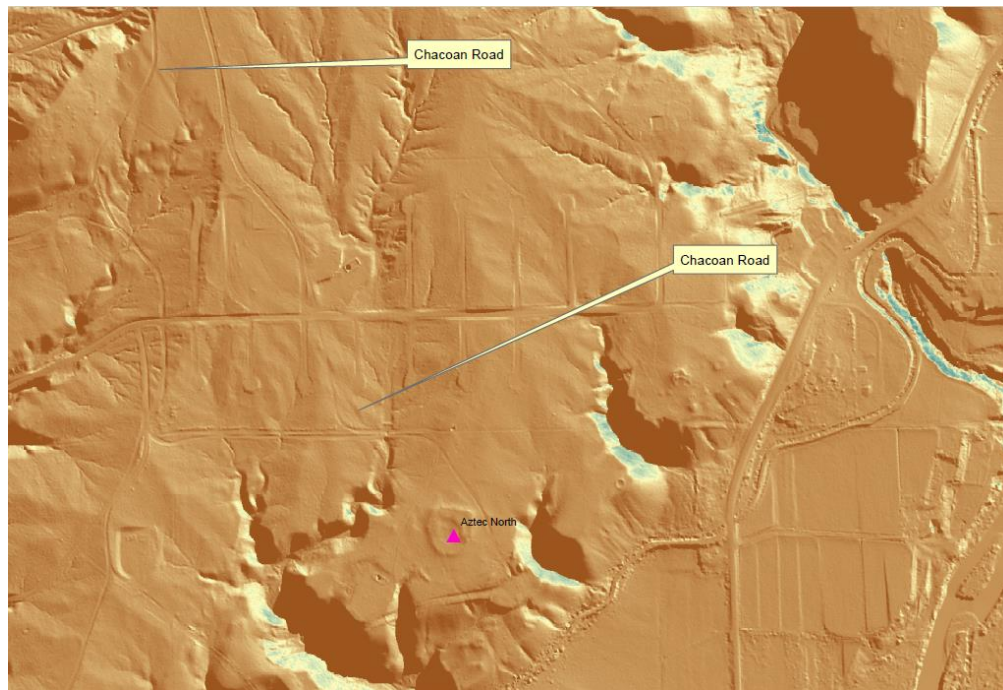


Figure 8. LiDAR Data showing Chacoan Road.

### Partnerships in Identification

BLM works with a multitude of partners, including other federal agencies, state agencies, tribes, local governments and private organizations, in complying with both Section 106 and Section 110 of the NHPA, as well as other laws and regulations. Through these partnerships, BLM assets (dollars and time) are combined with other funding, allowing investment into programs that are effective, sustainable and enduring.



## Public

The **BLM Nevada** Black Rock Field Office hosted almost 30 volunteers from Trails West and the Oregon and California Trails Association for a weekend project at Massacre Ranch. Using sniffer dogs, BLM investigated two possible emigrant trail burial sites (with negative results), a site form for a buried emigrant wagon was updated, and three segments of the Applegate Trail were confirmed as original trail traces (Figure 9). The photograph at right shows the volunteers on-site.



Figure 9. Trail volunteers conduct field investigations.

In **BLM Wyoming**, the Buffalo Field Office hosted its seventh Passport in Time (PIT) project. Several volunteers documented impacts from a range improvement water pipeline constructed through a buried unevaluated prehistoric site. The original range improvement project was a Section 106 foreclosure and the site was discovered after the pipeline was constructed. After consultation with the Wyoming State Historic Preservation Office, BLM utilized PIT volunteers to excavate shovel tests and 1x1 meter units in order to make a determination of eligibility and document any damage the pipeline caused to portions of the site (Figure 10). As a result of the fieldwork, the site was determined not eligible to the NRHP. After one week spent in the field, an additional week was spent in the lab while PIT volunteers prepared recovered artifacts for curation. The photograph (at right) shows the volunteers conducting test excavations at the site within the Welch Ranch Management Area.



Figure 10. PIT project investigations.

## Tribal Partnerships

**BLM Montana** continued its partnership with Chief Dull Knife College and the Northern Cheyenne Tribe on an Ecoregional Ethnographic Assessment. The effort has focused on developing a process to identify, document, evaluate, and map places of traditional religious or cultural significance to the tribe, to identify culturally important plant and animal species and their associated ecosystems that are critical for the maintenance of Northern Cheyenne cultures and traditions and to assess the potential effects of identified change agents upon resources important and significant to the tribe. The project focuses on Elders' stories, memories and their language, which provides a narrative about the important places on the landscape including heritage sites, features, plants, animals, and birds. The emphasis is also on their aboriginal territory where BLM

has partial jurisdiction. All of this information is being placed into a geospatial database that will provide important data to the college, tribal members, and BLM. The tribe benefits by capturing this legacy data for present and future generations. BLM benefits by gaining a better understanding of the tribe's significant resources and by being able to make more informed land management decisions. BLM plans to begin work with the Crow and Yankton Sioux Tribes on similar projects.

Several BLM states are involved in collaborative efforts with tribes to train and participate in both stewardship and Section 106 projects. In **BLM Nevada**, an active tribal monitoring program was created with the Te-Moak Tribe of Shoshone Indians of Nevada and the constituent bands. This "landscape" approach emphasizes the tribal monitor's ability to react to a variety of issues identified by the tribal community, in order to continue their cultural lifeways on aboriginal territories currently managed by the BLM District. Over 20 participants have graduated from the program since 2014 and are now working for their respective communities monitoring projects on public and private land.

### 3. Protecting Historic Properties

BLM's cultural resources management 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 condition and trends with regard to natural and human caused impacts. Once identified, BLM implements the appropriate physical or administrative conservation measures.

In FY 2014, the BLM placed some type of protection measure on 4,777 cultural properties. This number rose slightly to 4,851 in 2015, primarily due to an increase in on-the-ground monitoring, and then declined to 4,178 in 2016. From FY 2014 through FY 2016, the BLM completed 547 new signs, 254 new gates or fences, 347 stabilization actions, and 634 maintenance activities. The BLM assigned an additional 4,399 properties some form of administrative protection, such as closure, withdrawal from mineral leasing, or designation as an area of critical environmental concern (ACEC).

#### Partnerships in Protection

Almost every BLM state has a site stewardship program of some kind. Some states like Arizona and California have been working with volunteer stewards for decades, while others are building their base program. 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 for Section 110 responsibilities.

BLM law enforcement rangers also add to the cultural program's monitoring and protection efforts. Rangers from one BLM state completed 732 patrol checks of cultural (and paleontological) sites in 2016. That number averages to 2 per day throughout the year.

## State Partnerships

As part of the state protocol, **BLM Oregon** has joined in partnership with the Oregon State Historic Preservation Office to permit the use of the Oregon Cultural Resource Information System (OCRIS). This program, through a custom agency interface for the ORSHPO, will be used as the consultative vehicle for Section 106 and Section 110 processes and documentation. The OCRIS will now allow for the exchange of data both seamlessly and digitally between the two agencies. During 2015 and 2016 there were several OCRIS training sessions offered for internal and external users as well as consultation and coordination with the National Operations Center (NOC) for OCRIS servers, configuration, and deployment strategies.

## Public Partnerships

**BLM California** worked on emergency stabilization of the historic Cleveland Mill in 2014. The site dates to the early 1870s and was used continuously until 1980. While it has undergone many alterations, the mill possesses several characteristics that make it eligible for listing on the National Register. The structure contains the original ore bins, conveyer belts, Pelton wheel, amalgamating tables, ball mill, and table separator. Prior to beginning the stabilization, BLM removed 13 flatbed truckloads of modern trash and debris from the site. During site



Figure 11. Cleveland Mill roof collapse imminent.

documentation it was discovered that two foundation walls and the entire south side of the structure had failed, putting the mill at immediate risk. Using in-kind materials, BLM was able to prevent the loss of the mill structure and related features (Figure 11 and Figure 12). The majority of the stabilization work was accomplished using skilled volunteer labor and interns from the Student Conservation Association. Post-stabilization, the site will be interpreted for the public and nominated to the NRHP.



Figure 12. Cleveland Mill after stabilization work.



A Wyoming Conservation Corps (Corps) team assisted the **BLM Wyoming** Newcastle Field Office to remove fire killed trees and deadfall from areas near 38 petroglyph panels to protect them from future wildfires and clear access along walking routes used on public tours. The crew also removed tangled fencing and fence posts that had been uprooted during a flashflood, which had hindered access to a large petroglyph panel. The crew cleared flashflood debris from two sections of the stream channel to prevent future debris dams. Several techniques were used to prevent livestock from impacting the petroglyphs including repairing and rebuilding livestock exclusion fences. In additional work, the Corps crew inspected three archaeological habitation sites for post-fire erosion and pin flagged newly exposed artifacts. The team stabilized soil erosion with Curlex landscape fabric strips (Figure 13). The crew continued past efforts to remove rock fall and sediment in front of a petroglyph panel and excavated soil that was still covering part of the panel in order to prevent it from damaging the buried glyphs. Throughout the work, and on a day devoted to education, the field office archaeologist provided educational information and promoted discussions, so that the students understood the value of the site protection work they were accomplishing. The Corps crew especially appreciated the sensitivity given to cultural resource sites and the importance of their conservation effort.



Figure 13. Corps team stabilizing soil erosion

#### **BLM Colorado's** Canyons of the Ancients National Monument

administers a broad site stewardship program that includes training. There are 75 sites, both prehistoric and historic, that are actively monitored by 46 site stewards. The volunteers annually contribute approximately 650 hours of time, driving over 7,500 miles. At an estimated BLM volunteer value of \$22.14/hour, this assistance equates to a total of \$14,391.00 for donated labor and \$4,294.00 for mileage. Those numbers come out to a savings of \$249.13 per site to the government and the public. The volunteers took advantage of training classes such as pottery identification, artifact illustration, and rock art identification and recordation.

**BLM Arizona** has a robust site steward program across the state. In the Arizona Strip Field Office, 57 site stewards contributed 1,893 volunteer hours in a single year, monitoring conditions at 85 sites within the field office and the Vermilion Cliffs National Monument. This effort provided the BLM with an estimated dollar value of \$41,911.02. In the Kingman Field Office, there are 17 site stewards who effectively monitor more than 60 at-risk sites on BLM and state trust lands. BLM's relationship with these avid volunteers allows monitoring across 2.5 million acres and effective actions when damage or vandalism is reported.



The **BLM Arizona** Yuma Field Office actively monitors approximately 30 cultural resource sites a year. Monitoring is focused on sites where protection efforts are being evaluated. In particular, two sites just outside of the Yuma Proving Ground are targeted, the Tule Springs Petroglyph Site (Figure 14) and the Tule Springs Cabin Site. The sites are jointly managed with the Yuma Proving Ground and are extremely remote, accessible only through the Proving Ground itself. Despite the difficult access, the sites are favorites of the recreating public and get a lot of visitation during the winter season. Photographs are taken each year in order to better assess the protection needs of each site and compare changing site conditions to the baseline documentation.



Figure 14. Tule Springs Petroglyph Site.

The **BLM Montana** Site Stewardship Program completed training sessions for new site stewards each year of the reporting period. In April 2016, the Montana Archaeological Society recognized the stewardship program with its Conservation Archaeology Award for outstanding efforts in engaging and training public volunteers in the systematic monitoring and reporting of archaeological sites on public lands.

**BLM New Mexico** supports the State Historic Preservation Office's SiteWatch program. In 2014 BLM's engineering, cultural and law enforcement programs came together with SiteWatch volunteers to construct a fence line barrier and install signs to deter off-road vehicle travel, illegal dumping and vandalism in the vicinity of Hill Top Pueblo. The volunteers monitor critical archaeological and historical sites, identify looting and other sources of deterioration, install anti-looting/anti-vandalism signs, and record unreported sites in unexplored areas. In one year, over 5,000 hours of service were donated.

**BLM California** Central Coast Field Office staff and volunteers from the local community used traditional building methods and materials to begin stabilization and restoration of the Mocetini Cheese Barn. Early work addressed immediate life, property, safety issues and subsequent years will finish stabilization; account for any dairy-related equipment in the barn for possible restoration or display; and begin long-term restoration of the barn.

When large acreages of vegetation burn in close proximity to highly populated urban areas, cultural resources can be placed at a higher risk from unauthorized collection or looting. **BLM Idaho** found an opportunity to educate public land users on the significance of preserving America's history by placing 12 "Protect America's Past" signs at highly visible and popular recreation areas that were burned in the 2015 Soda Fire (Figure 15). These signs include information on the importance of leaving artifacts in place, about cultural resource laws, and emphasizing stewardship.



Figure 15. Protect the Past sign.

## Multi-Agency Initiatives

Since the early 20th century, Utah has had a long and well-documented history of archaeological, paleontological, and other natural resources being looted and vandalized on federal, state, and tribal lands. Unfortunately, these issues have continued to the present day, and numerous incidents on BLM-administered public lands have recently received national and international media attention. In order to educate the public about the consequences of these behaviors and promote more responsible outdoor ethics, **BLM Utah** and *Tread Lightly!* initiated a partnership to develop and implement a statewide public awareness campaign called “Respect and Protect,” to engage the public in the stewardship of our nation’s priceless cultural and natural heritage.

Early data gathered about the project shows that 2 Native American tribes, 7 federal agencies, 10 state government agencies, 2 county governments, 11 universities and colleges, 9 museums, 22 non-profit organizations, 21 private sector businesses, and 38 individuals participated in an online survey and/or regional stakeholder meetings to identify key issues and messages the public awareness campaign should emphasize. The logo below was developed out of this effort (Figure 16).



Figure 16. Respect and Protect logo

The online survey was taken by 212 individuals, highlighting that the looting of archaeological and paleontological resources that occurs for financial gain or personal use demonstrates a clear lack of respect for Native American cultures and/or America’s collective cultural and natural history. Other looting, such as taking home an arrowhead, potsherd, or small fossil, demonstrates a lack of knowledge about laws prohibiting these behaviors and/or a lack of understanding about the relevance of archaeological resources to contemporary Native American communities.

The intentional vandalism of archaeological, paleontological, and other natural resources demonstrates a clear lack of respect for Native American cultures and/or America’s collective cultural and natural history. The unintentional vandalism of archaeological, paleontological, and natural resources due to uninformed behaviors and/or poor outdoor ethics demonstrates the need for consistent messaging promoting responsible outdoor recreation etiquette. There is a need to expand and enhance stewardship and education opportunities for the public to more actively protect these resources and educate Utah residents and visitors about the consequences of these behaviors. There is a need for law enforcement efforts to deter and prevent these illegal behaviors and hold individuals responsible.

The ultimate goal of the Respect and Protect public awareness program is to eliminate the looting and vandalism of archaeological, paleontological, and natural resources. Beginning in Utah, another primary goal of the program is to expand the partnership with Native American tribes, local, state, and federal agencies, museums, non-profit organizations, and private sector business that are interested in supporting the campaign's goals. Expanding the partnership into other BLM states will amplify the key messages and ensure these messages are consistently communicated across the west, regardless of jurisdiction.

Key messages heard from the stakeholders included the following:

- **The number of archaeological, paleontological, and other natural resources that have been looted or vandalized in Utah is unacceptable.** It is up to us as stewards of our nation's cultural and natural heritage to work together to eliminate this illegal behavior. There are a wide variety of volunteer opportunities available to protect archaeological, paleontological, and natural resources, as well as numerous organizations and initiatives that can provide educational services about these resources in your local community.
- **Archaeological and paleontological sites should be enjoyed respectfully.** The public can minimize their impacts by leaving artifacts and fossils in place, not entering or sitting on structures, using existing trails, and not touching rock art. Members of the public who find archaeological or paleontological resources that are exposed or in danger of being damaged should leave the objects in place and contact the appropriate authorities. An archaeologist or paleontologist will visit the location, professionally document at-risk resources, and ensure they are appropriately protected.
- **Archaeological resources found on Utah's public lands are still culturally and religiously significant to many Native American communities today.** The looting and vandalism of these resources have real and personal consequences to these Americans, and these behaviors represent blatant disrespect of native cultures.
- **The looting and vandalism of archaeological and paleontological resources represent an irreplaceable loss** of important scientific data that could have expanded our understanding of America's cultural and natural history.
- **The looting and vandalism of archaeological and paleontological resources from federal, state, and tribal lands is against the law.** Members of the public who witness these behaviors taking place and/or suspect that such incidents have occurred should contact the appropriate authorities. These authorities will investigate these incidents and prosecute individuals participating in these behaviors to the maximum extent allowable by law.

As more BLM State Offices and other partners join this effort, these key messages may be customized to fit the need of the offices, agencies and partners. See the posters below that were created for this outreach program (Figure 17 and Figure 18). Information on the program will be dispersed through BLM's websites, social media, online and print media marketing, media engagement (i.e. press releases), outdoor billboards, and brand awareness efforts. BLM will be monitoring and tracking the success of the program annually by the number of public service announcements, social media posts, volunteer projects and events, number of advertisements, visitors to the website, number of facilities who display the information, number of individuals who saw the campaign and the number of individuals who report looting and vandalism incidents to the 1-800 tip hotline promoted through campaign materials.

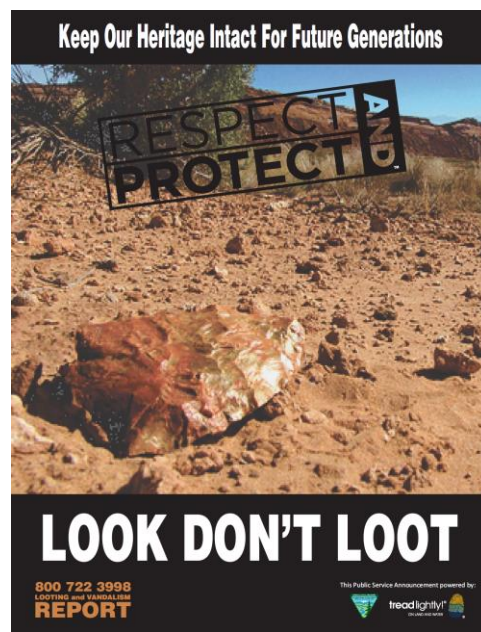
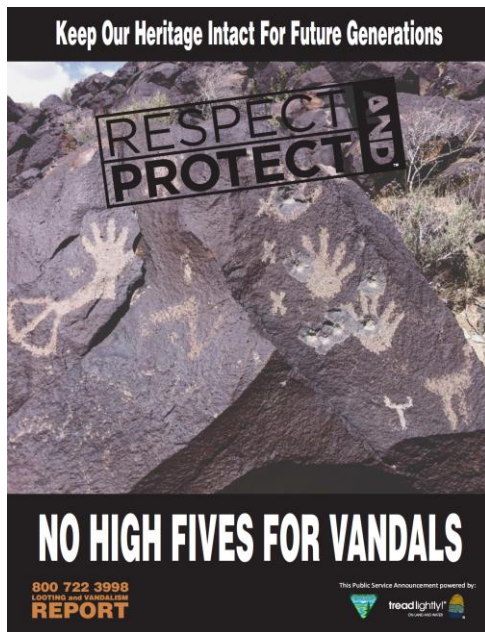


Figure 17. Respect and Protect promotional materials (2 posters).



Figure 18. Respect and Protect promotional materials (social media).

This one was used in a social media post to promote Respect and Protect. Although not directly stated, it shows how visitors should respect pictographs by not touching them and only taking photographs.





Figure 19. Archaeology camp badge.

Additionally, a new partnership began in 2016 between **BLM Utah**, the U. S. Forest Service, Edge of the Cedars State Park, BLM's Project Archaeology and Southern Utah University developed and conducted a three day archaeology camp for Girl Scouts and tribal youth over Memorial Day weekend. The camp was set on the Manti-La Sal National Forest, instruction was given at Edge of the Cedars, and field excursions were on BLM lands on Cedar Mesa. Eighteen girls (ages 10-16) and four leaders from the Moab and Bluff areas attended the camp. Several of the scouts represented the Navajo Nation. A special archaeology and camp patch was created and all of the girls received these as an award for completion of the Project Archaeology curriculum requirements (Figure 19).

### Tribal

In the Gold Butte area of **BLM Nevada**, the agency has actively begun to reengage in this archaeological wonderland and in 2016 joined with the Southern Paiute People and the Friends of Gold Butte for a Culture Walk (Figure 20). The site stewardship program began monitoring anew



Figure 20. Gold Butte culture walk with the Nuwu.

and reported that, during the two year absence there, little damage has been done to the petroglyph panels or habitation sites in the Gold Butte area. BLM Nevada is working on a Historic Properties Treatment Plan to protect and interpret the most visible public sites. Increasing visitation to the area will require an active plan to protect the resources, as well as to give the public information about the deep history of the area.



## Training

### BLM National Training Center and ACHP

Our staff have access to various training opportunities from BLM's National Training Center (NTC) in Phoenix, Arizona. The Washington Office provides financial assistance to NTC to offer expense-paid, in-person training for specific cases, such as for the Fundamentals of the Cultural Program, which is intended for new BLM archaeologists. Funding for training can be an issue and those decisions are based on management priorities. NTC also offers courses through the Knowledge Resource Center or DOI Learn, and distance learning is promoted as a useful alternative. The following courses were offered during the reporting period, FY2014-2016 (Table 11).

**Table 11. NTC Training Courses Offered to BLM Staff.**

<b>Course Name</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>Total</b>
ARPA	38	36	25	99
ARPA Damage Assessment	24	32	Not offered	56
Fundamentals for Managing the Cultural Heritage Program	40	Not offered	42	82
Effective Tribal Consultation	Not available	Not available	17	17
Tribal Consultation*	1	5	2	8
Tribal Consultation for Managers*	3	1	3	7
History of the Relationship between US Government and Tribes*	23	20	57	100
Working with Alaska Native Tribes and Entities*	6	7	10	23
Fundamentals for Managing the Cultural Heritage Program – self-study*	Not available	Not available	5	5
Managing Cultural Resources with other Land Uses*	6	18	15	39
Overview of Cultural Resource Protection Law*	1	1	3	5
Cultural Heritage Program: A Course for Managers*	Not available	13	17	30
Managing Historic Period Mining Resources*	Not available	Not available	16	16
Programmatic Agreement for Solar Energy Projects*	1	2	1	4
BLM's National Programmatic Agreement and State Protocols*	28	24	15	67
BLM NAGPRA Workshop	Not offered	17	Not offered	17
Managing Museum Property	Not offered	5 BLM & 1 partner staff**	1 BLM & 4 partner staff**	11
Curating Natural History Collections	Not offered	1 BLM	1 BLM & 4 partner staff**	6
<b>Total</b>	<b>171</b>	<b>176</b>	<b>228</b>	<b>575</b>
* Designates online courses      **BLM pays for staff from partner curatorial facilities to attend.				

In addition, based on the agreement that BLM has with the ACHP and the agency liaison position, the ACHP has offered 4 free courses per year for BLM employees in 2015 and 2016. Participation ranged from 40-50 people from BLM offices across the west for such classes as "Meeting the Reasonable and Good Faith Identification Standard in Section 106 Review," "Innovative Approaches to Section 106 Mitigation," "Defining the Area of Potential Effects," "Cultural

Landscapes: Identification and Effects Assessment,” and “Managing Confidential Information and Section 304.” In addition, several individual BLM states have hosted the ACHP’s liaison to the BLM, in teaching both the basic Section 106 training and the advanced course on agreement documents.

### BLM Field Office Training Opportunities

**BLM Wyoming** hosted geospatial experts from the BLM’s National Operations Center who provided training in the field at Castle Gardens Rock Art Site, and at the Wyoming State Museum (WSM). The 3-day field training in 2014 showed BLM archaeologists and Northern Arapaho tribal members how to document rock art using high-resolution stereo photographs.

After processing the field photographs to create a series of digital 3D models of the rock faces, in 2016 the photogrammetry specialists documented the Great Turtle Shield that is curated at the WSM. The petroglyph was hacked out of the sandstone cliff and stolen in 1940. The new images have “replaced” the Great Turtle Shield back in the cliff wall, showing us what it might look like had it been left in place (Figure 21, Figure 22, Figure 23, and Figure 24). Attendees at the second training included staff from BLM, SHPO and the State Museum.

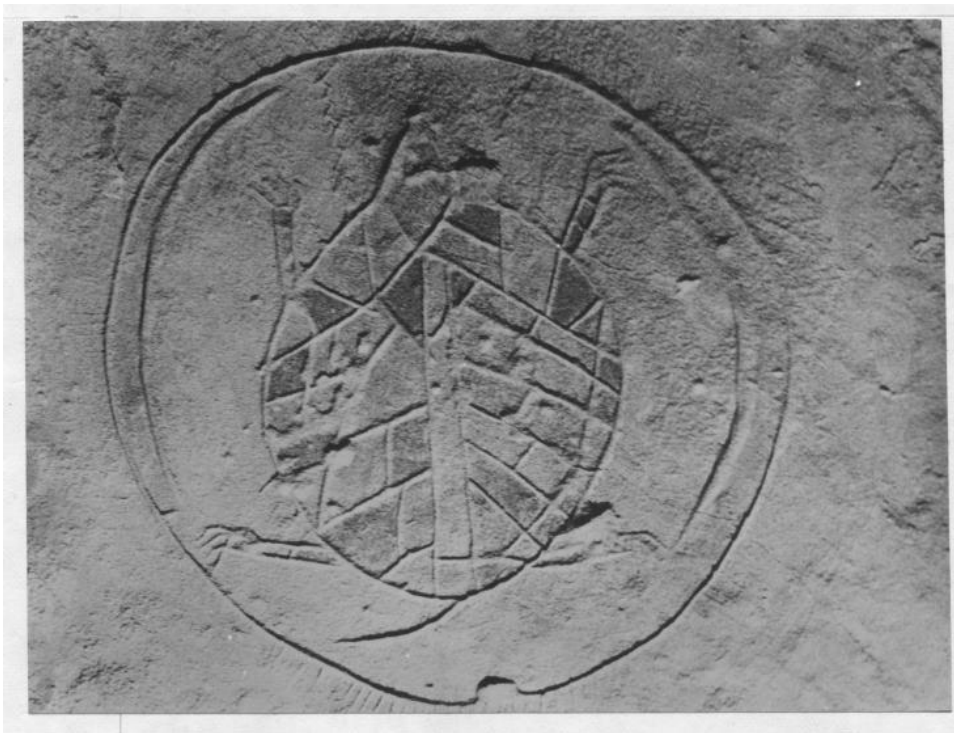


Figure 21. 1931 Photograph of the Great Turtle Shield in place.



Figure 22. Staff photo-document the Great Turtle Shield.



Figure 23. The Great Turtle Shield, showing faded red, yellow, and green colors.





Figure 24. Photogrammetric insertion of the Great Turtle Shield back into the vandal hole.

The **BLM Oregon** Roseburg Field Office cultural program helped organize and host a Resource Advisor/Resource Advisor Fireline (READ/REAF) Training in 2016. Class instructors came from the Confederated Tribes of Grand Ronde and the National Park Service. There were 46 attendees including tribal and federal agency representatives from the BLM and U.S. Forest Service. The class curriculum included general READ/REAF training, along with sections that specifically focused on cultural resources. This training was especially helpful since wildland fire is an annual occurrence across the west.

In 2016, the **BLM Wyoming** Buffalo Field Office hosted an Advanced Metal Detecting for the Archaeologist training. This course attracted more than 20 BLM, SHPO, private archaeological consultants and avocational archaeologists. The training took place at the Crazy Woman Battlefield in Johnson County. The Crazy Woman Battle is a little known skirmish fought on July 20, 1866, near the Bozeman Trail crossing of Crazy Woman Creek. The battle was between the U.S. Army and most likely Sioux and/or Northern Cheyenne warriors. The fight was one of the earliest in the Powder River Basin in the early stages of what is often referred to as “Red Cloud’s War.” The battle site is listed on the National Register of Historic Places and has a few BLM interpretive signs; however, no physical remains of the battle have been located to date.

The metal detecting effort was the first step in an ongoing research project to identify the battle site location. In the photograph below, a Wyoming SHPO archaeologist shows off a 1860s era mini-ball found during the metal detecting training at the battlefield (Figure 25).





Figure 25. Mini-Ball identified during metal detecting training.

Training also occurs as part of site stewardship activities. **BLM California** consistently partners with the California Archaeological Site Stewardship Program (CASSP) to train volunteers to work with professional archaeologists. During the reporting period, field offices hosted more than six workshops including an advanced training focused on documenting historic-era buildings.

## Planning for Management and Protection

### Programmatic Agreements

Two of the largest project Programmatic Agreements (PA) over the course of this reporting period came out of California. The West Mojave (WEMO) Travel Management planning project involved about 15,000 miles of routes in two field offices. **BLM California** and interested parties met on a monthly basis for nine months to craft a successful programmatic agreement. Invited to participate were 19 federally recognized tribes, five non-federally recognized tribes, 11 federal agencies, six state agencies, five counties, and 18 organizations and individuals with demonstrated interest in the project. A GIS predictive/sensitivity model was developed for cultural resources across the travel plan area. Five interns from the American Conservation Experience randomly sampled the WEMO route network, completing over 5,500 acres of inventory, identifying and recording 307 new cultural resources.

The Desert Renewable Environmental Conservation Plan (DRECP) Programmatic Agreement (PA) among **BLM California**, California Office of Historic Preservation, and the Advisory Council on Historic Preservation was executed on February 5, 2016 (Figure 26). The DRECP will direct possible siting for future utility scale renewable energy projects on BLM-administered lands in the southern California deserts. The PA is the result of BLM's consideration of input obtained from invitation, consultation, and outreach with 45 federally recognized tribes, seven tribal organizations, 89 federal, state, and local agencies, 42 academic institutions/museums/historical societies, 29 industry representatives, 72 other organizations, and five individuals. Four working group meetings were held in 2015 and between 30 and 40 people attended each meeting, either in person or by phone. Key aspects of the PA include cultural resource sensitivity analyses intended to inform siting decisions and to start project specific discussions early between consulting parties; a scientific peer review process; a cultural resources training program; and a regional compensatory mitigation program addressing cumulative impacts. Concurring Parties that have signed the PA include seven federally recognized tribes, one tribal organization, nine agencies, four academic institutions, museums, and historical societies, three industry representatives, seven other organizations, and one individual.



Figure 26. SHPO, ACHP and BLM sign the DRECP Section 106 PA.

**BLM New Mexico's** successful Permian Basin Programmatic Agreement (PBPA) was extended for another ten years. Signatories and other interested parties met in May 2015 to discuss the future of the PBPA. Attendees included representatives from the oil and gas industry, the ACHP, the Mescalero Apache Tribe, the NM SHPO, New Mexico Archaeological Council, BLM, and environmental compliance companies. Over 15 successful products have come from the mitigation agreement including a book on plant utilization in southeastern New Mexico; a report on evaluating the Transect Recording Unit method of site recordation; a report evaluating 500 radiocarbon dated sites in the area and an experimental project using Light Detecting and Ranging (Lidar) remote sensing in three areas to locate rock ring-middens. In 2016 the PBPA was recognized as a Section 106 Success Story by the Advisory Council on Historic Preservation.

### Management and Protection Plans

Mission Santa Ana de Cuicuiburitac, established in 1797, was one of several missions begun by Spanish Franciscan friars in the late 1700s and remained in operation until the 1820s. It served as a satellite hub for the Spanish Colonial Mission System. Mission Santa Ana de Cuicuiburitac is listed on the National Register of Historic Places and recently conditions at the site were described

as threatened. Within the past several years, the Ironwood Forest National Monument in the **BLM Arizona** Tucson Field Office has experienced increasing amounts of illegal human smuggling as well as drug trafficking, increases in border patrol vehicular traffic, and severe soil erosion on the nearby playa. With the recent completion of a Cultural Resource Management Activity site plan, protection measures have been identified that will aid the BLM with its preservation efforts, including physical barriers in the form of large boulders being placed strategically around the perimeter of the standing structural remains of the historic mission and soil and erosion control measures within the site.

A new national monument, the Organ Mountains – Desert Peaks National Monument, was designated in 2014, encompassing 550,000 acres in the **BLM New Mexico** Las Cruces Field Office. A wide range of cultural resources and historic events occur or have occurred within the new monument boundaries including Paleo-Indian artifacts, pit-house and surface pueblo habitation sites of the Mimbres Mogollon and Jornada Mogollon Peoples, Native American and historic rock art, segments of the Mormon Battalion, Southern Overland, and Butterfield Trails, the first Civil War engagements in New Mexico and World War II bombing targets. A resource management plan is currently under production; the cultural resource component will form a major responsibility within the plan.

The **BLM Alaska's** Glennallen Field Office began consultation efforts with two Southeast Alaskan tribes for the helicopter assisted recreation portion of the Haines Block amendment to the Ring of Fire Resource Management Plan. The use of helicopters for recreation has been a controversial issue for the Haines community, including with the area's two federally recognized tribes. Consultation efforts will continue as the plan amendment proceeds.

During the reporting period, travel management planning was a high priority for the BLM. In **BLM Arizona**, the Yuma Field Office signed the La Posa Travel Management Plan and the Yuma Field Office continued the planning process for the Imperial Hills Travel Management Plan. A marked increase in OHV traffic in recent years is threatening important archaeological features along the Colorado River. The field office plans to develop a public outreach program to educate the public about cultural resources, place interpretive signs through the area, monitor routes that have 100' pull-off areas, use existing information for best management practices and re-route OHV trails to avoid sensitive sites.

The **BLM Montana** Miles City Resource Management Plan (RMP) was released in June 2015. The RMP combines two older RMPS into one. Cultural and paleontological highlights include the designation of new and expanded cultural and paleontological Areas of Critical Environmental Concern (ACEC), use of setting consideration zones to assist in dealing with visual (indirect) impacts to sites types such a historic battlefields, historic trails, and sensitive Native American site types such as medicine wheels. The ACECs to be expanded are the Battle Butte (from 121 to 320 acres) and the Reynold's Battlefield (324 acres to 922 acres). New cultural ACECs include the Cedar Creek Battlefield, Long Medicine Wheel, and Walstein Reservoir. The Walstein Reservoir ACEC includes the Paleo Indian-aged Mill Iron Site (24CT30). New paleontological ACECs include the Flat Creek ACEC and the Powderville ACEC. Although primarily designated for cultural reasons, both the Long Medicine Wheel and Walstein Reservoir ACECs also contain paleontological resources.

A presentation on *The Owyhee County Model: Fine Tuning Landscape Level Modeling* was given at the Great Basin Anthropological Conference in 2016. **BLM Idaho** has been working on this model for eight years and published a model for the Owyhee Land Exchange. Archaeological predictive models are only as good as the data they are constructed from. Modeling is necessarily iterative, requiring continual testing and reevaluation. As new or improved data and methods are obtained, they should be incorporated into the model for refinement. While serving the purpose of addressing the land exchange it was recognized that the model over-represented the high sensitivity zone. The new model is framed on a simple decision tree hierarchy, allowing addition of new branches, pruning of existing branches, and sensitivity model recalculation using map algebra and cell statistics (Figure 27). The paper discussed revisions to the original model applying more robust landscape level and site data, as well as cost distance analyses to more accurately reflect sensitivity zones.

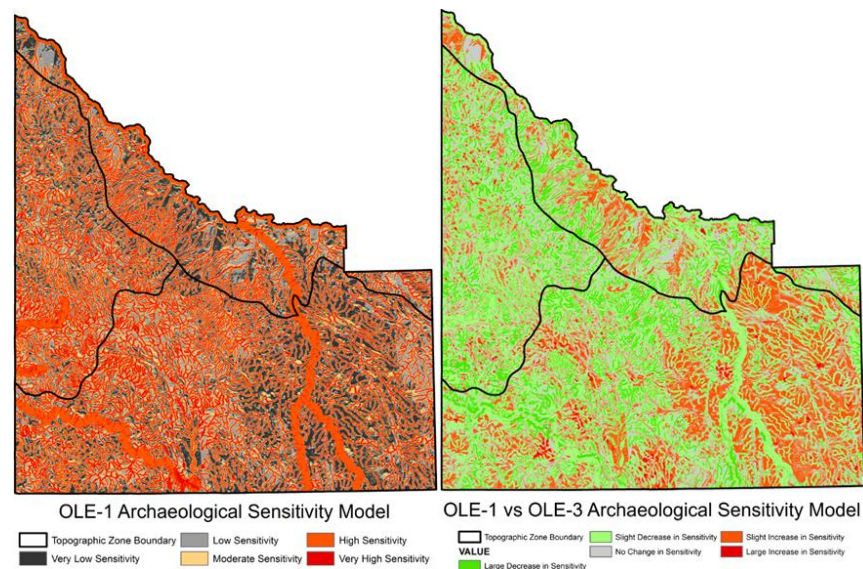


Figure 27. Owyhee County sensitivity model examples

## National Register Listings

During the reporting period, the BLM nominated and listed 12 properties to the National Register of Historic Places (Table 12). These 12 listings, identified below, had a total of 204 contributing properties.

Table 12. National Register Listed Properties

Year	State	Property Name	# of Contributing Properties
<b>FY 2014</b>	Colorado	Painted Hand Pueblo	1
	Montana	Judith Landing boundary increase	1
	Oregon	Paisley Five Mile Point Caves	1
	Utah	Nine Mile Canyon Multiple Property	101
	Wyoming	Powder Wash Archaeological District	29
		La Barge Bluffs Petroglyphs	1



		Tolar Petroglyph Site	1
		Eden-Farson Site	1
<b>FY 2015</b>	California	Luiseno Ancestral Origin Landscape	28
	Colorado	Sound Democrat Mill and Mine and Silver Queen Mine	18
<b>FY 2016</b>	Montana	Ervin Homestead/ Gist Ranch Historic District	19
	Oregon	Zane Grey Cabin	3

The Tolar Petroglyph site listed in 2014 is a small property administrated by **BLM Wyoming**. The site is located in the southwestern part of the state and consists of 32 rock art panels extending for more than 150 meters on a large sandstone outcrop. The site contains a distinctive collection of Protohistoric and Historic petroglyphs created by Native American groups inhabiting or traveling through the area (Figure 28). The artistic styles and motifs at Tolar are characteristic of Shoshone and Comanche, but may also be related to Arapaho, Ute and Athapaskan-speakers such as the Navajo. Exceptional illustrations of Ceremonial and Biographic traditions, the extremely fine craftsmanship of subjects, the distinctive representations (turtle, large-headed anthropomorphs and stick narrative) all highlight Criterion C eligibility. Tolar was also listed under Criterion D because it has the potential to yield more information to the understanding of Rocky Mountain, Great Basin, and Plains culture, symbolism and historic migration.

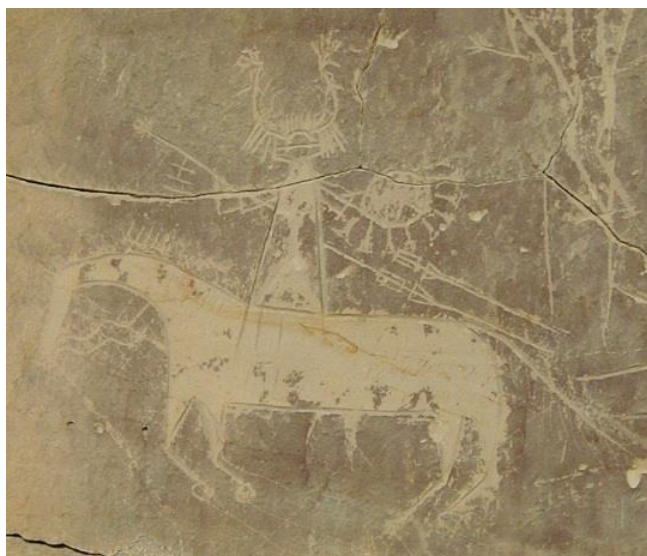


Figure 28. Petroglyph from Tolar site.

## 4. Using Historic Properties

BLM visitor data for FY15 indicated 3,412,888 visits to cultural sites; in FY16, that number increased almost a quarter-million to 3,637,818. Unfortunately, the economic contribution is not separated by viewing cultural sites, but is simply tied to multiple recreational activities on public land. Still the number is large, from over \$162 million dollars to over \$186 million dollars. Local economies are impacted due to employment or job numbers, as well as taxes to state and local governments, not to mention the dollars provided previously for recreation.

Although cultural resources are not typically found within town or city centers, our offices often are and serve as gateways to public land venues. Certainly local communities are part of all resource management and planning efforts, and economic development and environmental justice are found in RMPs. Stakeholders are invited to scoping meetings for environmental documents, as well as for planning efforts affecting field offices and districts.

### Community and Tourism

Stewardship of heritage resources is an important part of BLM's cultural program goals. By protecting the characteristics, attributes, and values of significant resources, BLM meets legal and regulatory obligations as well as maintains properties in the public interest. Partner organizations and the public assist BLM by participating in scoping meetings and public events and informing the agency about what resources are important to them.

### Events

**BLM Colorado** and Hinsdale County worked together to organize a celebration event for the 50<sup>th</sup> anniversary of the National Historic Preservation Act. The event (Figure 29) at the Ute-Ulay Mine and Milling Complex on the Alpine Loop featured tours of several mill buildings which are usually closed to the public. Approximately 85 people attended, taking in an awards ceremony presenting Elizabeth Francisco and Grant Houston with the Heritage Heroes Awards, as well as a town barbeque. The Ute-Ulay complex was featured on the 2016 History Colorado Archaeology Month poster and is listed on the 2015 Colorado Most Endangered Places List. Plans are to nominate the complex to the National Register of Historic Places in the future.



Figure 29. Ute-Ulay site public celebration of NHPA 50th anniversary.

## Media

**BLM California** developed a documentary film titled *Sands of War* as a mitigation product for the McCoy Solar Energy Project. *Sands of War* is a 30 minute-long, high-definition, professional documentary developed specifically for television airing (Figure 30). The documentary covers the development of the World War II (WWII) Desert Training Center/California- Arizona Maneuver Area (DTC/C-AMA) in the California deserts.

The DTC/C-AMA was developed by General George S. Patton, Jr. to prepare US troops for battle in North Africa during WWII. The facility covered approximately 18,000 square miles of the deserts of California, Arizona, and Nevada, and was in operation for 2 years, from 1942-1944. The DTC/C-AMA played a pivotal role in training more than 1 million troops for desert warfare tactics in true war-like conditions. The project included interviews with 14 veterans who actually trained at the facility during its period of operation. All interviews were recorded using high-definition

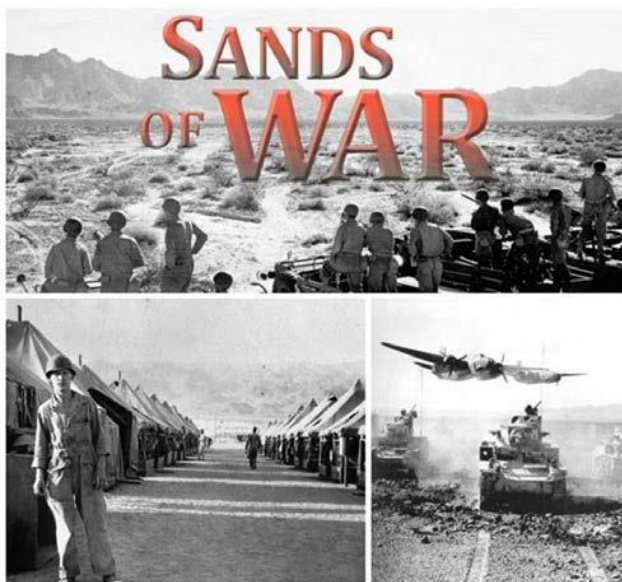


Figure 30. Sands of War DVD cover.

video and were transcribed. All interviews are archived at the Library of Congress Veteran's History Project and are publically available online. All interviews are also archived at the California Desert District library. The documentary relies on interviews with veterans, historic photos, and historic video from the Department of the Army to recount the story of the DTC/C-AMA, and is narrated by Peter Coyote. A 30-second trailer is available online at <https://vimeo.com/142180354>. *Sands of War* aired nationally on PBS (on Memorial Day weekend) reaching an estimated 140,000,000 viewers.

In 2015, the **BLM Idaho's** Public Affairs office re-established the popular Mackay Mine Hill Virtual Tour based on requests from the Challis and Mackay Chambers of Commerce and economic development groups. The National Archives' software, "The Wayback Machine" was used to retrieve the URLs allowing access once again.

[http://web.archive.org/web/20090510110451/http://www.blm.gov/heritage/adventures/menu/ID\\_virtualtour\\_files/white\\_knobVT.html](http://web.archive.org/web/20090510110451/http://www.blm.gov/heritage/adventures/menu/ID_virtualtour_files/white_knobVT.html)

The TERRA Kotzebue project is a multi-year Section 106 project for the **BLM Alaska** Anchorage District. It involves building broadband repeaters in several locations in western Alaska. An inadvertent discovery of a significant site found while trenching for a fiber-optic cable required development of a Memorandum of Agreement (MOA) to mitigate the adverse effects to the site.



Figure 31. Filming of classroom presentations.

Several excellent educational products came out of this MOA, including a website detailing the discovery:

<http://www.kotzebueartifacts.info/>.

The website includes information about prehistoric Kotzebue, the site and the artifacts discovered. It also includes photos and a video of the classroom presentation and public open house conducted by the project proponent, General Communication Inc. (GCI) (Figure 31). The site is located on private land of the Kikiktagruk Inupiat Corporation, an Alaska Native Corporation.

Social media is a part of every **BLM** state, as well as the national office. Facebook posts are standard practice as part of a state's archaeology month celebration. Interns and volunteers provide blogs for Tumblr. The previous Director had a Twitter handle and often tweeted about engaging in recreation on the public lands. Many of BLM's 65 visitor centers provide daily activities on social media. These centers are staffed by federal employees as well as volunteers from friends groups and other supportive associations. Below are a few examples of online support for cultural resources.

Tumblr is another outlet for BLM news. One BLM archaeologist is a blogger who regularly submits posts. In one post she shared a letter she wrote in 6th grade to her future self, stating that her goal was to become either an archaeologist or a paleontologist. She then shared her path to achieving that goal and becoming an archaeologist for **BLM Idaho**. During Women's History Month she did a post on the 9 women who are BLM archaeologists in Idaho. For Idaho Archaeology and Historic Preservation Month she worked with other BLM archaeologists to share research from the Owl Cave site. Finally, one post was also done for American Guide week and was picked up by The American Guide Blog. This post was on the Pioneer Historic Byway and three sites found on BLM lands, the Last Chance Canal, Sheep Rock (on the Oregon California National Historic Trail), and Formation Springs.

If Twitter is your thing, then BLM can also accommodate that interest. One **BLM New Mexico** archaeologist often uploads stories on Facebook and tweets on Twitter. Her research on the historic Magdalena Stock Driveway and the 80<sup>th</sup> anniversary of Civilian Conservation Corps Camp DG-42-N were featured on both platforms, as well as regular newspapers like the Albuquerque Journal.



Volunteers from Project Remembrance provided numerous hours in 2015 to relocate the 1943 crash sites of two B-24 bombers; one in Laidlaw Park and the other near Sid Lake. Workers were able to relocate the Sid Lake crash and helped document the site for the **BLM Idaho** Shoshone Field Office. Later, BLM officials and volunteers returned to create a video about the site. It was posted online on several BLM social media sites on Veterans' Day 2015 and has had numerous views since: <https://www.youtube.com/watch?v=xF5yjKo8t44&feature=youtu.be>.

### Re-Use

In **BLM Oregon**, the historic Zane Grey Cabin at Winkle Bar has been officially listed in the National Register of Historic Places (Figure 32). This honor is intended to provide recognition of the site's significance and to encourage its continued preservation.

The historic cabin is located at Winkle Bar, one of the most unique sites along the world-famous Rogue Wild and Scenic River. This spot--and the entire Rogue River--was popularized by the western novelist and angler Zane Grey, who fell in love with and wrote about the pristine wilderness and abundant fishing opportunities on the river.

In 1925, Grey launched an expedition down the Rogue River from Grants Pass to Gold Beach Oregon with nine other adventurers in seven wooden boats. Of the places Grey encountered on the trip, Winkle Bar proved to be the most influential. In 1926 he purchased the mining claim there and had this now-famous cabin built. In *Tales of Freshwater Fishing*, Grey described his new acquisition:

"The rushing river at this point makes a deep bend round a long oval bar, with rocky banks and high level terraces above, and both wooded and open land. Here it flows through a lonely valley set down amid the lofty green mountain slopes. A government forest trail winds out some twenty miles to the nearest settlement. Far indeed it is across the dark Oregon peaks to railroad or automobile road!"



Figure 32. Overview of the Zane Grey Cabin.

It was here, and along other portions of the Rogue River, that Grey was inspired to write such books as *Rogue River Feud*, *Shooting the Rogue*, and *Tales of Freshwater Fishing*. Grey's prose drew visitors by the thousands, and helped make the Rogue River a premiere destination for world class steelhead fishing, recreation, and wildlife viewing.

In 2008, the BLM purchased the property to help preserve its unique historic values. In 2012, the BLM began the process of documenting the site's historic significance for designation to the National Register of Historic Places. With funding and volunteer support from the Farley Tyas Foundation, considerable work was done to the property and to the cabin itself so that visitors can safely experience the scenery and history of Grey's era.

Today, visitors to the site at Winkle Bar will notice that the shake roof, windows, and log walls of the cabin have been repaired. This was done with careful attention to the historic details and construction techniques of the period of significance--1926. Visitors can also see the remains of a well-weathered wooden boat, thought to be one of the original vessels from Grey's first journey down the river in 1925. Visitors will also find a recently-installed interpretive display at Winkle Bar entitled "The Country Gentleman," commemorating his time on the Rogue River.

With this official designation, the Zane Grey cabin will be better protected for the public to visit and appreciate for generations to come.



Figure 33. New Fork River Crossing Historic Park.

A new 100-acre historical park was developed at the New Fork River crossing of the Lander Road, which is a branch of the California National Historic Trail in Wyoming (Figure 33). Using the NHPA Section 106 process, the **BLM Wyoming** Pinedale Field Office worked with the Wyoming

State Historic Preservation Office, the Advisory Council on Historic Preservation (ACHP), the National Park Service, the Sublette County Historical Society (SCHS), the Alliance for Historic Wyoming, the Oregon California Trails Association and the Lander Trail Foundation, along with SWEPI L.P., and Ultra Resources Inc., to complete a PA to mitigate adverse impacts to the road's setting from the adjacent Pinedale Anticline natural gas field. The BLM and those same historic preservation partners also worked with PacifiCorp to complete a memorandum of agreement to resolve impacts from a transmission line that spanned the same area. Both agreements funded the purchase and donation of 82 acres of riverfront property to the SCHS. A subsequent purchase by the SCHS expanded the park to 100 acres.

The New Fork River Crossing Historical Park celebrates the Lander Road river crossing and the river island where tens of thousands of emigrants watered, rested and refitted. The park now offers interpretive signs, almost a mile of fishing access, walking trails, picnic areas and other day-use activities to visitors. Including the initial Section 106 participants, almost 30 federal, state and local government agencies, non-profits and corporations, and many private citizens, played a role in the acquisition and development of the New Fork River Crossing Historical Park. It is a testimony to what vision, cooperation and partnerships can do. The grand opening celebration of the new park was held Saturday, June 21, 2014, and recognized the contributions of many partners ( Figure 34). This effort was chosen by the ACHP as one of their Section 106 success stories.



Figure 34. Partners at the ribbon cutting for the grand opening of the park.

The **BLM California's** Arcata Field Office in California worked with the Table Bluff Reservation Wiyot to allow the tribe to salvage two downed redwood logs. The logs were lying next to a parking area near a trailhead. The tribe plans to make traditional dugout canoes and planks for traditional buildings from the logs.



Volunteer docents continued to provide educational public tours of the restored 1860s era Adams House and adjacent farmstead in the **BLM Utah's** Red Cliffs National Conservation Area near St. George, Utah (Figure 35). This opportunity allows the house to open for public visitation on 8 days each month. These docents provide information to visitors about the history of the Adams house, the 19<sup>th</sup> century Mormon community of Harrisburg, UT, and the restoration work for the Adams house completed by BLM.



Figure 35. Adams House and surrounding landscape.

Volunteers keep up maintenance on the Adams House historic vegetable garden which was re-established through an Eagle Scout project. Each year volunteers re-seed historically planted crops such as watermelons, beans and corn, and conduct work to improve the garden's condition using techniques such as establishing raised beds and installing wire mesh to counter rodent infestation.

The BLM administered lands in the San Juan Islands of northwest Washington State were designated a National Monument during the last administration. These lands include two lighthouses (Turn Point Light Station and Potos Light Station), numerous archaeological sites, and areas of traditional use by Native American Tribes (Figure 36 and Figure 37). **BLM Oregon/Washington** is working with Turn Point Lighthouse Preservation Society and other partners to address safety findings related to the occurrence of lead paint and other issues, as well as working to rehabilitate the Fog Signal Building and



Figure 36. Turn Point Light Station.

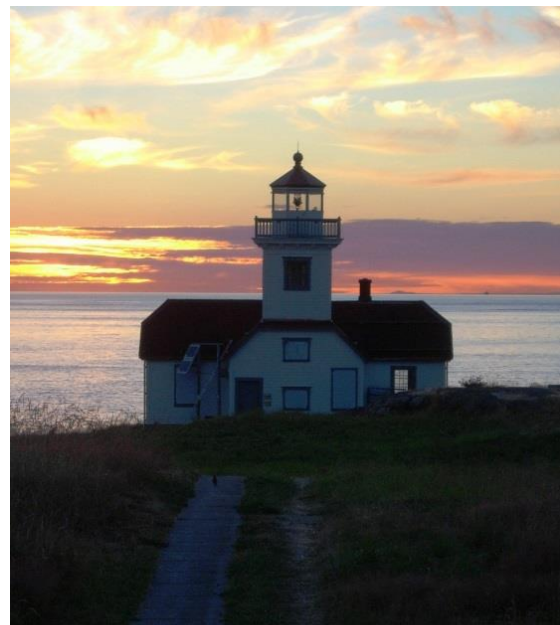


Figure 37. Potos Light Station.



the Keeper's Quarters. A small "museum" is staffed by volunteers at the Turn Point Light Station. In addition, BLM is working with partner Keepers of the Patos Light to maintain the Patos lighthouse and offer informational tours of the facilities. A small historical display is contained in the lighthouse and is staffed by volunteers during the summer.

### Exchanges, Transfers, and Acquisitions

BLM does not typically transfer historic properties out of ownership. If land parcels are identified for sale or exchange and it is discovered that these parcels contain historic properties, they are dropped from consideration. We also do not contract the management of historic properties to an outside entity. Occasionally BLM obtains parcels of land through purchase using the Land and Water Conservation Fund. For instance, in 2014 **BLM New Mexico** conducted intensive pedestrian inventory on two recently acquired parcels of ~336 acres within the Yellow Jacket Canyon archaeological landscape.

Several years ago **BLM New Mexico's** Taos Field Office (TFO) acquired a late 19<sup>th</sup> and 20<sup>th</sup> century historic Hispanic farm located within the La Cienega Area of Critical Environmental Concern (ACEC). Recently, TFO began planning efforts for the Rael Farm that included hosting a landscape charrette designed to capture ideas and sentiments from the interested public regarding the BLM's plans for future management and use of the farm property. The results of the charrette are being compiled into a report that will help guide the development of a site-specific management and use plan for the property. The farm is located in the Santa Fe River canyon and includes the Rael House, a 100-plus year old standing adobe structure, 300-year-old acequia ditch and water rights, 100-plus year old heritage fruit trees, heritage grape orchard, and small agricultural fields. The property also contains additional archaeological remains associated with the Archaic, Pueblo, Spanish Colonial, Mexican Republic, and U.S. Territorial periods. TFO has contracted for a historic structure assessment for the Rael House. Treatment recommendations made in the assessment will be carried out under a contract since not all BLM offices have in-house expertise for such resources. Plan development is considering the farm as an interpretive, educational, and research destination and also as a potential working farm and heritage plant/seed bank facility (Figure 38).



Figure 38. Rael Farm discussion with community attendees.

## Partnerships in Using Historic Properties

### Multi-Agency Partnerships

On October 22, 2015, the Stanley and Mildred Norstebon Family Trust donated a 1 acre parcel holding the Canyon Creek Station to **BLM Idaho** to manage the site in perpetuity for its historic values. In a ceremony on site October 29, state director Timothy Murphy received the title from the Norstebon family (Figure 39). Many partners were involved in making the donation possible, including the Norstebon Family, BLM, Idaho Heritage Trust (IHT) the Idaho Oregon-California Trails Association (IOCTA) and the National Park Service (NPS) (Figure 40).



Figure 39. BLM takes title from Norstebon Family.



Figure 40. Dedication Day, October 29, 2015.

In 1873, the Archibald Daniel family migrated west to Idaho and homesteaded a 160-acre parcel at Canyon Creek. The historic Canyon Creek Station, located in Elmore County, was built by the Archibald Daniel family in 1874. The structure sits in a lava rock canyon and is constructed from hand forged 13-18" thick basalt lava rock walls with horse hair mortar. The stage stop itself provided shelter and meals for the last travelers of the Oregon Trail, but before that Canyon Creek was an important stopping point along the trail for weary travelers needing water and feed.

Canyon Creek Station provided valuable services to travelers on the Oregon Trail, Kelton Freight Road and the Overland Stage route (Figure 41). It provided fresh horses for the mail, and fresh fruit, vegetables, meats and cool water in the sparse desert, along with sweet grass for travelers' livestock.

The Daniels family operated the stage stop until the stage line ceased with the completion of the Oregon Shortline Railroad in 1884. The station was a working farm and home until December 1976 at which time a fire heavily damaged the structure, leaving only the rock walls in place. In recent years, the family commenced efforts to preserve the station by eliminating fire hazards such as brush and weeds in the vicinity of the stage station. Two IHT grants were secured and initial planning began on stabilization and restoration at the site. These funds were significantly enhanced by funding from IOCTA. The family's goal was to restore the stage stop to its original state, but they soon recognized that community involvement would be necessary to realize this dream. To that end, and through commitment and vision, the family worked with the IHT to reach out to the BLM on the possibility of gifting the site to the BLM for management in perpetuity. Even though no BLM lands lie adjacent to the property, the significance of the site and the potential for a long-term partnership with the Norstebon family, IHT, IOCTA, NPS and the community was recognized. BLM determined to pursue acquisition of the parcel containing the Canyon Creek Station. Currently BLM is partnering with NPS to develop a long-term management and interpretive plan for the site. The BLM will continue stabilization and restoration efforts based on plans and drawings created by IHT historical architect Frederick Walters. Initial masonry work stabilized and reconstructed the gable ends and the north wall of the structure. Future work includes stabilization and reconstruction of the south wall and roof.



Figure 41. Canyon Creek Station in the 1870s, with Archibald Daniels.



Canyon Creek Station is enjoyed and valued as being only one of two remaining stage stops on the Oregon Trail, Kelton Road and Overland Stage system. It remains a valuable piece of the fabric of Idaho's history of early travelers, freighters and stage service (Figure 42 and Figure 43). The Station is recognized in the NPS comprehensive plan for the Oregon Trail as a high potential site for its importance to convey and interpret early historic travel in the region and along the Oregon Trail. The site is eligible for listing on the National Register of Historic Places. Its location on a county road provides access conducive for interpretation and public use.



Figure 43. Canyon Creek Station, north wall in 2014.



Figure 42. North Wall 2016, after reconstruction

### Outreach and Education

In 2016, **BLM California and Nevada** coordinated with the Nevada Bureau of Indian Affairs, the Nevada Indian Commission, the Inyo and Humboldt-Toiyabe National Forests, the Nevada branch of the U.S. Fish and Wildlife Service, and the Tubape-Numu traditional use advocates for a Traditional Ecological Knowledge Summit (Figure 44). The summit was intended to broaden the perspectives on proposed Federal actions related to sagebrush steppe habitat restoration, with the hope that a more expansive dialogue would incorporate traditional practices into land management actions. Approximately 200 people attended the summit. Tribal members, tribal leaders, land management specialists and managers came from throughout Nevada and eastern California. Highlights included a Native youth panel discussion that revealed an intellectually vibrant, up-and-coming generation dedicated to keeping cultural traditions flourishing and protecting indigenous plants and



Figure 44. Traditional Ecological Knowledge Summit.



wildlife. The success of the Summit and the widespread interest in the topic lead to a follow-up “next steps” meeting to establish a working group that will expand and continue the discussion.

The Grand Canyon-Parashant Tribe hosted the American Indian Youth Cultural Resource Internship for the fifth year. Though enrollment was down, all the tasks originally planned were successfully completed by six interns. Activities included expanding the porch at the Poverty Mountain facility using recycled wood from the National Park Service Mt. Dellenbaugh facility; refiring and collecting data from over 1,000 potsherds from past **BLM Arizona** excavations; further processing of previous BLM collections at Southern Utah University; and the beginning of a region-wide clay and sand sampling project.



Figure 45. Student determining size particulates added to the clay.

For the sampling project, 39 pottery-quality clay samples were collected and subjected to various field and laboratory test, including particle-size analysis (first photograph on page), water of plasticity (the amount of water required to bring a clay to the ideal state of plasticity), test tile shrinkage and firing, and construction of small prehistoric-replica bowls for paint and firing tests. These initial clay-source characterization tests, combined with future chemical characterization, will lay the foundation for future studies of prehistoric trade and interaction across the region (Figure 45 and Figure 46).



Figure 46. Student preparing clay.

**BLM Montana** and U.S. Forest Service collaborate to host the “Bridging the Divide” Tribal Field Camp with youth and elders from the Shoshone-Bannock Tribe. Each year has a different theme, but the field camp provides an opportunity for tribal students to be in an outdoor classroom with hands-on learning experiences. They work with tribal elders to learn about the natural and cultural landscapes, as well as traditional skills. Over the years, the students have studied tipi construction, cedar bark bags, digging sticks, harvesting and use of the bitterroot plant, and outdoor cooking. The federal employees also provide information about employment opportunities and management practices with the hydrology, cultural resources, soils, wildlife, fuels improvements and forestry programs (Figure 47, Figure 48, and Figure 49).



Figure 47. Harvesting Blue Camas with digging sticks.



Figure 48. Tribal youth peel bark to make cordage baskets.



Figure 49. Building a drying rack.

In addition to supporting the national programs *Hands on the Land and Take it Outside!*, as well as Project Archaeology, the BLM's signature educational program, **BLM** field offices engaged in a wide variety of heritage educational opportunities for people of all ages. BLM archaeologists gave classroom presentations, on-site activities, tours, and also hosted collegiate field schools, researchers, and interns. In rural areas BLM scientists served as valued role models, acting as judges for science fairs and advising students attending career days.

BLM archaeologists reported contacting 114,192 persons in venues such as community events, on or off site presentations, and other "in person" activities. They contacted 46,913 youth in classrooms, youth groups, and science fairs, and 921 college students.

BLM's national office began a Heritage Heroes program, recognizing staff, volunteers and organizations that assist in the BLM mission. In 2016, BLM acknowledged 12 honorees, such as the Rio Puerco Field Office Rock Art Team, a group of volunteers for **BLM New Mexico** who meet every Tuesday to record rock art on the public lands. The team also produces research reports and provide a bridge between BLM and the public. The hero's story is conveyed both within BLM and through local public media and they are presented with a plaque in a formal setting.

### Museum Collections

**BLM Montana's** Billings Curation Center (BCC) worked with volunteers from the Pompey's Pillar Historical Association and the Pompey's Pillar National Monument, to add an extensive archival collection and digitize hundreds of photographs. The curation facility also added two significant collections of donated prehistoric projectile points and other rare tools, and an archive of a collection of rock art tracings made in the Pryor Mountains of Southern Montana. Research, documentation, and artifacts made by the University of Montana from the Rosebud Battlefield were also added to the collection. Billings Curation Center also contracted to digitize all the photographic media within its' accessioned collections. More than 17,000 images related to cultural resources work conducted in Montana, North Dakota and South Dakota were identified and scanned. All of the now preserved images will be made available to the public through the Montana State Office website.

In **BLM Oregon**, the National Historic Oregon Trail Interpretive Center (NHOTIC) replaced several exhibit mounts, reorganized a portion of their collection storage; updated and corrected issues with catalog records for the Flagstaff Mine and Rabbit Mine collections; and initiated transition of records to the DOI ICMS system. Finally, the center hosted staff training in collections care and mount making, as shown in the photographs below (Figure 50 and Figure 51).





Figure 51. Staff preparing artifacts for curation.



Figure 50. Prepared artifact in curation facility.

The Anasazi Heritage Center, in **BLM Colorado**, regularly develops social media posts highlighting artifacts from the Anasazi Heritage Center collections (Figure 52). These artifact highlights are posted weekly to the BLM Canyons of the Ancients National Monument and Anasazi Heritage Center Facebook page.



Figure 52. Artifact from the Anasazi Heritage Center collection on social media.

**BLM California's** Ukiah Field Office promoted the use of museum collections in their public education work. BLM archaeologists presented the prehistory and history of the region to 300 elementary and middle-school children at the Mendocino County museum. Archaeological stations were created using artifacts, graphics, and maps depicting the human use and occupation in the area. By the time the children were finished they had a clear understanding that archaeology is the study of past people through their material culture. Linking prehistoric and historic events such as the Paleo-Indian migration into the Americas, the gold rush, and World Wars to nearby sites provided examples of how history is relevant to all. Students were encouraged to explore their



family's own interrelationship with past events by documenting their grandparent's stories, fostering the concept of protecting heritage resources that are more personally relevant.

## 5. Future Plans and Final Thoughts

### Programmatic Highlights

In the previous Preserve America report, the Bureau identified that it had completed work on the national Programmatic Agreement with the ACHP and the NCSHPO. During the reporting years 2014-2015, all BLM states completed updated state protocols with their individual State Historic Preservation Offices. Managers and archaeologists in every state became familiar with their new protocols through training. In some states, work continues on appendices for specific efficiencies such as standard areas of potential effect and discovery plans, as well as addressing particular program areas like mineral management, grazing and travel management planning. The Bureau continues to see the national PA as an important tool for programmatically accomplishing Section 106 efficiencies to address administrative priorities.

The BLM's new manual and handbook on tribal relations (Manual 1780, *Tribal Relations*, and handbook, 1780-1, *Improving and Sustaining BLM-Tribal Relations*) replaces the cultural program's Manual 8120, *Tribal Consultation under Cultural Resources*, and handbook H-8120-1, *Guidelines for Conducting Tribal Consultation*. These new documents are in part a response to tribal requests made during past listening sessions and to address the Department of the Interior's Secretarial Orders 3342, 3335 and 3317. The guidance also accomplishes this administration's priority of fostering a "shared conservation stewardship" with local, state and tribal governments. BLM leadership continues to encourage the field to develop ongoing partnerships with tribes across all BLM programs. The handbook addresses compensation, one of the more contentious issues across the west, and gives managers discretion for compensation with some guidance for implementation and decision-making. Training on the manual and handbook is currently being developed on a national level. Some states have already begun in-house training, using existing staff and local expertise. BLM's National Training Center is creating tribal vignettes to showcase successful BLM-tribal partnerships and enhance the training experience.

As BLM strives to accommodate the streamlined project review for energy and infrastructure development that is a priority of the new administration, several new options for progress are found. A thorough review and update of the 8100 series manuals will allow BLM to incorporate updates to policies and guidance, providing the opportunity to restructure the program. One of the biggest challenges to streamlining work processes is the lack of standardized datasets for planning purposes. BLM is making steps to address that critical issue with the National Heritage Solution Pilot that provides resource and investigation spatial data in a standard format across the western states. The new manuals will also improve efficiencies and "get America back to work" by updating permitting practices, setting standards for new technologies (Geographic Information Systems and Global Positioning Systems) and allowing the acceptance of electronic forms versus the previous manual's reliance on paper files, maps, and report submissions. Finally, as the Bureau continues to stay current on efficient practices for Section 106 compliance, several states are working with their State Historic Preservation Officers to update program-specific guidance on such topics as standard areas of potential effects and developing mitigation tools with consulting parties. The future looks good!