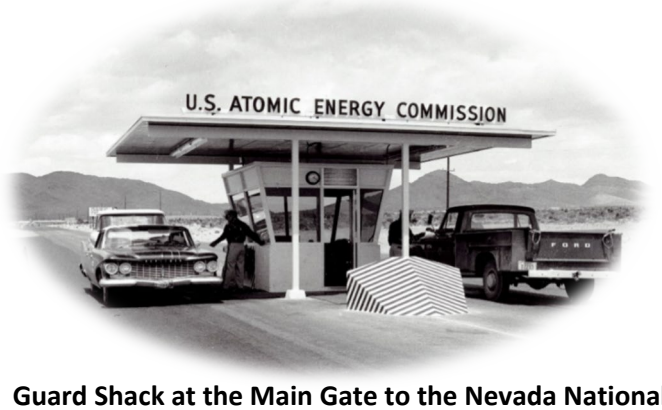
K-25 History Center in Oak Ridge, TN

An Assessment of Historic Properties and Preservation Activities at the U.S. Department of Energy



Guard Shack at the Main Gate to the Nevada National Security Site in the town of Mercury in 1965

Archaeological Field Work at the Hanford Site

In response to requirements of Executive Order 13287, *Preserve America*

U.S. Department of Energy

September 2023

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Acronym List

ACHP	Advisory Council on Historic Preservation
AEC	Atomic Energy Commission
ANL	Argonne National Laboratory
APE	Area of Potential Effect
BNL	Brookhaven National Laboratory
BPA	Bonneville Power Administration
BSO	Berkeley Site Office
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CRMP	Cultural Resource Management Plan
D&D	Decontamination & Decommissioning
EIS	Environmental Impact Statement
FIMS	Facilities Information Management System
GIS	Geographic Information System
HABS	Historic American Buildings Survey
HAER	Historic American Engineering Report
HALS	Historic American Landscape Survey
INL	Idaho National Laboratory
ITEK	Indigenous Traditional Ecological Knowledge
LANL	Los Alamos National Laboratory
LBNL	Lawrence Berkeley National Laboratory
LLNL	Lawrence Livermore National Laboratory
LM	Office of Legacy Management
MAPR	Manhattan Project National Historical Park
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NETL	National Energy Technology Laboratory
NEPA	National Environmental Policy Act

NFO	Nevada Field Office
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NNSA	National Nuclear Security Administration
NNSS	Nevada National Security Site
NPS	National Park Service
NREL	National Renewable Energy Laboratory
NRHP	National Register of Historic Places
OREM	Oak Ridge Office of Environmental Management
PA	Programmatic Agreement
NRE	National Register Eligible
NPS	National Park Service
NRHP	National Register of Historic Places
PNNL	Pacific Northwest National Laboratory
SHPO	State Historic Preservation Officer
SLAC	Stanford Linear Accelerator Laboratory
SRS	Savannah River Site
SSP	Site Sustainability Plans
SWPA	Southwestern Power Administration
THPO	Tribal Historic Preservation Officer
VARP	Vulnerability Assessment and Resilience Plan
WAPA	Western Area Power Administration

Introduction

In March 2003, President George W. Bush signed Executive Order 13287, *Preserve America.*

The goal of the Executive Order is to enhance Federal stewardship in the areas of cultural resource management and historic preservation. The Executive Order directs Federal agencies to include cultural resource and historic preservation considerations in their day-to-day decision making and encourages Federal agencies to seek partnerships with communities, nonprofits, and other interested parties to incorporate "heritage tourism" into local economic development strategies.

This report updates the December 2004, November 2005, November 2008, October 2011, September 2014, December 2017, and December 2020 assessments provided to the President's Advisory Council on Historic Preservation (ACHP) and fulfills the requirements of Executive Order 13287 (Sections 3a and 3b) that agencies with real property management responsibilities describe the general conditions and management needs of their historic properties and review their regulations, management policies, and operating procedures for compliance with Sections 110 and 111 of the National Historic Preservation Act (NHPA).

Part I of this report begins with an overview of the Department's assets, followed by a summary of the progress made since the 2020 report. **Part II** consists of answers to the questions provided by the Advisory Council on Historic Preservation guidelines, separately compiled by cultural resources staff at DOE sites and offices.

This report was prepared by the Department of Energy's Office of Legacy Management and Office of Environment, Health, Safety and Security, with the assistance of the cultural resources staff at the Department's field sites. Questions or comments should be directed to Eric Boyle, the Department's Chief Historian and Deputy Federal Preservation Officer, at 202-586-5241.

Part I. Background and Overview

U.S. Department of Energy

The U.S. Department of Energy (DOE or the Department) was established on October 1, 1977, as the twelfth cabinet-level department. It brought together for the first time within one agency two programmatic traditions that had long coexisted within the Federal establishment:

- a loosely knit amalgamation of energy-related programs scattered throughout the Federal Government dealing with various aspects of non-nuclear Federal energy policy, research and development, regulation, pricing, and conservation; and
- defense responsibilities that included the design, construction, and testing of nuclear weapons dating from the World War II Manhattan Project effort to build the atomic bomb that subsequently evolved into the Cold War nuclear weapons complex and national laboratory system.

Departmental Assets

From a historical and historic preservation perspective, many, though not all, of the Department's most significant assets are associated with the Manhattan Project and how it helped end World War II, the building of the nuclear weapons that helped win the Cold War, and the pursuit of world-class science and technology, most notably through the National Laboratories. The Manhattan Project's success in unleashing the power of the atom is regarded as one of the most important scientific and technological events of the 20th century. The use of atomic weapons helped end World War II, ushering in the nuclear age and setting the stage for how the next war—the Cold War—would be fought. Over the past seventy-five years, DOE and its predecessor agencies have also helped revolutionize the modern scientific enterprise —leveraging the work of Nobel prize-winning scientists—in such diverse fields as physics, genomics, climate change, and nanotechnology.

A small sample of the best known historical physical assets for which the Department has stewardship responsibilities includes the B Reactor at Hanford (Manhattan Project); V-Site and Gun Site at Los Alamos (Manhattan Project); the Graphite Reactor, Beta 3 Calutron Facility, and the K-25 Gaseous Diffusion Plant Process Building at Oak Ridge (Manhattan Project); Experimental Breeder Reactor-1 (EBR-1) at the Idaho National Laboratory (Atoms for Peace); the Nevada National Security Site, formerly known as the Nevada Test Site (Cold War), and the nuclear weapons rail cars at the Pantex Plant (Cold War).

Some of DOE's historical physical assets are open to the public on an intermittent or controlled basis, including, among others, the B Reactor at Hanford, EBR-I at the Idaho National Laboratory, the Graphite Reactor at the Oak Ridge National Laboratory, and the weapons effects areas at the Nevada National Security Site.

As the Federal Government's fourth largest steward of land, DOE is responsible for lands that contain prehistoric archeological sites. The Department's Los Alamos National Laboratory, for example, contains nearly 2000 known archaeological sites, many of them Ancestral Pueblo resources rivaling or even exceeding those of adjacent Bandelier National Monument—a well-known park—in terms of quality or uniqueness. Other examples include the Savannah River Site and Idaho National Laboratory archeological sites and the Nevada Test Site and Bonneville Power Administration petroglyphs. Idaho National Laboratory (INL) has conducted analysis of artifacts and paleontological remains to reveal additional information regarding prehistoric occupation and climate change as reflected in the isotopic signatures preserved in the bones of large game recovered from excavation. INL has also developed a memorandum of understanding to conduct research on volcanic glass with the U.S. Forest Service and Bureau of Land Management.

The Department is also responsible for historic assets that predate Federal ownership of a site. Oak Ridge, for example, maintains several church buildings and cemeteries left in place when the Manhattan Engineer District took over the site during World War II. Hanford has the remains of a high school, an agricultural warehouse, and

a bank building. The Nevada Test Site has cabins, corrals, and mine sites, and remnants of homesteads, stage stations, and historic trails dot the Idaho National Laboratory landscape.

Among the Department's most significant textual assets are documents, photographs, and oral histories. Notable examples are the Atomic Energy Commission (AEC) Secretariat records, headquarters and field photograph collections, and special collections like the Nuclear Testing Archive co-located with the Atomic Testing Museum in Las Vegas, Nevada. Oral histories include some of the most renowned figures in the history and science in the twentieth century, including Enrico Fermi, Edward Teller, and J. Robert Oppenheimer. In addition to oral histories that capture the words and deeds of well-known scientists, the Department's knowledge preservation efforts have documented important aspects of the decades-long, multi-billion-dollar investment in science, engineering, and process-knowledge through interviews with current and former employees.

DOE also has formal and informal relationships with museums located at or near DOE field sites. While a formal relationship exists with the American Museum of Science and Energy, Oak Ridge, Tennessee, informal relationships exist with the National Museum of Nuclear Science and History (formerly the National Atomic Museum), Albuquerque, New Mexico; Bradbury Science Museum, Los Alamos, New Mexico; the Hanford Reach Interpretive Center, Richland, Washington; and the National Atomic Testing Museum, Las Vegas, Nevada. Each museum is unique, due to local needs and varying funding and management mechanisms. Some sites also have exhibits at local museums. Idaho National Laboratory, for example, supports a major permanent exhibit in the Museum of Idaho in Idaho Falls.

Many DOE field sites also maintain visitor centers. Their primary focus is presenting the science and technology related to a particular DOE national laboratory or facility. Departmental visitor centers include the Science Learning Center at Brookhaven National Laboratory, the Lawrence Livermore National Laboratory Discovery Center, the Leon Lederman Science Education Center at Fermi National Accelerator Laboratory (Fermilab), the National Renewable Energy Laboratory Visitors Center, and the SLAC National Accelerator Laboratory Visitor Center.

DOE visitor centers are also located at former weapons complex sites that were closed, went through remedial action and environmental restoration, and then opened to the public. At the Office of Legacy Management's Weldon Springs, Missouri, and Fernald, Ohio, sites, the visitor centers document the history of the site and facility, clean-up efforts, and ongoing maintenance and surveillance. The Fernald Preserve, Ohio, site is the location of a former uranium processing facility that was cleaned up under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The Fernald Preserve Visitors Center is a 10,000-square-foot Leadership in Energy & Environmental Design (LEED) platinum-certified, green building that was converted from a former warehouse on the site. The Visitors Center celebrates the rich and varied history of the Fernald site. Information on the site's natural, Native American, settlement and farming, uranium production, and environmental cleanup eras, as well as the recent ecological restoration and legacy management mission, is presented through a series of exhibits. Admission to the Visitors Center is free, and meeting spaces at the facility are also available for no charge to local organizations. The Weldon Spring Site in Missouri is the location of a former uranium materials plant. The Weldon Spring Site Interpretive Center represents a window to the past and the Office of Legacy Management's commitment to the future through long-term surveillance and maintenance of the Weldon Spring Site and a strong community partnership. The Center houses exhibits that present a photographic history of the Weldon Spring area, the towns that once occupied this area, and the site's historical contributions. It also details progression of the site cleanup process and construction of the 45-acre disposal cell and communicates the legacy of the site to current and future generations. Educational and outreach programs, tours, research opportunities, and volunteer opportunities are provided by the Center.

Finally, DOE offices and sites provide a wide variety of history pages, online tours, and virtual museums on their websites. The DOE Historian oversees the History pages on the Department's Energy.gov website at DOE History | Department of Energy. The site provides a listing of field history pages at Labs and Field Site Histories | Department of Energy.

Due in large part to a history of compartmentalization and decentralization throughout DOE's history, substantial power and authority throughout the DOE complex has been allocated to field offices, which means DOE field sites have developed their own unique and individual cultural resources and historic preservation programs. Compliance activities associated with the National Historic Preservation Act (NHPA) and other relevant laws have been performed primarily by contractors under the direction of DOE field officials.

In the last three years, the Department's efforts to manage its history and heritage resources has made significant advances, with a wide range of resources being applied to historic preservation. Improvements in preservation efforts continue to increase visibility for historic properties, enhance recognition of the importance of the Department's historic assets, and provide genuine progress toward preservation and interpretation.

Identifying Historic Properties

In compliance with Section 106 of the NHPA and a variety of programmatic agreements (PAs), cultural resource staff assess proposed projects that range in size and complexity, from routine to specific activities. The number of these projects can vary dramatically depending on the site. During this reporting period, at Los Alamos National Laboratory, for example, 34 archaeological sites and 47 historical facilities were identified, and an additional 155.4 acres of previously unsurveyed LANL lands were intensively surveyed for historic properties. These efforts are like the prior reporting period and kept the total survey coverage for LANL just above 90 percent. At the Nevada National Security Site, within the reporting period almost 1,810 acres were inventoried, which represents an increase of little more than 4% in the acreage inventoried since the last reporting period, and an additional 253 cultural resources were documented. Not all of the 253 were determined eligible for the NRHP; some were evaluated and determined to be ineligible and are not historic properties. In total, to date, 8.95% of the 1,360 square miles of the NNSS has been inventoried for cultural resources (archaeological and architectural/built environment); however, some surveys have overlapped, so the true percentage of land area is less. At Idaho National Laboratory, beginning in FY2020 the Center for Environmental Management of Military Lands (CEMML) at Colorado State University began an inventory of the Advanced Test Reactor Complex, Central Facilities Area, Critical Infrastructure Test Range Complex, Experimental Breeder Reactor-I, Idaho Nuclear Technology and Engineering Center, and Materials and Fuels Complex facilities at the INL Site. These new evaluations reduced the number of historic properties at the INL Site to 37 buildings (3.8%) and identified four historic districts. An additional 11 buildings and two structures are recommended not individually eligible but contribute to one of the eligible historic districts.

Other sites have substantially fewer projects, architectural properties, and archaeological properties. At some sites, the Section 106 requirements of the NHPA are integrated with the National Environmental Policy Act (NEPA) review process. Sites rely on a continuous improvement process to evaluate policies and procedures for effectiveness and needed updates on a reoccurring cycle.

Historic properties are tracked with varying degrees of detail over several databases and online tools across the DOE complex. Due to the sensitivity of the data, in many cases this information is internal. Some DOE sites maintain a database of the site's eligible cultural resources and areas of completed archaeological surveys in a facility management Geographic Information System (GIS). The Nevada National Security Site (NNSS) Cultural Resources Management Plan, for example, relies on a GIS database that holds comprehensive records of archaeological and architectural inventory areas and known historic properties, historic districts, and unrecorded Cold War resources on the NNSS. The NNSS Cultural Resources Management Program uses this database to access, update, analyze, and manage historic properties. For built-environment resources, the Facility Information Management System is updated frequently as properties are recorded and evaluated for eligibility to the NRHP.

There are also publicly accessible repositories of information on historic resources. For example, the Bonneville Power Administration (BPA) Library contains a wealth of information on the transmission system as well as the history of BPA's development and includes historic photos, videos, reports, correspondence, and newspaper articles. A sizable amount of material from BPA is also stored at the National Archives at Seattle.

The results of some important studies of historic properties from a variety of sites that have been approved for public release and publication are made available via the Department's Office of Scientific and Technical (OSTI) website at https://www.osti.gov. Numerous reports have been uploaded over the last three years, including documentation of historic properties, findings from Section 106 actions that outline mitigation efforts, and amendments to programmatic agreements. Some examples of these documents include: *Historical Documentation of Buildings 0460 and 0463 at Technical Area 16; Finding of Effect, And Mitigation Documentation for Building 23-620, Mercury, Area 23, Nevada National Security Site, Nye County, Nevada*; *A Standard Operating Procedure for the Inadvertent Discovery of Native American Human Remains and Associated Funerary Objects, Sacred Objects, or Objects of Cultural Patrimony at Los Alamos National Laboratory*; and *Amendment to Programmatic Agreement among the U.S. Department of Energy, National Nuclear Security Administration, Los Alamos Field Office, the New Mexico State Historic Preservation Office and the Advisory Council on History Preservation Concerning Management of the Historic Properties of Los Alamos National Laboratory, Los Alamos, New Mexico*.

In the preparation of reports on historic properties, Federal employees and contractors utilize on-site and off-site archives, some of which have been digitized and made available electronically. The types of documents housed in the DOE archives include archaeological survey reports and project files dating, archaeological site files, historic building documentation, technical reports, journal articles, books, historic photographs and aerials, engineer drawings, and historic maps. Sites also retain photo archives dating to their beginnings, including initial construction and when additions were made.

In-house expertise in environmental science and cultural resources are on staff at some sites. At sites with cultural resources expertise in-house, staff continue to give presentations and tours that focus on cultural resource compliance, awareness and identification of historic properties, and historic preservation activities. Sites commonly utilize contracts with outside firms to conduct evaluation of historic structures and to conduct archeological evaluations.

DOE sites also use other methods for complying with the NHPA. Hanford, for example, in partnership with the Environmental Protection Agency, has developed new methods to integrate NHPA as an Applicable or Relevant and Appropriate Requirements (ARARs) to the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) section 121 requirements. The National Historic Preservation Act is identified as an ARAR, therefore CERCLA remedies must comply with the NHPA. The new process allows for information about historic properties and NHPA processes to be considered in making decisions about remedial actions under CERCLA. Documentation of how the agency met the substantive requirements of NHPA as an ARAR either though a finding of No Historic Properties Affected, No Adverse Effects or the development of an MOA to resolve Adverse Effects to Historic Properties, is then incorporated in the development of a final Record of Decision.

DOE sites have implemented a variety of new policies or programs that promote awareness and identification of historic properties over the last three years. Los Alamos National Laboratory, for example, developed three new programs, including a Climate Change Vulnerability Assessment and Resilience Plan (VARP) during fiscal year 2022, where staff were invited to participate, and they identified cultural resources as a non–Mission Dependency Index critical asset—with archaeological sites, traditional cultural properties, built-environment resources, and cultural landscapes defined as sub-tier critical assets. LANL also supported a University of New Mexico archaeological field school in the summer of 2022. The Cultural Resources Program taught 13 student field school participants—including three from local indigenous communities—cultural resources survey, site recordation, and in-field artifact analysis methods in a previously unsurveyed area of the Laboratory. Through this effort, LANL surveyed approximately 40 acres of rough terrain and documented 16 archaeological sites and one traditional cultural place. Lastly, during this last year, the Cultural Resources Program at LANL developed a new tool in R Studio to automate much of the cultural resources data collection required to perform a project review for cultural resources. Using the GIS layer of the project area, the Cultural Review Tool identifies historic properties within or adjacent to the project area, gathers information on those properties from internal databases, assesses potential impacts based on resource evaluation status and eligibility, and recommends subsequent actions. Then, the

Cultural Review Tool presents all collected data in an HTML report for a reviewer to use. The Cultural Review Tool was fully integrated into the cultural resources review process by the end of fiscal year 2023.

DOE sites have employed partnerships to assist in the identification and evaluation of historic properties in a variety of ways over the last three years.

Protecting Historic Properties

Cultural resources management staff across the DOE complex have continued to implement projects to comply with cultural resource laws, regulations, executive orders, and directives; develop tools to better manage cultural resources, including updating current guidance manuals; and assess the effects of projects on historic properties.

DOE sites take a variety of steps to manage historic assets, including: preparing Historic Resource Study (HRS) reports; preparing and implementing annual Site Sustainability Plans (SSP); conducting Phase I, Phase II and Phase III archaeological surveys; utilizing Geographic Information System (GIS) for construction and excavation projects; documenting properties through Historic American Buildings Survey (HABS), Historic American Engineering Record (HAER), or Historic American Landscape Survey (HALS) reports; conducting appropriate cultural resource inventory work or other technical studies of unevaluated buildings and structures of sufficient age to merit evaluation; and maintaining accurate historical status of real property assets in the Facilities Information Management System (FIMS), using Federal Real Property Profile (FRPP) definitions.

DOE consults with the SHPO(s) and the ACHP if proposed undertakings may adversely affect properties considered eligible for listing or listed on the NRHP. Site procedures for satisfying the NHPA and DOE requirements amidst ongoing facility operations in many cases are outlined in a Programmatic Agreement (PA) or Memorandum of Agreement (MOA) among DOE-and the relevant State Historic Preservation Officer(s) (SHPO) and, if appropriate, the Advisory Council on Historic Preservation. Some sites also maintain a Cultural Resource Management Plan (CRMP) which contains information on the procedures for considering cultural resources during site or laboratory operations. In accordance with the PA and CRMP, DOE consults with the SHPO on relevant projects.

Sites frequently work with SHPOs, Indian Tribes, Native Hawaiian organizations, certified local governments, and other organizations to protect and manage historic properties. Sites are encouraged to examine their policies, procedures, and capabilities for public-private initiatives and investment and report on their progress.

- In 2023, the Office of Legacy Management executed a new programmatic agreement with the Navajo Nation to formalize and streamline the Section 106 review and consultation process for routine activity primarily at four locations in the Navajo Nation: the Mexican Hat, Utah, Disposal Site; the Monument Valley, Arizona, Processing Site; the Shiprock, New Mexico, Disposal Site; and the Tuba City, Arizona, Disposal Site. These four LM locations are found entirely within the exterior boundary of the Navajo Nation.
- Another example of this type of cooperative work can be seen with the Pacific Northwest Site Office (PNSO), which utilizes partnerships with local Tribes during stewardship activities conducted under Section 110 of NHPA. Annual site conditions inspection and monitoring is conducted by contractor staff and Tribal representatives. Agreements have been established between PNSO, WA SHPO and Tribes that include management practices and actions developed for the purpose of protection and management of resources important to Tribes. Additionally, PNSO and its contractor have adopted new language in consultation correspondence (Area of Potential Effect notifications, for example) that are intended to encourage consideration of IK and Traditional Ecological Knowledge during identification efforts performed under Section 106.
- At the Hanford Site, an NRHP determined eligible archaeological site is the historic location of the village of *Múun* (water swirl place). This area is a Historic Property of Religious and Cultural Significance to Indian Tribes (HPRCSITs). A groundwater monitoring well, and its' associated dirt pad and access road was installed within this location as early as 1952. This well is accessed multiple times a year to perform maintenance and take groundwater samples. The need to access this well by vehicle has

led to an increase in the amount of erosion within this area and to artifacts being exposed, so DOE-RL is working with their contractor to develop an alternative approach for collecting groundwater samples from this location while also meeting the Environmental Protection Agency's sampling requirements. In the meantime, whenever work is conducted at the well at the Hanford Site, through another partnership with United States Fish and Wildlife Service and Area Tribes, DOE-RL is working to restore and conserve Umtanum Desert buckwheat (Eriogonum codium), the rare plant is only known to occur within a small area on the DOE-RL managed portion of the Hanford National Monument

- At Sandia National Laboratories (SNL), archaeologists are in active contact with the Pueblo of Isleta Tribal Historic Properties Office (THPO) regarding sites of significance and approaches to protection. This is done in coordination with the US Air Force cultural resources personnel on Kirtland Air Force Base. Currently, SNL is working with the Pueblo of Isleta to incorporate indigenous knowledge when locating and/or preserving historic properties. The two archaeologists talk with and meet with THPO and environmental personnel to share knowledge and provide site visits.
- Western Area Power Administration (WAPA) has also stepped up its Tribal government-to-government consultation efforts to include listening sessions and pursuant to the March 7, 2022 White House Memorandum, titled, *Announcing Tribal Consultation and Public Input Opportunities on Traditional Ecological Knowledge in Federal Policy*, WAPA is making efforts to integrate indigenous traditional ecological knowledge (ITEK) into its National Environmental Policy Act (NEPA) analysis and National Historic Preservation Act (NHPA) Section 106 consultations when appropriate to do so.

While most DOE sites have not increased staff in cultural resources management during the reporting period, there are some exceptions. DOE has increased its site-level NHPA compliance programs, with some sites adding to their core team of cultural resources management staff. In FY2020, Idaho National Laboratory's Cultural Resource Management Office (CRMO) expanded and created staff augmentation through contractors for approximately six staff members to assist with legacy documents, cultural resources databases, and reconciliation of geospatial data and site recordation. Between FY22 and early FY23, permanent CRMO staff positions experienced growth in terms of quantity of employees and expertise of staff to sustain the level of workload for DOE-ID. At present, CRMO staff consists of 17 individuals: one Manager, one Technical Lead, six Archaeologists, two Architectural Historians, one Archivist, and six Cultural Resource Technicians.

DOE sites also provide informational tools and resources to educate interested stakeholders on the significant history and future of these sites. Some of the resources available include social media and active websites, open houses and community conversations, articles and fact sheets, educational demonstrations, and displays. Additionally, cultural resource staff collaborate with local and regional schools to introduce students to STEM-based career opportunities and to educate them about the history and ecosystems of several sites.

At the Savannah River Site, for example, continued outreach endeavors provide residents of the Central Savannah River Area with avenues to learn about archaeology and historic preservation. Approximately 1,500 students participated in classroom and homeschool programs, while approximately 3,100 guests viewed displays at public events during this reporting period. The Savannah River Archaeological Research Program (SRARP) outreach program was also responsible for several local museum and library exhibits. Aside from public school presentations, homeschool group presentations, STEM events, and community events, the SRARP continued its site tour outreach by providing tours of the abandoned towns onsite for former residents, DOE employees, and members of the public. The SRARP's volunteer program, cinematic outreach, and Facebook page are additional outreach programs that provided residents opportunities to learn about the archaeology conducted at the SRS. The SRARP also uses dedicated volunteers to assist in archaeological research. The Cold War Historic Preservation Program (CWHPP), meanwhile, promotes awareness and appreciation of historic properties through constant and vigilant public outreach both on and off site. On site they work with Public Affairs to provide bus tours of historic areas that show the Site's developmental history including, historic town sites, reactor areas, and our artifact curation facility.

During the reporting period, DOE executed new Programmatic Agreements. For example, a PA for operations and maintenance activities at the Pacific Northwest National Laboratory Richland Campus, and a Memorandum

of Agreement for campus development at the PNNL Sequim Campus effectively changed the way DOE manages compliance with 54 U.S.C. 306108 by providing a streamlined process for reviewing and approving projects on both campuses. At the Nevada National Security Site, a major accomplishment within the reporting period is negotiation of the draft Sitewide PA. This effort was initiated in 2020 and involved multiple consultation meetings and conference calls with the SHPO and ACHP. The next step in the process is the review of the draft Sitewide PA by the 16 Tribes and interested parties affiliated with the NNSS. Once implemented, this PA will streamline compliance activities, clearing the way for important infrastructure and sustainability projects on the NNSS.

In some cases, Section 110 Surveys are managed in-house, at the same time as carrying out Section 106 obligations. Cultural resources staff have employed strategies for adaptive reuse for facilities across the DOE complex, in accordance with Section 110 of the NHPA. Cultural resources staff have developed other uses for historically significant, uncontaminated properties as an alternative to demolition including use as office space, storage, and interpretative areas. One example of this type of effort is underway in Oak Ridge, where the National Nuclear Security Administration Y-12 complex (Y-12) has worked to rehabilitate Building 9731, which was Y-12's first building, constructed in 1943 to pilot the calutrons used for the electromagnetic separation of uranium isotopes as part of the Manhattan Project. Building 9731 will return to its original function as a training facility for site employees and will be preserved through this use. Certain modifications to areas of the building have proven necessary, which include making the building more energy efficient through updated systems and weatherproofing.

During the reporting period, DOE has implemented a variety of policies and programs designed to improve the protection of historic properties. Argonne National Laboratory is currently addressing climate change resilience for eligible historic properties, for example, through a site Vulnerability Assessment and Resilience Plan (VARP) conducted within the last three years, and these principles would also be incorporated into emergency management planning documents for the site. Lawrence Berkeley National Laboratory submitted their own Vulnerability Assessment and Resilience Plan in September 2022, developed with a cross-division team, which initiated a process of incorporating climate resiliency into project planning. LBNL has also initiated a process to update lab policy on sustainable construction and operations to incorporate DOE Order 436.1A requirements, including those related to climate adaptation and resilience.

In FY2020-FY2021, Idaho National Laboratory's Cultural Resources Management Office issued 48 procedures, guides, forms, and instructions that pertain to the INL comprehensive historic preservation program, including Section 106 and Section 110 responsibilities, in addition to other applicable regulations such as Archaeological Resources Protection Act (ARPA) and Native American Graves Protection and Repatriation Act (NAGPRA), and managing collections under 36 CFR 79.

Regarding collaborations, DOE has partnered with public and private preservation organizations, local city and county historic societies, and museums to assist in the protection of historic built resources. In Idaho, DOE-ID and INL Site contractors engage with the Shoshone-Bannock Tribes via formal and informal means; consultation, Agreement-in-Principle and partnership resulting in collaboration toward ongoing preservation and management of archaeological resources and those resources of spiritual, sacred, and community significance. DOE-ID provides funding to the Shoshone-Bannock Tribes through cooperative agreements to perform independent oversight of DOE-IDs operations at the INL Site, including management and protection of cultural resources and historic properties. At the Savannah River Site, the Cold War Historic Preservation Program has worked in partnership with the SRS Heritage Foundation (501c3), the Ruth Patrick Science Center, and the Savannah River Archaeological Research Program (SRARP) to design and install a permanent exhibit that spoke to the Site's establishment and environmental justice issues. The *6,000 Stories* exhibit was completed late in 2019, telling the story of five years of significant changes for former residents. The creation of this well received exhibit allowed DOE-SR to fulfill a public outreach stipulation in the Site's PA for the management of Cold War historic properties. Funding from the National Nuclear Security Administration (NNSA) for a second permanent exhibit followed quickly and led to the installation of *Defense, Deterrence and Discovery* in 2022. This exhibit explored tritium's role in the history of the Site and our Nation and took visitors behind the fence to the atomic workplace

at Savannah River. In addition, DOE-SR has supported the SRS Museum Executive Director and Education Specialist positions in 2022-2023.

Regarding Section 111, most sites have no plans to sell, lease, exchange, or transfer any of their historic properties.

Using Historic Properties

The Manhattan Project National Park (MAPR) sites, in Hanford, Washington, Oak Ridge, Tennessee, and Los Alamos, New Mexico, continue to make substantial contributions to local economies and communities. MAPR supports the school outreach program, under which several thousand elementary, middle, and high school students have visited the Park. Cultural resources staff have continued to be active participants in community dialogues regarding the Park, and they continue to work closely with local historic preservation representatives. During the current reporting period, cultural resources staff have facilitated the development of historical exhibits and have provided presentations at public meetings, community lectures and events, university venues, professional conferences, and at Energy Community Alliance meetings. Additionally, DOE sponsors a vibrant annual public tour program that enables people of all ages to visit the park's historic resources.

Beyond the Manhattan Project National Historical Park, DOE supports heritage tourism and community involvement through a wide range of outreach efforts. The public is often introduced to historic properties with guided public tours of Cold War historic locations. Some sites also offer special group and media tours. Indian Tribes also visit sites regularly to view prehistoric and ethnohistoric sites and assist with current condition assessments.

At the Pantex Plant, for example, staff conducted a Lunch and Learn in May 2023 to promote awareness of the historic preservation program at the plant. Thirty-five employees were present, and the presentation was recorded. This is the first on-site outreach of its kind relating to historic preservation awareness. Plans are being made for additional preservation awareness outreach events soon. Pantex staff also completed the installation of a history display in the John C. Drummond Center at the Pantex Plant. This display includes photographs related to women in the workforce, infrastructure, innovation, community outreach, and the Plant's mission. Each year cultural resources management staff participate in an average of 80 outreach events including public presentations, new employee orientation history briefings, windshield tours of the site, and meetings with external stakeholders.

Elsewhere, DOE has undertaken efforts to promote tourism in the last three years through historic photography, presentations, films, and exhibits to the DOE workforce as well as the surrounding communities. Interpretive signage at sites and their surrounding areas includes historic photos, maps, and text, which explore different aspects of history, technology, and significance to the development of the region. This includes virtual tours of historic properties that can be accessed by the public. It should be noted that some DOE sites are located on private campuses and are not open to the public, which precludes the use of historic properties by the public.

Oak Ridge National Laboratory is one example of a site that has for many decades been a leading force in fostering heritage tourism, showcasing DOE's science missions and accomplishments. The premier example of this would be maintaining and making publicly accessible the Graphite Reactor facility, a National Historic Landmark, and a part of the Manhattan Project National Historical Park. During this reporting period, the K-25 History Center at the East Tennessee Technology Park (ETTP) in Oak Ridge opened to the public, in 2020, and continues to attract tourists to the Oak Ridge area, offering a fascinating journey into the historical significance of the K-25 Building. Through exhibits, audiovisual productions, and display of over 300 artifacts from the K-25 Site, visitors gain an understanding of the building's role in the gaseous diffusion process for enriching uranium during World War II and the Cold War. Another example in Oak Ridge would be Oak Ridge National Laboratory's (ORNL) stewardship of the American Museum of Science and Energy, and participation in associated site tour programs.

On a smaller scale, the Albany Regional Museum in Albany, Oregon, currently has a museum exhibit highlighting the historic materials research, site history and buildings of National Energy Technology Laboratory-Albany site.

Also, the Albany site conducts site tours regularly to civic groups, congressional members, city and state government officials, local universities, and other Federal agencies. The typical tour is 1 to 4 hours in duration. The historical significance of the site, as well as the current research activities are discussed.

To help document historic activities at the Paducah Site, a virtual museum, The Paducah Gaseous Diffusion Plant Virtual Museum (pgdpvirtualmuseum.org), has been established, which includes the enrichment process; the plant's history; and the different faces, sights, and sounds of the site. The Paducah Site partnered with the McCracken County Public Library to install a computer that allows access to citizens who are interested in the virtual museum as well as creating a historic photograph display that honors the service of Paducah Gaseous Diffusion Plant workers and the work that was performed from 1952 to 2013.

DOE actively seeks out potential reuse opportunities associated with its diverse mix of sites and assets. As noted above, at Y-12 in Oak Ridge, TN, they are working in consultation with the Tennessee State Historic Preservation Officer on efforts to re-use Building 9731 as a "state-of-the-art" training facility and interpretive center. At the Oak Ridge National Laboratory, an opportunity to restore the National Register Listed Freels Bend Cabin located on the Oak Ridge Reservation to support contemporary uses is also being planned. A log cabin restoration specialist has been engaged to assist in planning the restoration techniques.

Across the DOE complex, when applicable, eligible historic properties are also maintained and repurposed to satisfy DOE's science mission. When a facility is not determined to be a candidate for reuse or rehabilitation, due to environment, safety or health limitations, the facility decommissioning process is considered to dispose of real property in accordance with applicable DOE Orders.

DOE's historic Federal properties contribute to local communities and their economies in a variety of ways. At Idaho National Laboratory, for example, DOE-ID supported the "Way Out West" exhibit at the Museum of Idaho in Idaho Falls during the reporting period. INL Site contractors Battelle Energy Alliance and Idaho Environmental Coalition are also corporate sponsors for the Museum, which attracts more than 90,000 visitors annually and serves as a tourist hub supporting the local economy. INL encourages interest in cultural resource and historic preservation professions through its internship program and through site tours for K-12 students. The EBR-I National Historic Landmark is open during the summer to members of the public and serves as an attraction for out-of-town visitors and tourists passing through the area and contributes indirectly to local and regional economies. At Los Alamos, the Laboratory has continued to contribute to local communities through public-education efforts that promoted awareness of LANL's cultural resources management and Park activities. The extent to which LANL's historic properties directly contributed to local communities and their economies is limited due to public-access restrictions to Laboratory property; however, the Laboratory, in conjunction with the National Park Service, continued to promote the Manhattan Project National Historical Park. During the reporting period, the Cultural Resources Program held public tours of Park properties within LANL boundaries and provided Park presentations at public meetings, community lectures and events, and professional conferences. Additionally, staff continued to be active participants in Los Alamos community dialogues regarding the Park and worked closely with Los Alamos County historic preservation representatives and the Los Alamos Historical Society.

Regarding other less obvious contributions to local communities, Federal properties of power administrations contribute to local communities and their economies by supplying required power, building new substations and transmission lines, or expanding capacity at existing sites to meet local and regional power supply changes.

Highlighted Successes and Opportunities

- Bonneville Power Administration's biggest successes achieved over the last three year are the continuation of a large-scale agency wide efforts to evaluate and manage historic transmission assets. The BPA Field Guide for Historic Resources is a portable, user-friendly distillation of the previous evaluations and assessments of hundreds of BPA assets that now all have an NRHP determination status. Another large effort that was completed this year is the BPA Transmission Line Historic Context Report,

which provides a timeline and historic background research related to the development of BPA's historic transmission grid, as well as the identification of 60 individually significant lines and an evaluation framework to continue with the assessment and evaluation of transmission lines for future BPA Section 106 compliance. This effort was also critical for the forthcoming BPA Transmission Line ILS and Programmatic Agreement for transmission line assets.

- At Brookhaven National Laboratory, recent efforts including evaluating properties over fifty-years of age, negotiating various MOAs between DOE- BHSO and the New York SHPO, and tours with the SHPO, all of which have highlighted the potential for increased historic exposure for the Lab and the local community. Significant exposure of the public to the history of the Laboratory through the Long Island Museum's exhibit 'Atoms to Cosmos, the History of Brookhaven National Laboratory has helped to educate the local public on the discoveries at the Lab. To help ensure the Lab maintains compliance with preservation requirements nominal funding has been provided to conduct the various building evaluations mentioned in this report, as well as to fund the digitization of approximately 1,400 historic videotapes to ensure that they are available for use, as well as digitization of some historic negatives needed for documentation as part of building evaluations.
- At the Hanford Site, DOE successes include the establishment of a Memorandum of Agreement for the rebuild and installation of a distribution line. This MOA contained collaborative elements with Area Tribes and the Washington State Department of Archaeology and Historic Preservation (DAHP). Through Section 106 consultation, it was determined that project activities would create adverse impacts to a Traditional Cultural Property (TCP). Among the MOA stipulations, mitigation strategies include the closure of a borrow pit at the TCP and collaborative development of a habitat improvement plan with components that address visualization of the area to be rehabilitated, and defining goals, criteria, and steps in consultation and collaboration with Area Tribes. Through consultation, DOE-RL will also develop digital interpretive content for use in public education materials. This content will discuss habitat as a cultural resource for Area Tribes and how restoration of habitat can be implemented as part of cultural resources mitigation.
- At Idaho National Laboratory, as part of DOE-ID commitments to strengthen the archaeological component of the INL historic preservation program, a Precontact Context (PCC) proposal has been developed, and includes the following themes (along with associated research questions): Shoshone and Bannock Ethnohistory, Changes in the Landscape and Environment, Projectile Point Chronology, and Settlement and Subsistence. The INL CRMO and Shoshone-Bannock Heritage Tribal Office are currently in the "Assessing, Synthesizing and Identification" phase of the PCC for the 8-million-acre study area. During summer of 2022, the CRMO staff, Heritage Tribal Office and the BLM archaeologist rerecorded ten previously recorded Precontact sites within the study area thought to represent specific property types. Most of these sites had not been visited by Shoshone-Bannock Tribal representatives before 2022.
- Los Alamos National Laboratory, during fiscal year 2022, unveiled its long-term Campus Master Plan, which details the need to strategize and modernize over the next 30 years. The Campus Master Plan serves as an evolving framework that describes the current condition of the campus, outlines projected needs, and proposes solutions. Some of the goals and associated projects have the potential to affect and be affected by historic properties. The Cultural Resources Program supported the Campus Master Plan planning process by providing timely assessments and data to facilitate project planning and design. Additionally, staff prioritized cultural resources evaluations and re-evaluations in alignment with Campus Master Plan near-term goals.
- At the Nevada National Security Site, the program instituted a new policy for preparing for current and future infrastructure funding. The policy involves coordination between the National Nuclear Security Administration and the Nevada Field Office, its cultural resource professionals, the NNSS Management and Operations contractor, and Environmental Management Nevada to develop an Integrated Planning List (IPL). The IPL is updated annually each spring. It compiles proposed projects in upcoming fiscal years and identifies the anticipated cultural resource compliance requirements for each. The NNSA/NFO, EM NV, and M&O contractor use the IPL to prioritize the timing and funding of projects. The NNSA/NFO's cultural resource professionals use it to develop annual scope and budget and ensure that Section 106 compliance is appropriately integrated into project schedules.

- In 2021, the Office of Legacy Management completed a reclamation project at the Burro Mines Complex in southwest Colorado. Extensive collaboration with Colorado State Historic Preservation Office resulted in significant changes to the engineering design to protect the historical integrity of the Burro mine complex. Working closely with the Colorado State Historic Preservation Office, LM revised the engineering design to better preserve the area's unique mining heritage, while still protecting the Dolores River. Historic waste rock piles were restored to their 1970s look and feel.
- In Oak Ridge, a revised Memorandum of Agreement for the Demolition of the K-25 Site and Interpretation of the East Tennessee Technology Park resulted in the design of a Viewing Platform which reduced the cost of the facility but retained the primary objective of providing the public with a view that allows visitors to envision the size and scope of K-25. To facilitate construction of the Viewing Platform, a partnership was created through an interagency agreement between DOE and the U.S. Army Corps of Engineers who will manage construction of the building. DOE contractor UCOR and their subcontractor, Smee + Busby Architects who designed the Viewing Platform, will provide engineering support to the Corps. It is noteworthy that the U.S. Army Corps of Engineers presence at the K-25 site is coming full circle from managing the construction of K-25 as part of the Manhattan Project during World War II to managing the construction of the Viewing Platform that commemorates K-25 some 75 years later.
- Given that a portion of the Pacific Northwest National Laboratory Richland Campus is a Traditional Cultural Property and Historic Property of Cultural and Religious Significance to Indian Tribes, referred to as the Preservation Designated Area (PDA), several protection and preservation actions have been conducted during the reporting period that exemplify PNSO's partnerships with Tribes in the context of resource protection and stewardship. Pursuant to a stipulation in the MOA for the Richland Campus Development project, the office constructed a fence with locking gates and no trespassing signs around the perimeter of the PDA to improve security and prevent unauthorized access. Additionally, pursuant to a stipulation in the MOA for the Richland Campus Development project, the office successfully completed the removal of legacy telecommunications equipment within the PDA. This equipment served no mission need, was considered an eyesore by the Tribes and was an obstacle to completing preservation and habitat restoration goals set by the Tribes.
- At the Portsmouth Site, notable accomplishments in protection of the property since 2020 include the Virtual Museum updates; the completion of HAER reports for seven PORTS facilities; the completion of reports based on the content requirements of the Historic American Building Survey for 26 site facilities; monthly panoramic photo-documentation of site D&D progress; and the continuation of outreach and communication activities such as site bus tours during the spring and summer months; and presentations to local groups and gatherings on site history that include showing items from PORTS' operational period. A contractor to DOE has completed the curation of 26 archaeological collections from the former Portsmouth Gaseous Diffusion Plant (PORTS) and adjacent private properties. The archaeological collections, totaling more than 50,000 artifacts, as well as reports, notes, photographs, and digital documentation are now curated in perpetuity at the Ohio History Connection (OHC), Columbus, Ohio. A copy of the prehistoric and historic-era reports can be obtained at the U.S. DOE Environmental Information Center by contacting 740-289-8898 or at portseic@ports.pppo.com. Additionally, an electronic copy can be found at https://www.energy.gov/pppo/downloads/national-historic-preservation-act-documents-portsmouth.
- Savannah River Site developed a series of thematic context studies to document its NRHP-eligible properties many of which are replicated building types associated with specific historic processes. The program has completed nine thematic studies. SRS just completed the final thematic study in 2022: *Hot Labs, Cold War: Process Improvements 1950-1989.* This thematic study provides a history of research and development at SRS and describes the properties associated with research and development on Site prior to the designation of the Savannah River National Laboratory. This approach has streamlined the documentation effort and the illustrated context studies, conceived as tools for Section 106 compliance, have become building blocks for education and research as well.
- Western Area Power Administration's Desert Southwest Region has far surpassed the other regions in its historic properties identification efforts and has evaluated 359 facilities (substations, transmission lines and communications sites) for NRHP eligibility with 10 of those facilities determined eligible.

This success came from DSW's ability to fully staff its cultural resources team in recent years and develop programmatic agreements and a historic context study, which enabled the region to meet its Section 106 needs in an efficient manner.

Part II: Field Site Reports

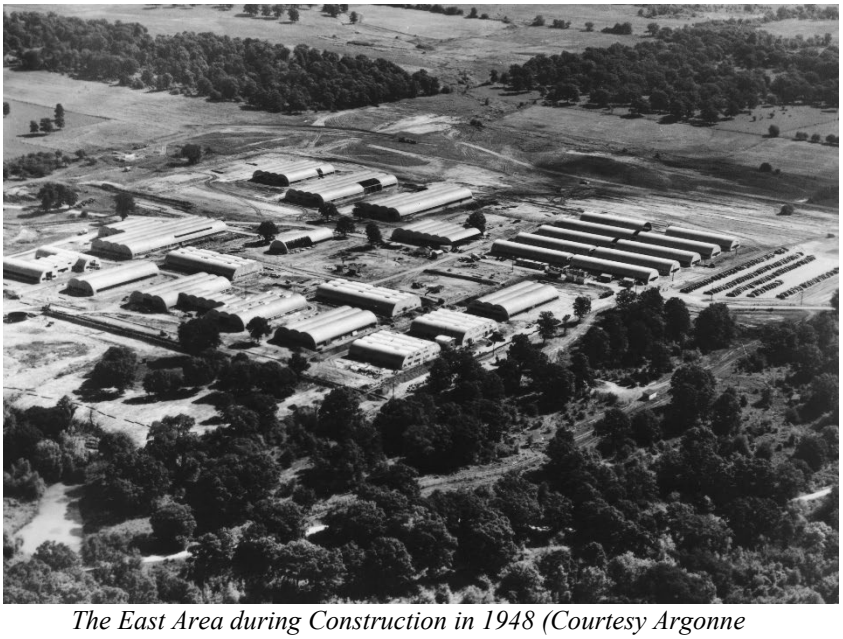
Note: reports in this section have been compiled separately by cultural resources staff at the respective sites. As a result, the content, format, and use of images will vary.

Argonne National Laboratory

Identifying Historic Properties

1. ***How many, and what percentage of your assets, are historic as reported in: (a) your bureau or agency's proprietary database and/or (b) your agency's reports?***

Argonne National Laboratory (ANL) uses the DOE's Facilities Information Management System (FIMS) to manage real property assets. Twelve buildings (12) and two (2) structures are "National Register Eligible," and one building (1) is considered a Non-Contributing Element to an NHL/NRL District. These 15 account for 6% of the total 235 assets. ANL has two eligible historic districts, which contain the majority (10) of the eligible properties.



The East Area during Construction in 1948 (Courtesy Argonne National Laboratory Photo Library)

2. ***Have your identification methods changed during this reporting period? Approximately what total percentage or portion of inventory have now been surveyed and evaluated for the National Register, and does this represent an increase from your site/office/program's 2020 progress report, if applicable?***

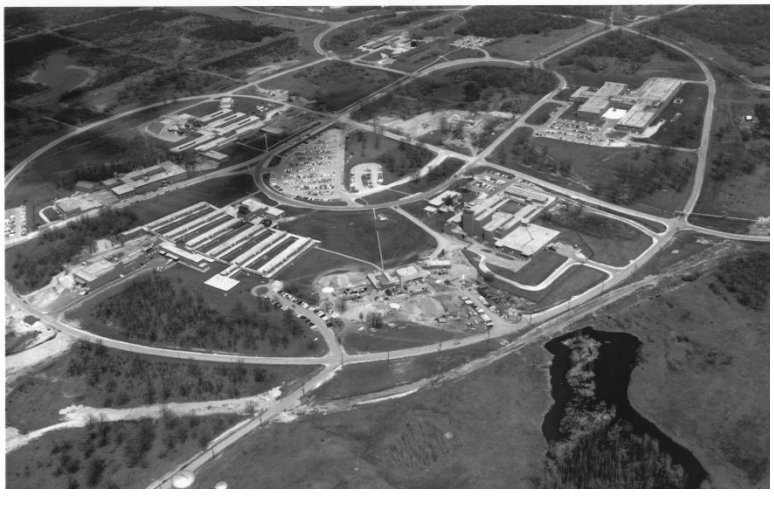


Photo of the 200 Area Taken in 1963
(Courtesy Argonne National Laboratory Photo Library)

Property identification methods have remained unchanged, as well as the total amount of evaluated properties unchanged since the 2020 report.

Roughly 248 hectares (613.37 acres), a total of 41% of the site has been examined through Phase I Archaeological surveys for the presence of cultural resources. This has not changed since the 2020 report.

3. Has your site/office/program implemented any new policies or programs that promote awareness and identification of historic properties over the last three years?

No new policies or programs were implemented over the last three years.

4. Federal agencies are encouraged to share information regarding the number and percentage of historic property identification completed in the context of Section 106 for specific undertakings and programs versus that completed for unspecified planning needs (Section 110 survey). In a given year, what percentage of your site/office/program's identification of historic properties occurs due to Section 106 planning and compliance versus regular stewardship and unspecified planning needs (Section 110)?

At ANL, the Section 106 requirements of the NHPA are integrated with the National Environmental Policy Act (NEPA) review process. This is the main way that properties are identified.

5. How has your site/office/program employed partnerships to assist in the identification and evaluation of historic properties over the last three years?

ANL's programmatic research divisions have in-house staff expertise in cultural resources. ANL maintains an ongoing partnership between its operations and research divisions to collaborate as needed and provide local knowledge and subject matter expertise on the identification of historic properties for various infrastructure projects.

Protecting Historic Properties

6. Have the policies and programs your site/office/program has in place to protect historic properties changed over the reporting period in ways that benefit historic properties?

The approach to management of compliance with the NHPA has remained unchanged over the last three years. The staffing level has remained the same, at one cultural resource point of contact for ANL and one for the DOE-Argonne Site Office (ASO); neither are dedicated to cultural resource responsibilities full-time.

ANL is currently addressing climate change resilience for eligible historic properties through a site Vulnerability Assessment and Resilience Plan conducted within the last three years. These principles would also be incorporated into emergency management planning documents for the site.

ANL maintains a database of the site's eligible cultural resources and areas of completed archaeological surveys in its facility management Geographic Information System (GIS). This data is available for viewing through ANL's intranet mapping website and is referenced when evaluating projects for potential environmental impacts. This has not changed over the last 3 years.

7. How has your site/office/program used program alternatives such as programmatic agreements, program comments, and other tools to identify, manage, and protect your site/office/program's historic properties over the last three years, if at all?

ANL's procedures for satisfying the NHPA and DOE requirements amidst ongoing facility operations are outlined in a Programmatic Agreement (PA) between the DOE-ASO, the Illinois State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP). DOE will consult with the SHPO and the ACHP if proposed actions may adversely affect properties considered eligible for listing or listed on the NRHP. The PA includes a list of routine operations and maintenance activities that are excluded from review, which allows for ANL to expedite the planning and implementation of infrastructure projects.

Argonne maintains a Cultural Resource Management Plan (CRMP) which contains information on the procedures for considering cultural resources during laboratory operations. In accordance with the PA and CRMP, DOE

consults with the SHPO on relevant projects. The PA has not been updated or required update since its original creation in 2001.

Using Historic Properties

8. How does your site/office/program coordinate historic preservation and sustainability/climate resiliency goals in project planning?

The oldest, register-eligible building at ANL was evaluated for a rehabilitation project that incorporates climate resilience and sustainability measures into the scope. This plan included an evaluation of carbon in the recommendations to achieve a net-zero carbon facility. However, due to funding limitations, the project has not moved forward into implementation.

9. How do your site/office/program's historic federal properties contribute to local communities and their economies, and how have their contributions changed over the reporting period?

ANL evaluates the economic impact of its research on the local and national economy, and this data is frequently cited when proposing large infrastructure or building projects for funding. The process has not changed in three years, but the economic information is updated.

The Educational Programs and Outreach group at ANL uses an eligible historic property as a classroom. Partnerships with nearby schools that bring local students to the Laboratory to engage in STEM activities.

Bonneville Power Administration

Identifying Historic Properties

1. ***How many, and what percentage of your assets, are historic as reported in: (a) your bureau or agency's proprietary database and/or (b) your agency's reports?***

In 2018 and 2019, BPA completed 100% of historic property identification and evaluation of its building and facility assets, which includes over 1,000 assets. As a result of this Intensive Level Survey (ILS), BPA has completed eligibility determinations for all 135 substations in its current ownership built prior to 1975. Within BPA's substation portfolio, 77 substations are eligible for the NRHP as historic districts, and 58 are not eligible. One district, the Covington Substation is listed in the NRHP. Within the eligible substation historic districts, 36 assets are historically significant for their architectural design. Three individually eligible control houses – Alcoa, Potholes, and Troutdale – are architecturally significant but stand alone as individually eligible resources in districts that are not eligible.

BPA's current microwave communication network consists of 117 microwave radio stations. Of these, 53 were built between 1950 and 1974 and 28 are eligible for inclusion in the in the National Register of Historic Places (NRHP).

2. ***Have your identification methods changed during this reporting period? Approximately what total percentage or portion of inventory have now been surveyed and evaluated for the National Register, and does this represent an increase from your site/office/program's 2020 progress report, if applicable?***

As reported in the 2020 progress report, BPA completed an Intensive Level Survey (ILS) of historic substations built between 1938 and 1974 in Oregon, Washington, Idaho, Montana, and Wyoming in 2018, as well as a Historic Resources Technical Report in 2019 which covers BPA's microwave communication network. These two reports are referenced frequently for Section 106 compliance purposes. Additionally, a Transmission Line Historic Context Report was completed in 2022 which covered the history of 750 historic transmission lines. As part of the analysis undertaken for the Transmission Line Historic Context report, 60 designed lines (which are represented by 93 present operating lines) as individually significant within the BPA system. An Intensive Level Survey of these 60 design lines is currently underway to determine their degree of integrity, and the eligibility of the subsequently identified named operating lines.

With the substation ILS and Microwave Radio Station Historic Resources Technical Report, BPA has completed 100% of historic property identification and evaluation of its building and facility assets, which includes over 1,000 assets.

Transmission lines have traditionally been reviewed and evaluated on a project-by-project basis. Out 750 named lines, 466 lines (62%) appear to be energized within the BPA period of significance (1938-1974) and potentially eligible for the NRHP, with 284 lines (38%) not meeting the minimum eligibility requirements outlined in the MPD. 299 lines have been formally reviewed for eligibility with 225 (75%) being identified as eligible and 74 (25%) as not eligible.

The Historic Context incorporated research from BPA's repositories of scanned historic architectural drawings, photographs, and aerial images, as well as published and unpublished works documenting BPA's history, including books, videos, and maps. BPA's annual reports, engineering reports, and Owned and Operated reports were reviewed for every year during the period of significance to glean information about development trends within BPA's transmission system, as well as events and technological developments that impacted the transmission system. Online newspaper articles supplemented the research with information relevant to the development and growth of lines and corridors between substations and associated industries and communities.

Contextual information was added to the report about significant trends and themes related to specific BPA transmission, such as BPA's role in the Pacific Northwest aluminum industry, rural electrification, and the Pacific Northwest-Pacific Southwest Intertie. BPA cultural resources staff has gathered and continue to collect agency reports and documents that aid in the historical research process.

All BPA assets are tracked with varying degrees of detail over several databases and online tools. Due to the sensitivity of the data and potential threat to the power grid from outside sources, most of this information is internal. The location of substations, microwave radio stations, and individual transmission structures have been mapped in ArcGIS and are available to internal staff through a web-based application (eGIS). Digital copies of maps, architectural/engineering plans and drawings, and site-specific design information are cataloged and accessible through an engineering project content management software (ProjectWise). The physical copies of documents found on ProjectWise are stored in BPA Central Records. Other groups within BPA have independent databases with information that is crucial for describing, evaluating, and assessing historic resources, including: Real Property Services, Geospatial Services, Transmission System Standards, and Transmission Engineering.

There are also publicly accessible repositories of information on BPA historic resources. The BPA Library contains a wealth of information on the transmission system as well as the history of BPA's development and includes historic photos, videos, reports, correspondence, and newspaper articles. A sizable amount of material from BPA is also stored at the National Archives at Seattle. Historic sites databases maintained by SHPO offices within the BPA service area also include information on all historic transmission projects that were encountered on any past project that went through the Section 106, however since these also include sensitive archaeological information the level of accessibility varies between states.

Geospatial information about historic properties is important for all transmission infrastructure for assessing the geographic context, but it has a particular importance for transmission line features. Transmission towers and other line structures were selected and manufactured to meet specific geographic and climactic need (river crossings, wind, ice/snow loads) so identifying their geographic context is important to understanding their design. Additionally, the transmission lines are evaluated as linear resources, with individual structures assessed as contributing elements to the overall line. In some cases, the lines are very long, stretching for hundreds of miles and crossing many intra/inter-state boundaries. Geospatial records help to keep the entire line in focus and crucial to determining the affects to the integrity of the overall line (especially for realignments of segments of the line, or material changes to transmission structures).

3. Has your site/office/program implemented any new policies or programs that promote awareness and identification of historic properties over the last three years?

In 2021 BPA completed the BPA Historic Resources Field Guide. This is a distillation of the information that was gathered for the Intensive Level Surveys for transmission building and facility assets, and the BPA Manual for Built Resources. The Field Guide serves as a celebration of BPA history as well as a Utility Field Guide, a portable and accessible reference document for historic built resources with maps, color coding, photographs, historic information, data tables, and icons for easy reference. The field guide was distributed to individuals at the transmission line maintenance districts throughout the BPA service territory to help facilitate and guide project development with early identification of historic properties for projects prior to entering the scoping phase of development.

In 2022 BPA completed the Transmission Line Historic Context. The historic context incorporates and builds on the 2012 Multiple Property Listing for the BPA Pacific Northwest Transmission System with a more detailed focus on transmission lines. The context documents the historical events and patterns – both national and local – that have influenced development of the BPA grid; specifically, the transmission lines, which are the backbone of BPA's entire system. Additionally, the historic context provided the foundational material for an evaluation framework to determine the eligibility of BPA transmission lines for inclusion in the NRHP. The historic context established the evaluation criteria for an individually eligible transmission line, and identified 60 design lines that

met this criteria. This framework is subsequently being used for the BPA transmission line intensive level survey (ILS).

BPA is in the process of an Intensive Level Survey of 60 individually significance transmission lines which were identified in the Transmission Line Historic Context to determine their degree of integrity and eligibility to the NRHP. The ILS is expected to take three years to complete.

BPA is also in the process of developing a PA to specifically address projects occurring on transmission line assets which will bring the agency into compliance with Section 110 of the NHPA while using the process for streamlining that is set forth in Section 106. The PA process started in 2021 with meetings with State Historic Preservation Offices (SHPOs), the Advisory Council on Historic Preservation (ACHP), and Tribal Historic Preservation Offices (THPOs). The PA is intended to preempt a wide range of impacts to the transmission system that will occur because of:

- Wildfires
- Climate Change
- Grid Modification
- Interconnections (via funding from the Bipartisan Infrastructure Law)
- Maintenance and changes/modifications to active infrastructure
- Unknown factors

BPA partnered with AISES (American Indian Science and Engineering Society) to initiate a 10-week practice-based, cultural resources focused summer internship over the summer of 2022 and 2023. It was a great learning experience for BPA staff and college Tribal citizens.

Hands-on experience and skill building gained during internship included performing fieldwork with BPA archaeologists and historians throughout BPA's service territory (Oregon, Washington, Idaho, Montana), working through the Section 106 compliance process for a variety of transmission and fish and wildlife projects, working collaboratively with BPA's project teams to advise on cultural resources issues as projects are developed, and improving professional communication and networking skills.

4. Federal agencies are encouraged to share information regarding the number and percentage of historic property identification completed in the context of Section 106 for specific undertakings and programs versus that completed for unspecified planning needs (Section 110 survey). In a given year, what percentage of your site/office/program's identification of historic properties occurs due to Section 106 planning and compliance versus regular stewardship and unspecified planning needs (Section 110)?

See question 1 and 2 above.

5. How has your site/office/program employed partnerships to assist in the identification and evaluation of historic properties over the last three years?

Sites are encouraged to examine their policies, procedures, and capabilities to increase opportunities for partnership initiatives involving non-federal collaboration and investment and report on their progress.

BPA partnered with multiple departments within the agency for the identification and evaluation efforts (Facilities, Projects and Planning, Library and Archives, Safety Office, Field staff) and with a consulting team from AECOM's Portland Office.

Protecting Historic Properties

6. Have the policies and programs your site/office/program has in place to protect historic properties changed over the reporting period in ways that benefit historic properties?

BPA now employs a Cultural Resource staff of over 20 employees. The group consists of archaeologists serving in three divisions: Transmission, Fish and Wildlife Program, and the Federal Columbia River Protection System. The department also employs a GIS professional to serve all three divisions, and the agency also employs a full-time Federal historian and two full time contract historians to serve Transmission and Fish and Wildlife projects that affect built resources owned and managed by the agency, and all other built resources that may be affected by an agency project are given full consideration. The hiring of three historians has enabled Section 110 Surveys to be managed in-house, at the same time as carrying out Section 106 obligations. The historians can supply guidance for all upcoming building projects and planning in the agency.

There is also the management of approximately 20 MOAs that have various stipulations that need to be met.

7. How has your site/office/program used program alternatives such as programmatic agreements, program comments, and other tools to identify, manage, and protect your site/office/program's historic properties over the last three years, if at all?

BPA signed two Programmatic Agreements with the Idaho State Historic Preservation Office in 2015, one for Fish and Wildlife projects and one for Transmission projects. BPA is currently in the process of creating a new Programmatic Agreements for BPA historic transmission line assets. A near future goal is to develop an additional Programmatic Agreement for BPA facilities assets.

Using Historic Properties

8. How does your site/office/program coordinate historic preservation and sustainability/climate resiliency goals in project planning?

N/A

9. How do your site/office/program's historic federal properties contribute to local communities and their economies, and how have their contributions changed over the reporting period?

BPA Federal properties contribute to local communities and their economies by supplying required power, building new substations and transmission lines, or expanding capacity at existing sites to meet local and regional power supply changes.

Local economic development does not typically affect BPA asset planning. BPA sites and facilities are secured access, with no public access to the public or the local community to the agency's historic properties.

BPA has promoted tourism by installing the museum exhibit "High Voltage – BPA and the High Voltage Direct Current Test Center" in the publicly accessible BPA Library. The exhibit was originally designed as a portable exhibit that traveled the region for two years (2019 and 2020) with stops at museums and visitors centers, before the installation at its final stop in the BPA Library. The HVDC Test Center, the first facility of its kind in the United States, was established to use emerging industry knowledge on conversion between alternating current and direct current. Tests conducted at the HVDC Test Center gave BPA the information it needed to design a system to transmit power from what would become BPA's Celilo Converter Station, near The Dalles to the Sylmar Converter Station at Los Angeles Water and Power in California. This system, the Pacific Northwest-Pacific Southwest Intertie, used an 846-mile-long direct current line that was heralded as the longest of its kind in the

world. The exhibit was three years in the making, historical plans, equipment, and photos were salvaged and used to create segments of the exhibit.

BPA is in the process of developing and installing multiple interpretive panels with historic photos, maps, and text at outdoor sites that talk about different aspects of BPA history, technology, and significance to the development of the region. A set of these interpretive panels will be installed at the J.D. Ross Complex and will highlight several themes relevant to the site and agency including:

- Architecture at BPA
- BPA art and artists
- "Gone but not forgotten" panel on structures that are no longer extant
- Engineering innovations
- BPA gardens and nursery
- Ross Complex high voltage test facilities
- Anatomy of a transmission structure
- Anatomy of a substation
- Women at BPA

In the past three years, a Historic Structures Report was completed for the Dittmer Control Center (1974), an individually eligible structure that is part of the J.D. Ross Complex historic district. The Brutalist style concrete building is significant both for its architecture and for its role as the operational and management hub of BPA's system through its housing of the agency's computer and communication technologies. Additionally, the site serves as the bookend for BPA's Period of Significance (1938-1974), ending with the 1974 dedication of the Dittmer Control Center's computer-based management systems for power transmission. This document is available to the public and will help researchers understand the role of the structure in BPA's history.

BPA also recently completed Historic American Engineering Record (HAER) documentation of several contributing resources at the J.D. Ross Complex historic district: the Untanking Tower, North Ampere Building, South Ampere Building, Cooling Pond, and Transfer Track Rails. These structures are being removed as part of BPA's Ross Complex Redevelopment program which will involve the construction of the Vancouver Control Center (VCC), a new power scheduling and control center for BPA's bulk electric system. The Level II HAER documentation for the resources consists of an outline format for the Untanking Tower and short format for the remaining four resources, as well as large-format photographs of all resources. The HAER documentation will be available to the public and will help researchers understand the early history of BPA, as well as the development of the Ross Complex and its role in powering the Pacific Northwest.

Successes, Opportunities and Challenges

10. Provide specific examples of major successes, opportunities, and/or challenges your site/office/program has experienced during the past three years.

BPA's biggest successes achieved over the last three year are the continuation of a large-scale agency wide efforts to evaluate and manage historic transmission assets. The BPA Field Guide for Historic Resources is a portable, user-friendly distillation of the previous evaluations and assessments of hundreds of BPA assets that now all have an NRHP determination status. This culmination of the ILS and Manual for Built Resources efforts is an internal and external celebration of BPA's historic resources. It provides a quick guide of the key info for all of BPA's historic substations and radio stations, and highlights the best of the best from each era, theme, and style. The Field Guide is organized by location, district, and region and provides easy access to staff out in the field for quick info on every historic asset.

Another large effort that was completed this year is the BPA Transmission Line Historic Context Report, which provides a timeline and historic background research related to the development of BPA's historic transmission

grid, as well as the identification of 60 individually significant lines and an evaluation framework to continue with the assessment and evaluation of transmission lines for future BPA Section 106 compliance. This effort was also critical for the forthcoming BPA Transmission Line ILS and Programmatic Agreement for transmission line assets.

BPA is taking a leadership role in historic properties stewardship with these efforts. The State Historic Preservation Offices that BPA collaborates with have commended these efforts, which would not have been possible without agency support. The efforts have proven to reduce cost and improve efficiency.

Brookhaven National Laboratory

Identifying Historic Properties

1. ***How many, and what percentage of your assets, are historic as reported in: (a) your bureau or agency's proprietary database and/or (b) your agency's reports?***

Approximately seven percent of the 481 buildings, structures, or infrastructure at BNL have been determined eligible for listing on the National Register of Historic Places. All buildings, structures, and infrastructure greater than 50-years of age have been evaluated (48% of buildings) leaving 252 buildings, structures, and infrastructure less than 50-years old not evaluated.

Historic properties identified on the BNL site are composed of World War I trenches and foundations that are scattered across the site; two archeological sites representing mid-nineteenth century lifeways; the Gamma Forest, a scientific facility that studied gamma radiation impacts on ecosystems (Figure 1); the 1940s era water tower; building 120 a representative World War II Series 700 barracks (Figure 2); and twenty-nine buildings representing the scientific history of the Laboratory.

Figure 1: The Gamma Forest as it appeared in 1976 two years before conclusion of the experiment.

Figure 2: Building 120, representative structure of a Series 700 barracks building dating from 1941.

2. ***Have your identification methods changed during this reporting period? Approximately what total percentage or portion of inventory have now been surveyed and evaluated for the National Register, and does this represent an increase from your site/office/program's 2020 progress report, if applicable?***

Identification methods have not changed. Approximately forty-eight percent of the total building inventory has been evaluated for the National Register representing a significant increase since 2020. As mentioned above all buildings, structures, and infrastructure greater than 50-years of age have been evaluated.

3. ***Has your site/office/program implemented any new policies or programs that promote awareness and identification of historic properties over the last three years?***

Figure 3: Opening display for 'Atom to Cosmos, the History of Brookhaven National Laboratory.'

No new policies have been implemented. However, BNL recently celebrated its 75th anniversary. In preparation for the 75th anniversary, BNL worked with the Long Island Museum to develop an exhibit titled "Atoms to Cosmos, the History of Brookhaven National Laboratory" (Figure 3). The exhibit ran from April through October of 2022 and utilized numerous BNL provided artifacts, photographs, and information for the exhibit, along with several speakers from BNL providing talks throughout the year. A 'History of Brookhaven National Laboratory' talk was developed for presentation during the 75th Anniversary and has been presented at local libraries.

Several Memoranda of Agreement have been developed with the NY State Historic Preservation Office and require the development of kiosks that will highlight various aspects of cultural significance on the Lab site. Kiosks are planned for placement at the SUSC under construction at the entrance to the Laboratory and will be the first point of entry for the public.

Currently, there has been no specific inclusion of equity, access, and involvement of underserved communities with stewardship of cultural resources.

With all properties greater than 50-years of age evaluated, the need for prioritizing properties about climate impacts is precluded. In general, BNL has reviewed potential impacts on all facilities and has not identified any significant impacts from climate change.

4. ***Federal agencies are encouraged to share information regarding the number and percentage of historic property identification completed in the context of Section 106 for specific undertakings and programs versus that completed for unspecified planning needs (Section 110 survey). In a given year, what percentage of your site/office/program's identification of historic properties occurs due to Section 106 planning and compliance versus regular stewardship and unspecified planning needs (Section 110)?***

Most Section 106 agreements have occurred after identification of historic properties under Section 110. Since 2020 two projects have required development of agreements under Section 106 due to adverse impacts. Since a significant review was conducted under Section 110 no new materials were identified while implementing Section 106 agreements.

5. ***How has your site/office/program employed partnerships to assist in the identification and evaluation of historic properties over the last three years?***

Evaluation of historic properties has occurred through contracts with qualified individuals/commercial organizations.

Protecting Historic Properties

6. ***Have the policies and programs your site/office/program has in place to protect historic properties changed over the reporting period in ways that benefit historic properties?***

There has been no change in how BNL manages compliance with NHPA since 2020. The amount of time devoted to cultural resources continues to increase with the need to complete evaluations of buildings, structures, and infrastructure greater than fifty-years of age, and several new additions to the list of National Register eligible buildings, structures, sites, and new construction potentially impacting cultural resources. No new partnerships have been developed with outside organizations for the protection of cultural resources. BNL has utilized digital information (lidar data) to identify WWI features on the landscape over the past three years. Identified resources are typically outside areas that would be immediately impacted by climate change.

To date, efforts to retain cultural integrity for buildings has not required significant increases in funding. However, future work to ensure buildings are meeting sustainability initiatives while maintaining historically significant features may result in added costs.

While BNL has engaged with local Tribes on improving relationships and opportunities for workforce development, there has not been an identified need for consultation about cultural resources as no Native American cultural sites have been found on the BNL property.

The use of digital information has not changed in the past three years. It is utilized to help identify areas of cultural interest mostly about World War I Camp Upton features. The digital information is also used to identify potential impacts to Federal properties due to climate change.

BNL has not yet had to conduct any rehabilitation of historic properties. Minor upgrades of properties have not impacted historically sensitive aspects of historic properties.

7. ***How has your site/office/program used program alternatives such as programmatic agreements, program comments, and other tools to identify, manage, and protect your site/office/program's historic properties over the last three years, if at all?***

No program alternatives to Section 106 have been developed since the 2020 report.

Using Historic Properties

8. ***How does your site/office/program coordinate historic preservation and sustainability/climate resiliency goals in project planning?***

No historic properties have been fully rehabilitated; several historic buildings have had minor modifications to install LED lighting to enhance energy savings. No current study has been completed to account for embodied carbon. The Laboratory is continuing to develop its cultural resources program to ensure sustainability and climate resilience is incorporated into campus planning.

9. ***How do your site/office/program's historic federal properties contribute to local communities and their economies, and how have their contributions changed over the reporting period?***

There have been no current opportunities for use of Laboratory historic properties for local economic development, preservation training, or heritage tourism.

Successes, Opportunities and Challenges

10. Provide specific examples of major successes, opportunities, and/or challenges your site/office/program has experienced during the past three years.

Recent efforts in evaluating properties over fifty-years of age, negotiating various MOAs between DOE- BHSO and the New York SHPO and tours with the SHPO have highlighted the potential for increased historic exposure for the Lab and the local community. Significant exposure of the public to the history of the Laboratory through the Long Island Museum's exhibit 'Atoms to Cosmos, the History of Brookhaven National Laboratory' has helped to educate local public on the discoveries at the Lab. To help ensure the Lab maintains compliance with preservation requirements nominal funding has been provided to conduct the various building evaluations mentioned in this report, as well as to fund the digitization of approximately 1,400 historic videotapes to ensure that they are available for use, as well as digitization of some historic negatives needed for documentation as part of building evaluations.

Fermilab

Identifying Historic Properties

1. ***How many, and what percentage of your assets, are historic as reported in: (a) your bureau or agency's proprietary database and/or (b) your agency's reports?***

Fermilab currently has 5 sites that are eligible for inclusion on the National Register of Historic Places (NRHP). Three eligible properties are buildings, and two properties are sites.

2. ***Have your identification methods changed during this reporting period? Approximately what total percentage or portion of inventory have now been surveyed and evaluated for the National Register, and does this represent an increase from your site/office/program's 2020 progress report, if applicable?***

Fermilab has not changed identification methods between 2020 and 2023. As described in Fermilab's Cultural Resource Management Plan (CRMP), Midwest Archaeological Research Services, Incorporated (MARS) completed Phase I archaeological surveys for the entire Fermilab site, and 108 archaeological and architectural sites have been recorded with the Illinois Historic Preservation Agency (IHPA). Of the 108 sites, 5 sites are eligible for inclusion on the National Register of Historic Places (NRHP), 70 sites are not eligible, and 33 sites require Phase II testing to determine their NRHP eligibility. There is no change from the inventory identified in the 2020 report, and identification methods for historic properties have not changed during this reporting period.

3. ***Has your site/office/program implemented any new policies or programs that promote awareness and identification of historic properties over the last three years?***

No new policies or programs have been implemented over the past three years, and no updates are planned.

4. ***Federal agencies are encouraged to share information regarding the number and percentage of historic property identification completed in the context of Section 106 for specific undertakings and programs versus that completed for unspecified planning needs (Section 110 survey). In a given year, what percentage of your site/office/program's identification of historic properties occurs due to Section 106 planning and compliance versus regular stewardship and unspecified planning needs (Section 110)?***

No new historic properties were identified during this reporting period.

5. ***How has your site/office/program employed partnerships to assist in the identification and evaluation of historic properties over the last three years?***

There have been no recent partnerships established regarding potential historic properties over the last three years.

Protecting Historic Properties

6. ***Have the policies and programs your site/office/program has in place to protect historic properties changed over the reporting period in ways that benefit historic properties?***

There have been no changes over the last three years regarding management of responsibilities and compliance for historic properties, including no programmatic or partnering programs. At this point in time, we do not utilize digital information to protect historic properties in the context of the effects of climate change. Fermilab will

continue to utilize its Geographic Information System (GIS) for future construction and excavation projects at Fermilab. The GIS provides information to engineers and others who may want to disturb land around the Fermilab site for construction or infrastructure repairs. The "archeological" layer indicates exclusion zones where excavating is either totally restricted or requires approval prior to digging.

7. ***How has your site/office/program used program alternatives such as programmatic agreements, program comments, and other tools to identify, manage, and protect your site/office/program's historic properties over the last three years, if at all?***

Throughout 2021, 2022 and 2023, DOE continued to manage Section 106 activities regarding construction and operation of the LBNF/DUNE at SURF according to a Programmatic Agreement (PA) that was signed in 2015. Signatories to the PA included DOE, South Dakota State Historic Preservation Office (SHPO), Advisory Council on Historic Preservation (ACHP), South Dakota Science and Technology Authority (SDSTA). Invited signatories included the City of Lead, the City of Deadwood, and the South Dakota Game, Fish and Parks. There were also 22 invited concurring parties to the PA, including Fermilab and 19 Indian Tribes. None of the Indian Tribes signed the PA.

Under the 2015 Programmatic Agreement (PA) for National Historic Preservation Act (NHPA) activities at Sanford Lab in South Dakota, which is in the Lead Historic Mining District, DOE initiated Section 106 consultation for the LBNF Conveyor in 2018. DOE received a "No Adverse Effect" determination from the South Dakota SHPO that same year.

Fermilab will follow the procedures in the CRMP, which will be revised in 2023 or 2024, to protect Fermilab's historic properties. Phase II archaeological testing will be conducted for the remaining sites as necessary. As LBNF/DUNE construction activities proceed, Fermilab and SURF will implement the Section 106 procedures in the PA for future projects to be conducted at SURF in South Dakota. No Section 106 program alternatives have been developed during the reporting period.

Using Historic Properties

8. ***How does your site/office/program coordinate historic preservation and sustainability/climate resiliency goals in project planning?***

Fermilab has a robust review process for reviewing proposed excavations that ensures no historic locations or properties are disturbed without review. Our site has not reused any historic properties to achieve sustainability or climate resiliency goals during the reporting period. No eligible buildings have been retrofitted or rehabilitated over the last three years.

9. ***How do your site/office/program's historic federal properties contribute to local communities and their economies, and how have their contributions changed over the reporting period?***

Due to the types and locations of our potential properties, economic development and job creation has not been a factor in planning, and they have not been used for educational purposes or to foster heritage tourism. Artifacts recovered during Fermilab archaeological investigations are curated at the Illinois State Museum in Springfield, Illinois. The lab also has multiple exhibits onsite which display historic artifacts.

Successes, Opportunities, and Challenges

10. Provide specific examples of major successes, opportunities, and/or challenges your site/office/program has experienced during the past three years.

The PA has been a success in that it provides a formal mechanism for Section 106 consultation for proposed projects at SURF. However, implementation of the PA has been challenging because there are responses for 26 consulting parties and signatories to track and the 19 Indian Tribes do not normally respond to the Section 106 submittals. None of the historic properties located at SURF contribute to the local economies or tourism. However, the Lead Historic District and the associated Visitors Center bring tourism to Lead, Deadwood, and the Black Hills.

Idaho National Laboratory

Identifying Historic Properties

1. ***How many, and what percentage of your assets, are historic as reported in: (a) your bureau or agency's proprietary database and/or (b) your agency's reports?***

At the beginning of the reporting period, 116 historic properties were recommended eligible for inclusion in the National Register of Historic Places. These represent 11.97% of the 969 buildings and structures included in DOE's Facilities Information Management System (FIMS). The Idaho National Laboratory (INL) Site occupies 569,600 acres of lands in southeast Idaho. Since its inception in 1949, less than 10% of this acreage has been developed for DOE and predecessor agency use. Of the remaining undeveloped lands, about 12% has been inventoried for archaeological resources. As of FY2022, 3,226 archaeological sites had been inventoried on INL Site lands, of which 419 (13%) were determined to be eligible for listing on the National Register of Historic Places. Archaeological sites are documented in the INL Site Cultural Resource Management Office's (CRMO) database and in site records that are submitted to the Idaho State Historic Preservation Office (SHPO).

2. ***Have your identification methods changed during this reporting period? Approximately what total percentage or portion of inventory have now been surveyed and evaluated for the National Register, and does this represent an increase from your site/office/program's 2020 progress report, if applicable?***

Beginning in FY2020, the Center for Environmental Management of Military Lands (CEMML) at Colorado State University began an inventory of the Advanced Test Reactor Complex, Central Facilities Area, Critical Infrastructure Test Range Complex, Experimental Breeder Reactor-I, Idaho Nuclear Technology and Engineering Center, and Materials and Fuels Complex facilities at the INL Site. These new evaluations reduced the number of historic properties at the INL Site to 37 buildings (3.8%) and identified four historic districts. An additional 11 buildings and two structures are recommended not individually eligible but contribute to one of the eligible historic districts. As Idaho State Historic Preservation Office concurrence was received after the annual FIMS audit, the database will be updated to include the changed historic designations in FY2023.

3. Has your site/office/program implemented any new policies or programs that promote awareness and identification of historic properties over the last three years?

The Department of Energy Idaho Operations Office (DOE-ID), Idaho SHPO, and the Advisory Council on Historic Preservation (ACHP) began negotiations on a new Programmatic Agreement (PA) in FY2021 to replace the PA signed in 2004. In FY2022, the draft PA was undergoing regular negotiations with DOE, the INL CRMO, Idaho SHPO, ACHP, Shoshone-Bannock Tribes, and other consulting parties. Through negotiations, several successful improvements were made to clearly delineate roles and responsibilities, define the Section 106 process, and commit to Section 110 deliverables. The PA was approved and fully executable in May 2023.

In FY2020-FY2021, CRMO issued 48 procedures, guides, forms, and instructions that pertain to the INL comprehensive historic preservation program, including Section 106 and Section 110 responsibilities, in addition to other applicable regulations such as Archaeological Resources Protection Act (ARPA) and Native American Graves Protection and Repatriation Act (NAGPRA), and managing collections under 36 CFR 79. In FY2022, PLN-5920 INL Archives and Special Collections Management Plan, went through a revision process that resulted in the update and creation of 11 new procedures and forms. The INL Archives and Special Collections was established as part of an October 2005 Memorandum of Agreement (MOA) between the DOE–ID and the Idaho SHPO and represents an additional component of the Cultural Resource Management Program, preserving tangible elements of the history of the INL Site in a manner reflecting its importance at local, regional, and

national levels. Continual assessments and revisions of INL CRMO procedures, guides, forms, and instructions will occur as needed.

To identify areas to improve and ensure processes and procedures are clear and consistently applied within the Cultural Resource Management Program, the INL CRMO conducted eight assessments of work performed at the INL between FY2021-FY2022. With several new procedures issued in FY2021, the focus of two of the assessments was on recently issued procedures. Three of the assessments focused on work orders and the screening process at the INL for routine maintenance activities in each trimester of FY2022. Four of the assessments were associated with records management, archives, and communication and transmittal processes. DOE-ID performed an assessment of INL Site compliance with the 36 CFR 800 regulations and identified several findings that resulted in improvements to conducting, documenting, and approving National Historic Preservation Act Section 106 reviews in compliance with 36 CFR 800. The INL Environmental Management System is a certified ISO-14001 standard program, and INL CRMO participates in annual audits regarding the program, and how it integrates with other environmental programs and supports lab mission.

For more than two decades, DOE-ID and the INL CRMO have participated in an important partnership with the Shoshone-Bannock Tribes with commitment detailed in the Agreement-in-Principle (AIP). This partnership enables Tribal and INL CRMO staff to jointly conduct many general and project-specific activities including archaeological surveys and site evaluations, identification of and protective strategies for tribally sensitive resources, recommendations for cultural resource protection and/or mitigation, educational outreach and tours, Tribal access to and use of significant areas and resources on the INL, and general planning and feedback on INL activities. A new five-year Agreement-in-Principle was signed by DOE-ID and the Shoshone-Bannock Tribes Fort Hall Business Council in 2022.

Regular, face-to-face meetings of the INL Site Cultural Resources Working Group (CRWG), with representatives from DOE-ID, the INL CRMO, the Shoshone-Bannock Tribes, and INL Site project managers facilitate this important partnership and foster an atmosphere of mutual respect that is conducive to open communication and effective consideration of Tribal views in decisions regarding INL Site cultural resources and overall land management. In FY2020-FY2022, sixteen meetings of the INL Site CRWG were held. These meetings occurred approximately once a month and were held at several locations depending on the topics including but not limited to DOE-ID's Idaho Falls office, Fort Hall, Idaho Museum of Natural History (IMNH) in Pocatello, and Museum of Idaho (MOI) in Idaho Falls. Furthermore, the Shoshone-Bannock Tribes' Heritage Tribal Office (HeTO) staff assisted CRMO staff with Section 106 and Section 110 projects that included survey of a total of 6,309 acres and the recording of approximately 159 cultural resources. In total, the HeTO staff contributed 230 person days during FY2020-FY2022. The Shoshone-Bannock Tribes are involved in all Section 110 work, and the thresholds for involvement in Section 106 fieldwork is as follows: Class II and Class III archaeological surveys that: 1) exceed three acres; 2) are less than three acres but involve known precontact historic properties; or 3) are in culturally sensitive areas.

DOE-ID and the INL CRMO have not prioritized the identification of historic properties in areas with the highest potential for climate impacts.

3. ***Federal agencies are encouraged to share information regarding the number and percentage of historic property identification completed in the context of Section 106 for specific undertakings and programs versus that completed for unspecified planning needs (Section 110 survey). In a given year, what percentage of your site/office/program's identification of historic properties occurs due to Section 106 planning and compliance versus regular stewardship and unspecified planning needs (Section 110)?***

Over the past three years, an average of 235 INL Site projects have been reviewed per year for potential impacts to archaeological resources and historic architectural properties. This includes over 705 project reviews in FY2020-FY2022 for a variety of INL Site activities such as new construction (roads, facilities, utilities),

environmental cleanup, small research developments and field tests, monitoring wells, facility deactivation and demolition, equipment removal, roof repairs, security and utility upgrades, general maintenance, and modifications to historic properties to support new test beds for microreactors. Between FY2020 and FY2022, a total of 6,611 acres of land were surveyed, 85% (5,626 acres) of the surveys were conducted because of Section 106 undertakings.

As of FY2022, approximately 12% of lands (nearly 68,000 acres) within the INL Site have been inventoried for archaeological properties through Section 106 and Section 110 related efforts; 3,226 precontact and historic archaeological resources have been identified. Data in the table below for FY2020-2022 show 64% of NRHP-eligible properties were identified during Section 106 surveys and 36% were identified during Section 110 activities.

Figure 1. FY2020-2022 NHPA Surveys

NHPA Responsibilities	FY2020	FY2021	FY2022	Total	% of Total
Section 106 undertakings	184	280	241	705	
Section 106 acres*	3,041	2,162	423	5626	85%
Section 110 acres*	N/A	450	535	985	15%
Total acres*	3,041	2,612	958	6,611	
Section 106 cultural resources*	13	17	23	53	38%
Section 110 cultural resources*	21	17	49	87	62%
Total cultural resources*	34	34	72	140	
Section 106 NRHP eligible	2	5	7	14	64%
Section 110 NRHP eligible	4	0	4	8	36%
Total NRHP eligible	6	5	11	22	

*Acres and number of cultural resources includes newly surveyed areas and identified archaeological resources.

The implementation of Section 106 agreements has not contributed to the identification of historic properties during the reporting period.

5. How has your site/office/program employed partnerships to assist in the identification and evaluation of historic properties over the last three years?

Partnerships have long been an important component of cultural resource management (CRM) at the INL Site. In FY2020-FY2022, DOE-ID and the INL CRMO continued to participate in long term relationships with the Shoshone-Bannock Tribes, Federal agencies, and other entities involved in work activities on or near the INL Site including the Bureau of Land Management (BLM), the U.S. Forest Service (USFS), and the National Park Service (NPS). In FY2020, research goals related to pluvial Lake Terreton and regional volcanic glass characterization were furthered by the initiative of graduate and undergraduate students participating in INL's internship program.

Museum of Idaho

The Museum of Idaho's "Way Out West" permanent exhibit opened on January 23, 2021. "Way Out West" is aimed at explaining southern Idaho from the days of Lake Terreton, at the terminal Pleistocene, until present day. DOE-ID and INL CRMO worked with Museum of Idaho (MOI) staff in 2019 and 2020 as part of multi-effort collaboration with the Shoshone-Bannock Tribes and other historical and cultural preservation organizations to create the "Way Out West" exhibit. DOE-ID loaned historic artifacts to MOI, for display in the exhibit. MOI receives between 90,000-100,000 visitors a year.

MOI, in collaboration with INL CRMO staff, hosted a public outreach event at the Wasden Site on August 13, 2022. The site is currently owned and managed by The Archaeological Conservancy (TAC). The event included

presentations by CRMO and MOI staff, a viewing of Wasden artifacts currently housed at MOI, and a field visit to the site. The event was attended by thirty members of the public with an interest in local archaeology.

Figure 2. Event participants examining Coyote Cave at the Wasden Site.

In addition to tours, INL CRMO archaeologists working with the MOI provided professional expertise and assistance in teaching a brief archaeology summer course for local public-school teachers in July 2021 and 2022. This included providing instruction on Idaho's Precontact period, archaeological survey and excavation techniques, and the protection of cultural resources. This outreach effort included 16 public school teachers in history, science, and social studies curriculum.

Figure 3. INL CRMO Intern discussing archaeological history to a group of teachers.

Bureau of Land Management
Efforts to renew an existing 2016 Memorandum of Understanding (MOU) between DOE-ID and BLM Upper Snake Field Office began in 2021 and continued in 2022. The existing MOU discusses a cooperative management approach to certain lands within the INL. The renewed MOU will include a cultural resources management section, where BLM and DOE-ID define the cooperative process to determine the Lead Federal Agency for Section 106 undertakings; denotes the frequency and topics of reoccurring meetings; encourages joint Section 110 projects; issues a standardized data-sharing agreement; and the ability for assistance in NAGPRA, ARPA, paleontological resources, and wildland fire resource advising expertise held with either DOE-ID and INL CRMO or BLM. The updated MOU is anticipated to be signed in FY2024. In addition, the Idaho Transportation Department, Idaho Power, and Rocky Mountain Power maintain rights-of-way along public roads and power line utilities that pass through the INL Site. INL CRMO staff have established productive working relationships with cultural resource managers and other personnel in these organizations and routinely share information for cultural resource identification, assessment, and protection.

Joint efforts with BLM in FY2020-FY2021 include the following: Class III inventories, site recordation, precontact context coordination, and an ARPA damage assessment.

Battelle Laboratories Cultural Resources Community of Practice
On January 27, 2022, INL CRMO initiated the first meeting of the Battelle Cultural Resources Community of Practice with seven participating laboratories. The mission statement is as follows: *The Battelle Cultural Resources Community of Practice will share knowledge, resources, expertise, success stories and lessons learned. Agenda items will focus on ways to creatively address common issues or complexities within cultural resource management at highly technical facilities and working with Federal Agencies, Native American Tribes, and State Historic Preservation Offices.*

In FY2022, a total of eight successful discussions and workshops on a variety of issues have proved fruitful for participants. Topics have included laboratory overviews, lessons learned, programmatic agreements, NRHP Historic Districts, and practical applications in Section 106 projects utilizing *Balancing Historic Preservation Needs with the Operation of Highly Technical or Scientific Facilities* (ACHP 1991). Together, in a community of practice, we share ideas, guidance, and lessons learned to inform and establish streamlined, compliant, and efficient ways to fulfill cultural resource management responsibilities at national laboratories.

INL Internships
INL CRMO has a robust intern program selecting students from local universities each year. Since FY2020, there have been nine interns hired to work within the CRMO. Some of those interns were financially supported by other organizations at INL working to add environmental justice goals into their programs.

Public Education, Outreach, and Stewardship
Public outreach and education are fundamental components to the INL CRMO program. The CRMO staff look for opportunities to discuss the stewardship of cultural resources to the local community, public, INL employees, and key stakeholders such as the Idaho SHPO and the Shoshone-Bannock Tribes. In FY2020, many of these events were limited in number or conducted virtually due to health concerns and restrictions related to the Covid-19 pandemic.

Educational exhibits at the Experimental Breeder Reactor I (EBR-I) Visitor's Center (a National Historic Landmark) and the Big Lost River Rest Area on U.S. Highway 20/26 within the boundaries of the INL Site are also important tools for public outreach. By the close of 2022, and for the first time in two years, face-to-face employee and public tours at these facilities were conducted, and there was a total of 9,164 visitors. In addition to in person tours, visitors could download a free app that provided a virtual tour of the EBR-I museum.

Staff Supported Education and Outreach FY2020 – FY2022

- In April 2021, INL CRMO provided a presentation to the INL Monitoring and Surveillance Committee discussing Section 106 and Emergency Response Procedures to wildland fires. Topics covered included INL CRMO as resource advisors, Emergency Response Action Plans, and associated reporting timelines, and INL CRMO input on remediation of fire suppression activities.
- In May 2021, CRMO and another subcontractor presented "Travelling the Jeffrey-Goodale's Cutoff" virtually as part of the Herrett Center for Arts and Science Forum lecture series.
- On July 9, 2021, CRMO archaeologists, Shoshone-Bannock HeTO staff, and the DOE-ID Cultural Resource Coordinator facilitated access to the INL Site for members of the Fort Hall Business Council. Council members visited three sites of traditional significance, and CRMO staff demonstrated current protocols for in-field XRF analysis of obsidian artifacts that reduce the need for surface collection and curation.
- In early July 2021, an INL CRMO Archaeologist and INL Intern led two archaeology workshops for about 25 Shoshone-Bannock middle school Science, Technology, Engineering, and Mathematics (STEM) students. The students were provided a brief overview of lithic technology before leading a mock archaeological survey exercise on the campus of Idaho State University in Pocatello, Idaho. A week later, CRMO and Shoshone-Bannock HeTO staff, Larae Bill, and Anna Bowers, co-lead the tour and provided students an opportunity to exercise their survey skills at a real archaeological site.
- In July 2021, INL CRMO staff hosted two onsite tours for Senior Leadership Team (SLT) focusing on Section 106 and Section 110 responsibilities and visited historic archaeological sites and built environment locations to discuss history of the INL site. As part of continual outreach opportunities to INL employees and leadership, the information presented to SLT during these tours is crucial to keeping leadership engaged in the INL CRMO processes, promotes stewardship, and explain how INL CRMO is critical to the success of the INL mission.
- INL CRMO visited three schools in FY2022 to give presentations on archaeology in southern Idaho (Eagle Rock Middle School, Longfellow Elementary, and Thunder Ridge High School).
- On November 11, 2021, CRMO gave a presentation to local government officials focused on how INL CRMO supports lab mission. This included highlights on our working relationship with the Shoshone-Bannock Tribes and Idaho SHPO and a brief history of the INL from the Precontact period to the naval and nuclear period.
- On April 4, 2022, the CRMO assisted staff of the Shoshone-Bannock HeTO with a presentation on cultural resource management to students at the Shoshone-Bannock Junior-Senior High School.
- On April 18, 2022, CRMO participated in the inaugural Net-Zero Fair which was open to INL employees and members of the public, who had the opportunity to learn about INL's plan to mitigate carbon emissions resulting from INL business and operations.
- On April 22, 2022, the Shoshone-Bannock Tribes held the first Earth Day celebration at the INL Site for students from the Shoshone-Bannock Junior-Senior High School. The celebration was part of DOE's "Sunrise to Sunset" National Lab Earth Day event. More than 80 students and Tribal members visited Middle Butte cave and participated in traditional Shoshone-Bannock dancing and drumming at the Central Facilities Area. DOE-ID and Battelle Energy Alliance employees provided planning and logistical support to the Tribes and participated in the celebration.
- In May, July, and August 2022, CRMO staff hosted four onsite tours for Environmental, Safety, Health, and Quality (ESH&Q) employees as recognition events. The tour topics focused on Section 106 and Section 110 responsibilities and included visits to historic archaeological sites and built environment locations to discuss the history of the INL site.
- On June 28, 2022, DOE-ID's Idaho Cleanup Project (ICP) led a tour of the INL Site with the Shoshone-Bannock Tribes and INL CRMO to discuss cleanup advancements at the Radioactive Waste Management Complex; Idaho Nuclear Technology and Engineering Center; Idaho Comprehensive Environmental Response, Compensation, and Liability Act Facility; Integrated Waste Treatment Unit; and Critical Infrastructure Test Range Complex. ICP and the Tribes are working together to develop the Tribes' Long-Term Stewardship Program that will also include measures to protect of cultural resources.

- On August 4, 2022, staff from the CRMO and Shoshone-Bannock HeTO led a half day tour of INL cultural resources for 33 Tribal students participating in INL's work experience program for high school students. The group discussed Tribal history, Shoshone and Bannock use of the landscape, and cultural resource management.
- On August 16, 2022, INL CRMO and DOE-ID hosted the Idaho State Historical Society Board of Trustees and members of Idaho State Historic Preservation Office at the INL. The meetings consisted of presentations on Precontact archaeology of the INL, nuclear reactor history at the Lab, and SHPO and DOE-ID discussed the importance of the consultation process and Section 106 success stories. Later, the group visited EBR-II (DOME) and the original control room to discuss how adaptive reuse and repurposing of the structure will host new microreactors.
- On September 13, 2022, CRMO staff presented a lecture to a group of students attending the Pacific Northwest Historic Preservation Field School at Harriman Park. The topic included Idaho Precontact history and the current and future activities associated with the Precontact context, highlighting the collaboration work being conducted between DOE-ID, INL CRMO, and the Shoshone-Bannock Tribes.

Figure 4. Earth Day Celebration, from left, Willetia Amos (DOE-ID), Connie Flohr (DOE-ID), Larae Bill (HeTO), Reese Cook (CRMO), Betsy Holmes (DOE-ID), Anna Bowers (HeTO), Nicholas Homer (CRMO), Taylor Haskett (HeTO), Josh Clements (CRMO), and Jeremias Pink (CRMO).

Protecting Historic Properties

6. Have the policies and programs your site/office/program has in place to protect historic properties changed over the reporting period in ways that benefit historic properties?

In FY2020, CRMO expanded and created staff augmentation through contractors for approximately six staff members to assist with legacy documents, cultural resources databases, and reconciliation of geospatial data and site recordation. Between FY22 and early FY23, permanent CRMO staff positions experienced growth in terms of quantity of employees and expertise of staff to sustain the level of workload for DOE-ID. At present, CRMO staff consists of 17 individuals: one Manager, one Technical Lead, six Archaeologists, two Architectural Historians, one Archivist, and six Cultural Resource Technicians. Areas of expertise include Anthropology, Archaeology, Archives, Special Collections, Architectural History, History, Tribal Relations, Regulatory Compliance, Lithic Analysis, GIS/Cartography, Database Management, Ceramics, Zooarchaeology, Osteology, Forensics, X-Ray Fluorescence, Curation, Preservation Plans, Treatment Plans, and NEPA and Section 106 Coordination. In addition, between FY2020-FY2022, the INL CRMO hosted between one and six interns each summer, and some

continued their experience's part time while they attended school fall through spring, including one full-time archivist intern between FY2020-FY2022. Funding is approximately 95% indirect through the M&O contract and 5% direct through project funded Section 106 review.

- *Has your site/office/program incorporated climate change adaptation/mitigation principles into its policies, programs, and procedures in place to protect historic properties over the last three years?*

Net-zero means keeping things in balance. INL will reach net-zero when the amount of greenhouse gas emissions produced by the laboratory equals the amount of greenhouse gases removed from the atmosphere. INL will eliminate emissions where they can by replacing older technologies with newer or cleaner technologies. Achieving net-zero doesn't mean INL won't produce emissions, but any greenhouse gases produced will be offset by carbon-capture technologies.

INL's goal is to achieve that balance and reach net-zero emissions by 2031 by eliminating or offsetting all the greenhouse gas emissions from its 357 buildings, 605 vehicles and approximately 5,400 employees spread over its 890-square-mile campus.

INL staff's ingenuity and expertise in energy research drive innovations that lead to cleaner energy production and reduced carbon emissions. INL will demonstrate solutions, including integrating advanced nuclear reactors with other clean energy systems on a microgrid to provide clean, secure electricity, thermal energy, hydrogen, ammonia, and other value-added products to achieve carbon reduction goals. Part of these efforts include upgrading existing systems and use of existing infrastructure, which can lead to opportunities to promote historic preservation through adaptive reuse.

- *Has your site/office/program employed partnerships to assist in the protection of historic properties over the last three years? How does your site/office/program involve stakeholders, such as tribes and Native Hawaiian organizations (NHOs) and other underrepresented communities in the protection and management of properties of significance to them?*

As discussed above, DOE-ID and INL Site contractors engage with the Shoshone-Bannock Tribes via formal and informal means; consultation, Agreement-in-Principle and partnership resulting in collaboration toward ongoing preservation and management of archaeological resources and those resources of spiritual, sacred, and community significance. DOE-ID provides funding to the Shoshone-Bannock Tribes through cooperative agreements to perform independent oversight of DOE-IDs operations at the INL Site, including management and protection of cultural resources and historic properties.

- *Has your site/office/program developed methods, guidance, or best practices to engage with tribes and NHOs to incorporate Indigenous Knowledge when locating and/or preserving historic properties of direct concern to Indian tribes and NHOs?*

The Shoshone-Bannock Tribes identify the areas that will be subject to proactive Section 110 annual surveys. The sites are selected based on the Tribes' detailed knowledge of INL Site landscapes and resources.

- *How has your site/office/program's use of digital information sources changed since the previous reporting period? What new or updated sources of digital information about the location of historic properties does your site/office/program use? Does your site/office/program utilize digital information in order to protect historic properties in the context of the effects of climate change?*

An agreed upon reconciliation process between DOE-ID and Idaho SHPO in 2019 continued throughout FY2020-FY2022. The reconciliation process includes reconciling the Idaho SHPO data provided to DOE-ID and INL CRMO in 2019 with the information currently available at INL. There were discrepancies in the number and location of sites. Therefore, a full review of the site forms, databases, and geospatial data was conducted and updated with the most current and accurate information available.

The data was gathered from an extensive review of the INL CRMO records and used to create a new geospatial database for all archaeological resources as well as a corresponding archaeological site database from existing digital and paper records. Efforts to compile the most up to date and accurate site (ASI) databases also occurred, which included INL CRMO working with computer programmers to ensure merging, compilation, and creation of a database that contains all required and useful information to compile into ASI site databases and records. Both comprehensive ASI and geospatial databases will represent the most up to date data INL CRMO has on every known resource. Reconciliation of the archaeological geospatial and site databases was completed in January 2023.

The INL CRMO currently manages, updates, and ensures security of all DOE-ID archaeological and paleontological geodatabases, as well as Federal records associated with management of cultural resources on INL. Currently, as a portion of DOE-ID cultural resource data reconciliation activities, a subcontractor is in the process of digitizing all paper legacy records. At the end of FY2022, a total of 8,701 records were entered into the restricted cultural section of EDMS (Electronic Data Management System) and included, but are not limited to: project files, correspondence files, cultural resource reports, photo files, ASI and IHSI forms, and MOA and MOU documents. These efforts were completed in September 2023.

The INL CRMO has continued to develop the cultural resource database (CRDB) in FY2020-FY2022, instituting a standard of digital data collection that conforms to Federal archival and records management standards. The institution of new file structures and naming systems designed to streamline data storage and future access, as well as developing more stringent and streamlined data collection protocols have continued to evolve with the development of 48 new procedures. In March 2022, CRMO staff worked to integrate the Section 106 process into the National Environmental Policy Act (NEPA) systems at INL. Continued integration and improvements will be pursued to enhance the abilities of the CRDB such that it will "talk" with other systems to support projects with records and results of the Section 106 process. These changes will continue to be developed in FY2023-FY2025.

- *Has your site/office/program faced challenges or seen costs increase in attempting to ensure your historic rehabilitations, if any, comply with the Secretary of the Interior's Standards for the Rehabilitation of Historic Properties?*

There were no historic rehabilitations during the period covered by this report.

7. How has your site/office/program used program alternatives such as programmatic agreements, program comments, and other tools to identify, manage, and protect your site/office/program's historic properties over the last three years, if at all?

During the reporting period the newly implement Programmatic Agreement discussed above, was undergoing negotiation. It has since been signed and implemented and will positively impact Section 106 and 110 practices.

INL CRMO will perform self-assessments on aspects of PA implementation, tracks metrics of program health, and reports on Section 110 activities in Annual Reports to stakeholders. DOE-ID has a formal assessment program that evaluates INL Site contractor performance in complying with contract requirements, regulatory requirements, and formal agreement requirements (Programmatic Agreement, Memoranda of Agreement). The results of DOE-ID's assessments are factored into the overall evaluation of contractor performance for fee awards and ES&H effectiveness.

Using Historic Properties

8. How does your site/office/program coordinate historic preservation and sustainability/climate resiliency goals in project planning?

A large majority of the Section 106 undertakings at the INL Site involve maintenance of an aging infrastructure and retrofitting new systems in historic buildings. These activities are to support the net-zero initiative, but also to improve energy, locational, and system efficiencies and remove obsolete equipment, materials, and machinery. INL maintenance staff that work within these historic buildings have attended historic preservation training to receive qualifications in managing the historic properties in which they maintain, including but not limited to EBR-I.

Experimental Breeder Reactor (EBR)-II Modifications to Support National Reactor Innovation Center (NRIC) Demonstration of Microreactor Experiments (DOME)

Pre-conceptual design modifications for EBR-II and associated room in the power plant were initiated in January 2021. These modifications to refurbish these buildings are to support potential future advanced reactor demonstration activities. The project is referred to internally as "DOME" or Demonstration of Microreactor Experiments. The INL CRMO and DOE-ID conducted an informational conference call with Idaho SHPO on February 24, 2021, to discuss preliminary plans, design work, and project timelines. The design process continued through FY2021-FY2022 with periodic INL CRMO and DOE-ID involvement to reduce, avoid or minimize impacts to historic properties. In April 2022, INL CRMO was provided with the preliminary final designs and completed the Section 106 review. On June 8, 2022, INL CRMO and DOE-ID traveled to Boise to meet with Idaho SHPO to discuss the outcome of the review. A report was submitted to Idaho SHPO documenting a finding of No Adverse Effect and concurrence was received on June 17, 2022. EBR-II is a historic property that was undergoing decontamination and demolition when DOE-ID determined it could be adapted to serve as a microreactor demonstration test bed thereby sparing the building from demolition and renewing its original purpose to demonstrate new reactor concepts. The modifications will support continued mission use that relates to the historic significance of the building.

LOTUS (ZPPR) Test Bed Modifications

Pre-conceptual design modifications for the ZPPR were initiated in January 2021. Referred to internally as "LOTUS," or Laboratory for Operation and Testing in the United States, the project proposes to modify and refurbish the ZPPR cell to support future advanced reactor demonstration activities. The INL CRMO and DOE-ID conducted an informal briefing on the project with Idaho SHPO on May 18 and June 25, 2021, to discuss the timing of Section 106 and NEPA and present the proposed modifications. During the June meeting, SHPO agreed that the modifications as proposed currently would likely have a No Adverse Effect. Preliminary final designs were provided to INL CRMO in June 2022 and were adequate to complete Section 106. DOE-ID submitted a report and determination of No Adverse Effect to historic properties from the proposed modifications within ZPPR. SHPO concurrence on the No Adverse Effect finding was received on August 15, 2022. ZPPR is a historic property, and the modifications will support continued mission use that relates to the historic significance of the building.

9. How do your site/office/program's historic federal properties contribute to local communities and their economies, and how have their contributions changed over the reporting period?

DOE-ID and INL supported the "Way Out West" exhibit at the Museum of Idaho in Idaho Falls as discussed previously. INL Site contractors Battelle Energy Alliance and Idaho Environmental Coalition are also corporate sponsors for the Museum, which attracts more than 90,000 visitors annually and serves as a tourist hub supporting the local economy.

INL encourages interest in cultural resource and historic preservation professions through its internship program and through site tours for K-12 students. The EBR-I National Historic Landmark is open during the summer to members of the public and serves as an attraction for out-of-town visitors and tourists passing through the area and contributes indirectly to local and regional economies.

- *Does your site/office/program use historic properties to foster heritage tourism, when consistent with site/office/program mission? If so, please describe any new heritage tourism efforts during the reporting period and whether they include public access to historic properties. Include any examples that promote diversity and equity in the use of historic properties for heritage tourism.*

EBR-I
Experimental Breeder Reactor I (EBR-I), which is recognized as a National Historic Landmark (NHL) and was the first nuclear reactor in the world to produce usable electrical power. Today, EBR-I remains open to the public, filling an important role in heritage tourism for DOE-ID with thousands of visitors every year. In FY2022, following lifting of COVID-19 restrictions, EBR-I saw over 9,000 visitors. It hosts INL visiting dignitaries and local school field trip excursions and is part of new INL employee orientation.

Virtual Tours
Following the success of the virtual tours of the EBR-I museum, the INL CRMO developed a virtual archaeology tour in coordination with DOE-ID and Shoshone-Bannock Tribes Heritage Tribal Office (HeTO) staff. The virtual tours were held on August 25, September 27, October 27 and November 16, 2021, and January 18, 2022. Due to the overwhelming response to these opportunities, CRMO staff are working on creating three separate virtual tours that will be rotated monthly: 1) Precontact history (co-led with member of HeTO staff), 2) Euroamerican contact, i.e., fur traders, emigrant trails, and homesteads, and 3) INL naval and nuclear history.

NOTF Potential Heritage Tourism Site
INL is in the preliminary stages of initiating a potential heritage tourism display at the INL to highlight the NOTF used at the site in the 1960-1970s. A variety of tests were performed to calibrate and test guns for use on naval ships.

Successes, Opportunities and Challenges

10. Provide specific examples of major successes, opportunities, and/or challenges your site/office/program has experienced during the past three years.

See above examples in USING HISTORIC PROPERITES for the LOTUS Test Bed and DOME Test Bed as successful Section 106 case studies. In addition to Section 106 responsibilities, INL CRMO pursues Section 110 projects as part of aiding DOE-ID in operation of a preservation program. Examples of some these efforts are described below.

Section 110 Research

XRF Analysis of Terminal Pleistocene Tools
As part of a graduate intern research project during the summer of 2020, INL CRMO Intern conducted XRF analysis on artifacts from on terminal Pleistocene site and compared the result from two additional terminal Pleistocene sites. Preliminary results show that over 90% of artifacts were manufactured using material from a local source. The presence of multiple Folsom point fragments, channel flakes, and the predominance of this toolstone suggest that study subject site functioned as a production locale for Folsom technology using the local-source toolstone. Two Humboldt projectile point bases were sourced to more remote locations which suggests the site's later occupants were traveling farther to obtain toolstone. Other regional sources were also represented at the site. The results for the two comparative site artifacts show a similar reliance on nearby material with nearly

75% and 84% of the samples attributed to the local source and the remaining samples at these two locations source to the more remote regional source locations.

Terminal Pleistocene/Early Holocene Projectile Point Distribution and Lake Terreton
The significance of pluvial Lake Terreton in the lifeways of the ancestral Shoshone and Bannock people has long been hypothesized. During the fall of 2020, an INL CRMO intern and ISU student, performed several geospatial analyses to explore the relationship of Terminal Pleistocene-Early Holocene projectile points and Lake Terreton. Attributes considered in the analysis include projectile point type, associated chronology, projectile point location, elevation, and density of projectile points in relation to and distance from a proposed Lake Terreton shoreline.

A total of 129 projectile points from within 20-kilometers of the proposed shoreline were selected for analysis. Statistical analyses were performed including hotspot, simple cluster modeling, box plots, and distance decay models were performed to explore the relationship between Lake Terreton and Terminal Pleistocene and Early Holocene projectile points. Projectile points from the latest period 10,000-8,000 BP, such as Cody Complex and various Late Plano types, were on average farther from the proposed lakeshore than earlier types which may suggest people were less tethered to the riparian environment of Lake Terreton. Essentially on a local scale, the closer one gets to the proposed shoreline of Lake Terreton, more early archaeological materials will be encountered. This result, combined with the fact that less than 6% of the sampled projectile points fell within the proposed boundary of Lake Terreton, demonstrates that the Terminal Pleistocene and Early Holocene projectile points and the people who left them are strongly associated with Lake Terreton and the resources it attracted.

FY2020 – FY2022 Volcanic Glass Characterization
To fully characterize the geographic distribution of Southern Idaho obsidian source groups, the INL CRMO has compiled a comprehensive Idaho obsidian reference collection. The project has been on-going since 2019. As of FY2022, the current dataset contains over 2,000 samples of geologic obsidian from 155 locations that correspond to 30 geochemically distinct source groups, a few of which have not been previously defined or recognized by archaeologists. In FY2023, the CRMO will compile the results of analyses conducted in FY2020-FY2022, including sources defined in the reference collection.

Folsom Manufacturing Site
Because Clovis and Folsom points from the eastern Snake River Plain (ESRP) have rarely been reported in peer-reviewed literature, the North American archaeological community is generally unaware of their existence or distribution in this part of the Desert West. In fact, channel flakes have never been reported in archaeological assemblages west of the Rocky Mountains. As such, the great antiquity of the Shoshone and Bannock occupation of this region and its significance remains unacknowledged.

The purpose of this research is to pursue investigations of the Folsom assemblage recovered from an ancient site to address the likelihood that, during the terminal Pleistocene, the ancestral territory of the Shoshone and Bannock was already well established and included not only the rich habitats of Lake Terreton and the Pioneer Basin, but the surrounding mountains, valleys and water courses that are still important to the Tribes today. Folsom technology is also ubiquitous to bison kills on the Great Plains. This and other likened sites in the Pioneer Basin may provide evidence that the Shoshone and Bannock people have relied on bison for subsistence for at least 13,000 years.

Research goals completed in FY2022 include an XRF analysis of Folsom points from study site as well as other specimens from the Pioneer Basin. Furthermore, a comprehensive lithic analysis, being performed by an outside researcher is currently underway. A draft manuscript, in collaboration with HeTO and the researcher, will be prepared in FY2023-FY2024.

Section 110 Historic Contexts

Precontact Context

As part of DOE-ID commitments to strengthen the INL historic preservation program, the INL CRMO, DOE-ID, BLM and HeTO initiated efforts on the Precontact Context (PCC). The PCC proposal includes the following themes (along with associated research questions): Shoshone and Bannock Ethnohistory, Changes in the Landscape and Environment, Projectile Point Chronology, and Settlement and Subsistence.

The INL CRMO and HeTO are currently in the "*Assessing, Synthesizing* and *Identification*" phase of the PCC for the 8-million-acre study area. During summer of 2022, the CRMO staff, HeTO and the BLM archaeologist rerecorded ten previously recorded Precontact sites within the study area thought to represent specific property types. Most of these sites had not been visited by Shoshone-Bannock Tribal representatives before 2022.

Work has also been initiated on context themes, including the generation of Accelerator Mass Spectrometry (AMS) assays to refine the ESRP point chronology and characterize environmental changes over the past 13,000 years. Previously collected projectile points from excavated sites within the study area have been analyzed via XRF. These efforts will continue into FY2024 and involve XRF analysis of existing surface collections from the study area.

Property types have been identified in collaboration with HeTO staff, and assignment of property types in the PCC geospatial database occurred in FY2023. Once this task is complete, the INL CRMO and HeTO staff will work to characterize the locational patterns of property types, as well as characterize the current condition of property types. This task will assist in defining physical integrity guidelines and provide the necessary information for evaluating National Register eligibility.

Historic Euroamerican Contexts

As part of DOE-ID commitments to strengthen the INL historic preservation program, the INL CRMO and DOE-ID initiated efforts on the Pre-WWII Historic Context in FY2022. A draft proposal was completed and submitted to Idaho SHPO in April 2023. Currently, three historic contexts are being proposed: 1) *Felts and Pelts: Fur Trade on the Eastern Snake River Plain, 1810-1845,* 2) *Historic Networks: Migration, Transportation, and Trade across the Eastern Snake River Plain, 1852-1942* and 3) *Home on the Plain: Homesteading and Agricultural Settlement on the Eastern Snake River Plain, 1855-1942*.

Lawrence Berkeley National Laboratory

Identifying Historic Properties

1. ***How many, and what percentage of your assets, are historic as reported in: (a) your bureau or agency's proprietary database and/or (b) your bureau's or agency reports?***

At this time, the LBNL campus features one building considered to be National Register Eligible: Building 71. Nevertheless, this linear accelerator facility has been heavily modified and has lost much of its historic integrity. This one building represents about 1% of our building stock.

2. ***Have your identification methods changed during this reporting period? Approximately what total percentage or portion of inventory have now been surveyed and evaluated for the National Register, and does this represent an increase from your site/office/program's 2020 progress report, if applicable?***

Out of approximately 94 FIMS-listed campus buildings, approximately 2 buildings 50+ years of age have not been surveyed by a historical specialist: an EH&S building, and an air-monitoring shed. Twenty-one buildings have not been surveyed by a historical specialist due to facility age (>50 years of age). All remaining buildings have been surveyed and reports/recommendations issued.

Thirty of the surveyed buildings were evaluated by DOE with SHPO concurrence. One was found to be Register Eligible. Twenty-nine were found to be Not Register Eligible.

3. Has your site/office/program implemented any new policies or programs that promote awareness and identification of historic properties over the last three years?

No new policies or programs during the past 3 years.

4. Federal agencies are encouraged to share information regarding the number and percentage of historic property identification completed in the context of Section 106 for specific undertakings and programs versus that completed for unspecified planning needs (Section 110 survey). In a given year, what percentage of your site/office/program's identification of historic properties occurs due to Section 106 planning and compliance versus regular stewardship and unspecified planning needs (Section 110)?

LBNL conducts historic surveys sitewide to comply with its CRMP (Section 110), but reaching out to the SHPO for evaluation concurrence more typically results from immediate project needs (Section 106). Currently, Section 106 undertakings are too few to produce meaningful annual percentages.

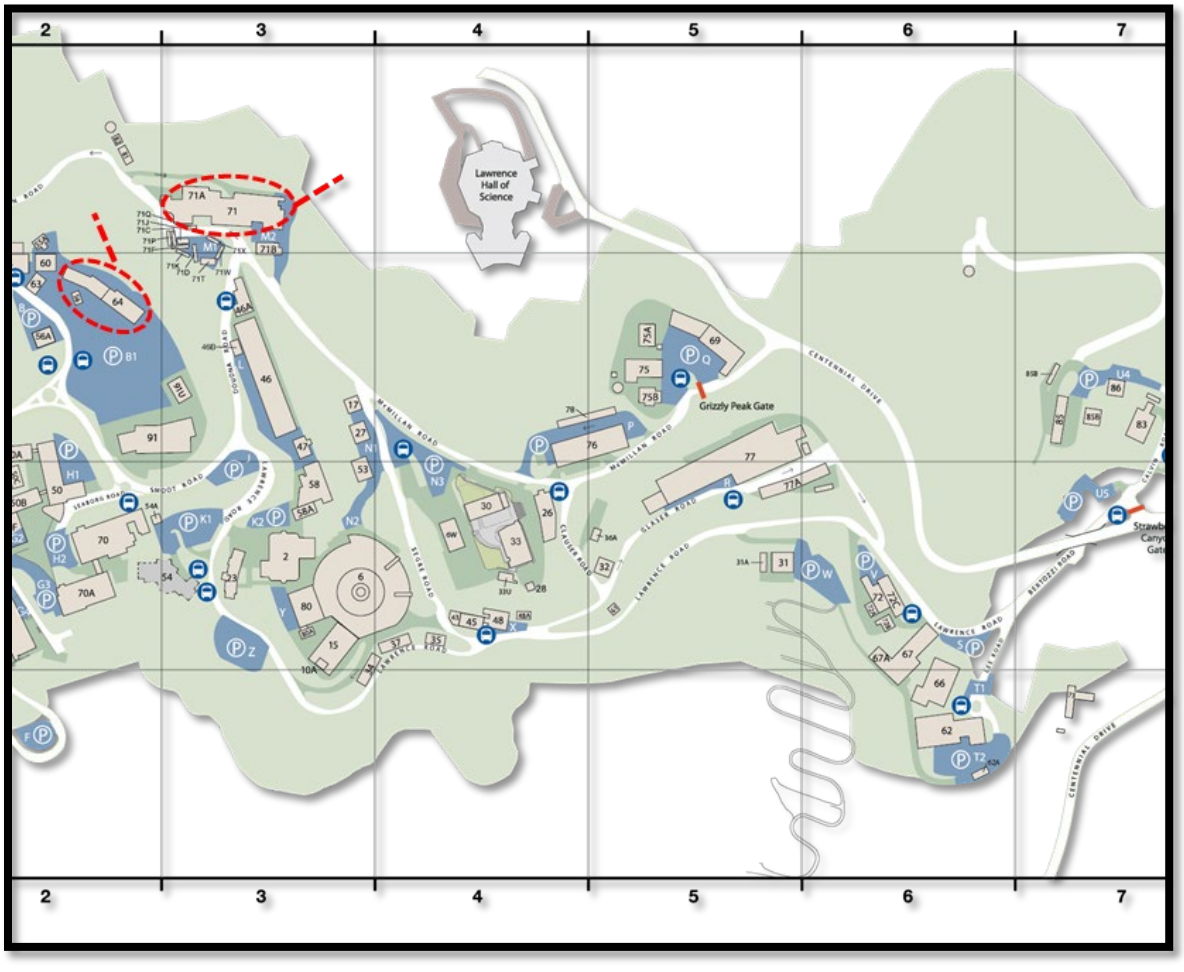
5. How has your site/office/program employed partnerships to assist in the identification and evaluation of historic properties over the last three years?

LBNL is a closed facility without much public interaction as to its physical assets/resources. In compliance with California state law, LBNL reaches out to interested or local Native American Tribes to inform and offer consultation on projects affecting the Lab grounds.

Protecting Historic Properties

6. Have the policies and programs your site/office/program has in place to protect historic properties changed over the reporting period in ways that benefit historic properties?

No changes to historic program during the past three years.



7. How has your site/office/program used program alternatives such as programmatic agreements, program comments, and other tools to identify, manage, and protect your site/office/program's historic properties over the last three years, if at all?

A Programmatic Agreement is not in place. However, DOE's Berkeley Site Office (BSO) is exploring creation of a PA with the SHPO.

Using Historic Properties

8. How does your site/office/program coordinate historic preservation and sustainability/climate resiliency goals in project planning?

Historic considerations, including National Register eligibility and potential to disturb archaeological artifacts are considered with each project.

LBNL submitted a Vulnerability Assessment and Resilience Plan (VARP) in September 2022, developed with a cross-division team, which initiated a process of incorporating climate resiliency into project planning. LBNL has also initiated a process to update lab policy on sustainable construction and operations to incorporate DOE Order 436.1A requirements, including those related to climate adaptation and resilience.

9. How do your site/office/program's historic federal properties contribute to local communities and their economies, and how have their contributions changed over the reporting period?

LBNL is a closed facility without much public interaction as to its physical assets/resources.

Successes, Opportunities and Challenges

10. Provide specific examples of major successes, opportunities, and/or challenges your site/office/program has experienced during the past three years.

In the past three years, LBNL conducted historical surveys of various evaluated buildings. BSO reached and achieved SHPO concurrence (Not Register Eligible) on two of them that were proposed for demolition.

B56: Recent SHPO concurrence for demolition

B71: Register-eligible

B64: Recent SHPO concurrence for demolition

Lawrence Livermore National Laboratory

Identifying Historic Properties

1. ***How many, and what percentage of your assets, are historic as reported in: (a) your bureau or agency's proprietary database and/or (b) your agency's reports?***

In 2005, LLNL initiated preparation of the Historic Context and Building Assessment for the Lawrence Livermore National Laboratory (2007). This document was prepared to support compliance with Sections 106 and 110 of the National Historic Preservation Act, and the final recommendations of the assessment were that LLNL had five individual historic buildings, two historic districts, and selected historic objects that were eligible for the National Register of Historic Places. The California State Historic Preservation Officer and the Advisory Council on Historic Preservation concurred with these recommendations. The five individual historic buildings, two historic districts, and selected historic objects that were eligible for the NRHP represent approximately three percent of LLNL assets.

The Advanced Test Accelerator (ATA) facility (Building 865A) was built in 1983 to investigate the feasibility of propagating intense electron beams through the atmosphere.

2. ***Have your identification methods changed during this reporting period? Approximately what total percentage or portion of inventory have now been surveyed and evaluated for the National Register, and does this represent an increase from your site/office/program's 2020 progress report, if applicable?***

Identification methods have not changed during this reporting period. Approximately 96 percent of inventory has been surveyed and evaluated for the NRHP. This data was not reported in the 2020 progress report; however, the data for 2020 and 2023 are consistent. The majority of inventory that has not been surveyed represents new construction.

3. Has your site/office/program implemented any new policies or programs that promote awareness and identification of historic properties over the last three years?

In 2005, LLNL initiated preparation of the *Historic Context and Building Assessment for the Lawrence Livermore National Laboratory* (2007). This document was prepared to support compliance with Sections 106 and 110 of the National Historic Preservation Act (NHPA), and the final recommendations of the assessment were that LLNL had five individual historic buildings, two historic districts, and selected historic objects that were eligible for the NRHP. The California State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP) concurred with these recommendations. The historic context report is available to the public on the external website at https://enviroinfo.llnl.gov/cultural.

In accordance with Section 111 of the NHPA, recordation in the form of a Historic American Building Survey (HABS) or Historic American Engineering Record (HAER)) was prepared for each eligible building or district to mitigate potential impacts from DOE's need to refurbish facilities, update or replace outdated equipment, and to provide employees with modern services and safety requirements.

In 2021, confirmation was received from the National Park Service (NPS) that all submitted preservation documents had been accepted. With the completion of this mitigation effort, all previously eligible properties are no longer considered eligible for the NRHP. The final HABS or HAER documents are also available to the public on the external website at the location noted above. However, public access to LLNL is strictly controlled, and former historic properties onsite are not available for public viewing. No new policies or programs that promote awareness and identification of historic properties have been implemented over the last three years.

Because LLNL has no historic properties, the effectiveness of existing policies, procedures, and guidelines to promote awareness and identification of historic properties have not been evaluated during the reporting period, and no updates are currently planned.

NNSA is committed to sustainable development and community engagement at LLNL. Because LLNL has no historic properties, the implementation of policies that promote equity and diversity in the identification process is not currently applicable.

NNSA is committed to sustainable development and community engagement at LLNL. Because LLNL has no historic properties, the prioritization of the identification of historic properties in areas with the highest potential for climate impacts is not currently applicable.

4. Federal agencies are encouraged to share information regarding the number and percentage of historic property identification completed in the context of Section 106 for specific undertakings and programs versus that completed for unspecified planning needs (Section 110 survey). In a given year, what percentage of your site/office/program's identification of historic properties occurs due to Section 106 planning and compliance versus regular stewardship and unspecified planning needs (Section 110)?

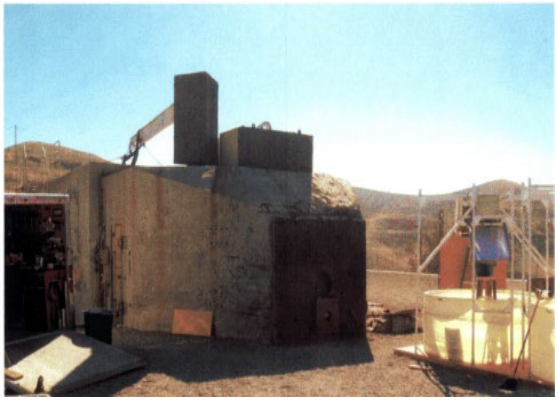
In 2005, DOE/NNSA, the University of California (formerly managed LLNL), and the California SHPO initiated discussions toward the development of a new Programmatic Agreement (PA) that would govern how the LLNL National Register-eligible properties would be managed. However, in 2014, the SHPO requested project-specific compliance with Section 106 of the NHPA. As such, no Section 106 agreements are in place between LLNL and SHPO.

5. How has your site/office/program employed partnerships to assist in the identification and evaluation of historic properties over the last three years?

NNSA is committed to promoting partnerships with Federal, state, and local agencies, and Tribal governments. Because LLNL has no historic properties, policies, procedures, and capabilities to increase opportunities for partnership initiatives are not currently applicable.

The Building 280 LPTR reactor vessel, pictured here in 2003, has been decommissioned.

As noted above, preparation of previous historical documentation at LLNL has included partnership with the California SHPO, ACHP, and NPS to ensure that appropriate documentation was completed, made available to the public, and placed in archives for preservation. Facilities and equipment continue to evolve according to mission needs. DOE/NNSA and LLNL have and will continue to comply with Section 106 of the NHPA, including through the fostering of partnerships for the purpose of historic preservation.



The Firing Facility at Building 851A was engaged in hydrodynamic testing of non-fissionable nuclear weapons components and devices in support of the LLNL weapons program during the Cold War.

Protecting Historic Properties

6. Have the policies and programs your site/office/program has in place to protect historic properties changed over the reporting period in ways that benefit historic properties?

No changes to the management of Section 106 compliance have been noted during the reporting period.

The number of full-time cultural resources professionals at LLNL has not changed during the reporting period. As such, best practices or challenges in the hiring process are not applicable.

Consistent with DOE Order 436.1, LLNL strives to be a leader in responsible environmental stewardship and sustainability and incorporates sustainability and environmental management into the planning and performance of day-today operations and non-routine activities. LLNL's Environmental Management System (EMS) provides a framework for integrating environmental considerations into daily work processes, based on an international standard (ISO 14001), to guide efforts to continually improve environmental performance.

NNSA is committed to promoting partnerships with Federal, state, and local agencies, and Tribal governments. DOE/NNSA has conferred with the California Native American Heritage Commission to identify Tribes with traditional ties to the LLNL region and has consulted with representatives of potentially interested Tribes concerning the continued operation of LLNL. To date, no federally recognized Indian Tribes have claimed strong cultural affiliation to lands operated by LLNL.

LLNL has a well-developed process for pre-reviewing any excavations and building modification plans to assess adverse impacts to cultural resources and implement any necessary mitigation, including National Environmental Policy Act (NEPA) evaluations, as necessary. These processes include public outreach when required to solicit public interest with the public or other agencies.

No changes in the use of digital information sources have been noted since the previous reporting period.

Challenges or costs increases related to ensuring compliance with historic rehabilitation standards have not been observed at LLNL.

7. How has your site/office/program used program alternatives such as programmatic agreements, program comments, and other tools to identify, manage, and protect your site/office/program's historic properties over the last three years, if at all?

No new or revised Section 106 program alternatives have been developed during the reporting period.

LLNL does not currently have Section 106 agreements in place. As such, Section 106 agreements are not currently supporting the implementation of infrastructure projects.

No evaluation of the results or effectiveness of program alternatives has been conducted during the reporting period.

Using Historic Properties

8. How does your site/office/program coordinate historic preservation and sustainability/climate resiliency goals in project planning?

Rehabilitation or adaptive reuse of historic properties to achieve sustainability and climate resiliency goals have not been implemented during the reporting period.

Retrofit of historic buildings to improve operational energy efficiency have not been implemented during the reporting period.

Full life-cycle accounting valuations of embodied carbon in historic buildings have not been used.

Resistance to the reuse of historic properties has not been observed.

No reduction in sustainability performance because of historic rehabilitations has been observed.

9. How do your site/office/program's historic federal properties contribute to local communities and their economies, and how have their contributions changed over the reporting period?

As noted above, LNL has a well-developed process for assessing adverse impacts to cultural resources and implementing any necessary mitigation. These processes include public outreach when required to solicit interest from the public or other agencies.

Because LLNL has no historic properties, the use of historic properties for educational purposes is not applicable.

Successes, Opportunities and Challenges

10. Provide specific examples of major successes, opportunities, and/or challenges your site/office/program has experienced during the past three years.

Because LLNL has no historic properties, the incorporation of equity and climate change adaptation/ mitigation into the identification, protection, and use of historic properties is not currently applicable.

During the reporting period, DOE/NNSA announced its intent to prepare a new Site-wide Environmental Impact Statement for Continued Operation of LLNL and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement (SW/SPEIS). The purpose of the SW/SPEIS is to analyze the potential environmental impacts of the Proposed Action, which includes infrastructure projects, other reasonable alternatives, and the No Action Alternative, for continuing operations of LLNL for approximately the next 15 years. The draft SW/SPEIS was completed and released for public review in November 2022. The public comment period has since concluded, and preparation of the Comment Response Document and Final SW/SPEIS is in progress.

Preparation of previous historical documentation at LLNL has included collaboration with the California SHPO, ACHP, and NPS for stewardship of historic properties, to ensure that appropriate documentation was completed, made available to the public, and placed in archives for preservation.

Completion of mitigation in the form of HABS or HAER documentation for all eligible properties has been identified as a major achievement for LLNL's management of cultural resources. Previously documented successes have also included the completion of an interactive history of LLNL, which is available to the public on the external website at https://www.llnl.gov/purpose/history. A companion document of six decades of photographs was published by the Regents of the University of California (*Lawrence Livermore National Laboratory and the University of California, Making History…Making a Difference*, [2007]).

Office of Legacy Management

Identifying Historic Properties

3. How many, and what percentage of your assets, are historic as reported in: (a) your bureau or agency's proprietary database and/or (b) your agency's reports?

DOE Office of Legacy Management (LM) has 3 assets reported as being historic property in the department's Facilities and Information Management System (FIMS). Of the 400 items in the LM real property inventory, 49 are 45 years old or older. LM's mission is to fulfill the Department of Energy's post-closure responsibilities and ensure the future protection of human health and the environment. When sites come to LM for long-term stewardship, they have already undergone remediation, often including the transfer of real property assets to third parties or the demolition of production-era assets. Existing assets tend to have been built in support of LM's long-term stewardship mission and many are of too recent construction to merit evaluation for potential historic significance.

4. Have your identification methods changed during this reporting period? Approximately what total percentage or portion of inventory have now been surveyed and evaluated for the National Register, and does this represent an increase from your site/office/program's 2020 progress report, if applicable?

LM's identification methods have not changed in the past 3 years. Most LM-owned land has been surveyed for archaeological resources. In the past 3 years, LM has completed 526 acres of archaeological survey; 102 acres in 2021, 187 acres in 2022, and 237 acres in 2023. Archaeological surveys are completed by qualified professional archaeologists, which are then shared with the relevant State Historic Preservation Officers, Tribal Historic Preservation Officers, and federally recognized Tribes.

3. Has your site/office/program implemented any new policies or programs that promote awareness and identification of historic properties over the last three years?

LM maintains a regularly updated Cultural Resource Management Plan that promotes awareness and identification of historic properties.

In collaboration with the National Lab Network, LM produced the report Climate *Change Risk and Resilience Assessment Project for the U.S. Department of Energy Office of Legacy Management*. The report evaluated climate change vulnerability for each of the LM sites for which a detailed climate assessment survey identified some level of concern regarding the potential for future climate changes to impact LM site infrastructure, site design specifications, and/or long-term site regulatory performance. Based on the results of this work, LM has incorporated strategies for improving resilience to climate change into our performance baseline.

5. Federal agencies are encouraged to share information regarding the number and percentage of historic property identification completed in the context of Section 106 for specific undertakings and programs versus that completed for unspecified planning needs (Section 110 survey). In a given year, what percentage of your site/office/program's identification of historic properties occurs due to Section 106 planning and compliance versus regular stewardship and unspecified planning needs (Section 110)?

Over the past three years, 100% of the identification conducted by LM has been driven by requirements to satisfy the Section 106 process. This has resulted in 526 acres of archaeological survey; 102 acres in 2021, 187 acres in 2022, and 237 acres in 2023.

5. How has your site/office/program employed partnerships to assist in the identification and evaluation of historic properties over the last three years?

LM partnered with the BLM in the identification of historic property and the management of potentially adverse effects associated with the Burro Mines reclamation project in southwest Colorado. LM took the lead on addressing impacts to buildings and structures associated with Cold War-era uranium mining and BLM took the lead on addressing prehistoric and historic archaeology.

Protecting Historic Properties

6. Have the policies and programs your site/office/program has in place to protect historic properties changed over the reporting period in ways that benefit historic properties?

In 2023, LM executed a new programmatic agreement between LM and the Navajo Nation to formalize and streamline the Section 106 review and consultation process for routine activity.

7. How has your site/office/program used program alternatives such as programmatic agreements, program comments, and other tools to identify, manage, and protect your site/office/program's historic properties over the last three years, if at all?

In 2023, LM executed a new programmatic agreement between LM and the Navajo Nation to formalize and streamline the Section 106 review and consultation process for routine activity.

Using Historic Properties

8. How does your site/office/program coordinate historic preservation and sustainability/climate resiliency goals in project planning?

Most LM-owed historic properties include prehistoric archaeological sites. These sites are typically avoided by LM undertakings during the planning process.

9. How do your site/office/program's historic federal properties contribute to local communities and their economies, and how have their contributions changed over the reporting period?

LM does not have historic federally owned properties that contribute to local communities in its portfolio.

Successes, Opportunities and Challenges

10. Provide specific examples of major successes, opportunities, and/or challenges your site/office/program has experienced during the past three years.

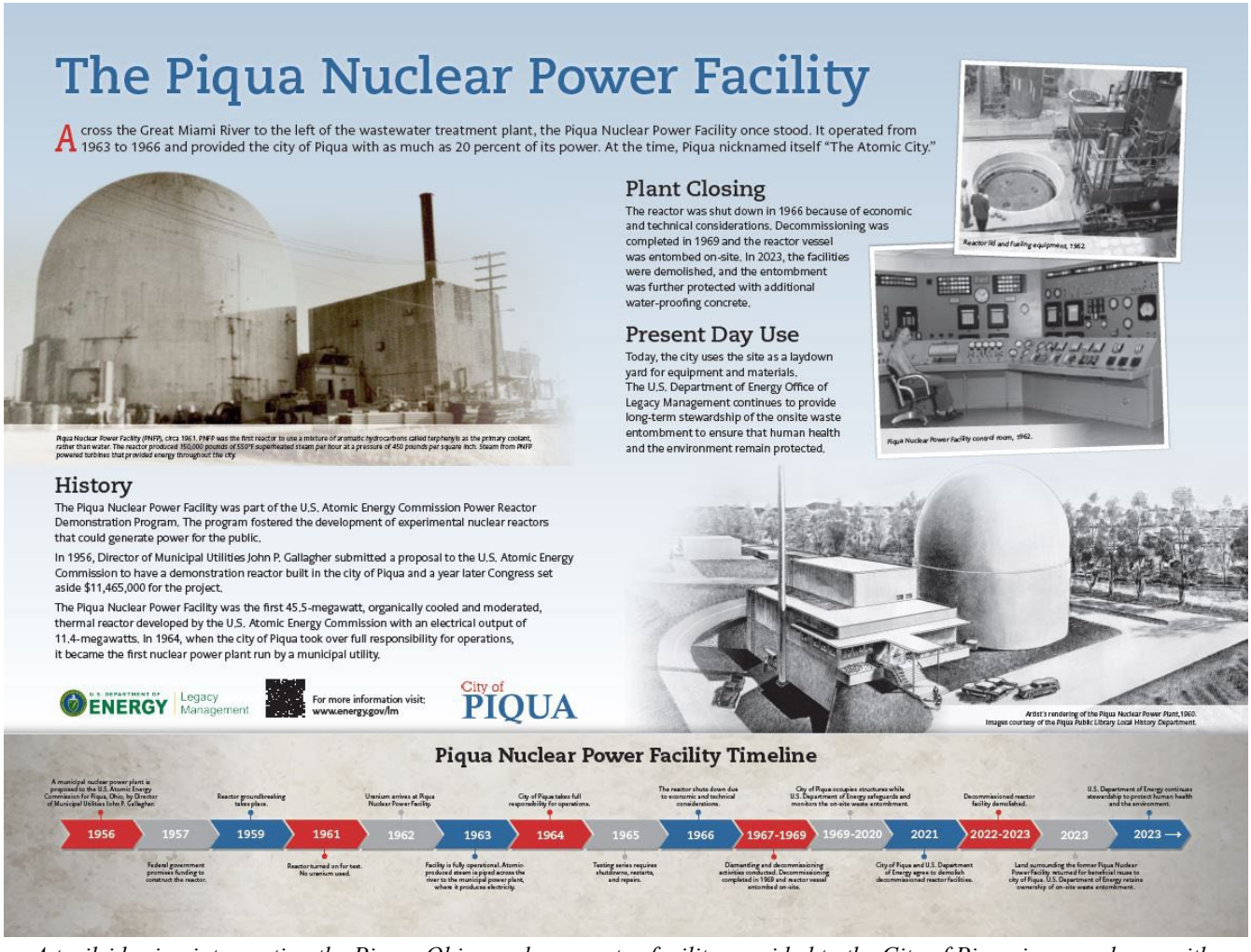
In 2023, LM executed a new programmatic agreement between LM and the Navajo Nation to formalize and streamline the Section 106 review and consultation process for routine activity primarily at four locations in the Navajo Nation: the Mexican Hat, Utah, Disposal Site; the Monument Valley, Arizona, Processing Site; the Shiprock, New Mexico, Disposal Site; and the Tuba City, Arizona, Disposal Site. These four locations are found entirely within the exterior boundary of the Navajo Nation.

A memorandum of agreement with the Ohio State Historic Preservation Office signed in 2021 successfully mitigated the demolition of the Piqua, Ohio, decommissioned nuclear reactor site. In accordance with the MOA,

the city received a scale diorama model of the former reactor building, an interpretive sign, and a selection of historical salvage. Towards fulfilling the MOA, LM also submitted Historic American Engineering Record (HAER) documentation to the National Park Service and, on behalf of the city, applied for an Ohio Historical Marker, through a program run by the Ohio History Connection, formerly the Ohio Historical Society, a statewide history organization, 501(c)(3) nonprofit organization chartered in 1885.

In 2021, LM completed a reclamation project at the Burro Mines Complex in southwest Colorado. Extensive collaboration with Colorado State Historic Preservation Office resulted in significant changes to the engineering design to protect the historical integrity of the Burro mine complex. Working closely with the Colorado State Historic Preservation Office, LM revised the engineering design to better preserve the area's unique mining heritage, while still protecting the Dolores River. Historic waste rock piles were restored to their 1970s look and feel.

A diorama of the Piqua, Ohio, nuclear reactor facility provided to the City of Piqua in accordance with a memorandum of agreement between LM and the Ohio State Historic Preservation Office.



A trailside sign interpreting the Piqua, Ohio, nuclear reactor facility provided to the City of Piqua in accordance with a memorandum of agreement between LM and the Ohio State Historic Preservation Office.

Los Alamos National Laboratory

Identifying Historic Properties

1. ***How many, and what percentage of your assets, are historic as reported in: (a) your bureau or agency's proprietary database and/or your agency's reports?***

The Los Alamos National Laboratory (LANL or Laboratory) has 1,903 archaeological sites. Of these, 1,752 are considered historic properties per the Laboratory's Programmatic Agreement (PA); 723 of these sites are eligible for listing in the National Register of Historic Places (NRHP), and 1,029 of these sites remain unevaluated or have undetermined eligibility. Forty-six percent of LANL's archaeological sites have been evaluated for listing in the NRHP and have New Mexico State Historic Preservation Officer (SHPO) concurrence on the determinations.

The built environment includes 411 historical facilities where Laboratory activities took place—beginning with the Manhattan Project (Figure 1) in 1943 and continuing through the end of the Cold War in 1991. Of these 411 facilities, 270 are considered historic properties, 169 are eligible for listing in the NRHP, and 101 are currently being evaluated for listing. The Laboratory's facility information management system (or FIMS) shows that 157 (or 11 percent) of the 1,394 facilities owned by DOE at LANL are historic properties. Of these 157 facilities, 4 are structures, and 153 are buildings.

Figure 1. National Park Service, LM, LANL, and NA-LA staff standing in front of a new sign.

2. ***Have your identification methods changed during this reporting period? Approximately what total percentage or portion of inventory have now been surveyed and evaluated for the National Register, and does this represent an increase from your site/office/program's 2020 progress report, if applicable?***

The identification of historic properties has continued to be a programmatic priority, and identification methods have remained generally unchanged. Since the last report, 34 archaeological sites and 47 historical facilities were identified, and an additional 155.4 acres of previously unsurveyed LANL lands were intensively surveyed for

historic properties. The number of these efforts is similar to that for the prior reporting period and the LANL survey covered more than 90 percent of LANL land.

3. Has your site/office/program implemented any new policies or programs that promote awareness and identification of historic properties over the last three years?

The Cultural Resources Program participated in five major activities this reporting period that promoted awareness and identification of historic properties at LANL. First, the Laboratory developed a Climate Change Vulnerability Assessment and Resilience Plan (VARP) during fiscal year 2022. Staff were invited to participate, and they identified cultural resources as a non–Mission Dependency Index critical asset—with archaeological sites, traditional cultural properties, built-environment resources, and cultural landscapes defined as sub-tier critical assets. The VARP looked at the effects of climate-associated hazards on cultural resources and made recommendations on how to minimize anticipated effects.

Second, the Cerro Pelado Fire that burned within 4 miles of the Laboratory between April and July 2022 burgeoned the Laboratory's fuels mitigation projects. The Cultural Resources Program prioritized support of this work and expended more time on this effort than normally allotted. Staff conducted fieldwork, participated in project-planning meetings, updated archaeological site information and boundaries, and flagged historic properties for avoidance.

Third, the Laboratory supported a University of New Mexico archaeological field school in the summer of 2022 (Figure 2). The Cultural Resources Program taught 13 student field school participants—including three from local indigenous communities—cultural resources survey, site recordation, and in-field artifact analysis methods in a previously unsurveyed area of the Laboratory. Through this effort, LANL surveyed approximately 40 acres of rough terrain and documented 16 archaeological sites and one traditional cultural place.

Figure 2. University of New Mexico field school students surveying Laboratory property in Lower Water Canyon.

Fourth, the Laboratory continued its work at Technical Area– (TA-) 18 for the Manhattan Project National Historical Park (or Park) during this reporting period. Contracted by LANL, the University of Oregon completed a cultural landscape report for TA-18. The report focused on the continuum of history and the landscape of security. In support of this project, LANL contracted with the University of Arizona to conduct an ethnographic

study of the TA-18 cultural landscape. University ethnographers are currently meeting with Tribal representatives on site to discuss Tribal perspectives and to identify resources significant to them.

Lastly, the Laboratory prioritized the evaluation or re-evaluation of archaeological sites along the Pajarito Corridor, an area directly associated with the pit-production mission that has a high potential for development. Activities associated with this effort included site visits, fieldwork, feasibility studies, and workshops.

Awareness promotion for cultural resources at the Laboratory occurred in many other forms, including in-person and online presentations, public Park tours, internal site visits and outings, online articles, exhibit development, briefings and meetings, trainings, school visits, and participation in the Bradbury Science Museum's traveling STEM[1] experience. During the reporting period, the Cultural Resources Program participated in more than 110 activities that promoted awareness of LANL's cultural resources management and Park activities. Additionally, staff helped author a book on the history of Laboratory operations.

4. Federal agencies are encouraged to share information regarding the number and percentage of historic property identification completed in the context of Section 106 for specific undertakings and programs versus that completed for unspecified planning needs (Section 110 survey). In a given year, what percentage of your site/office/program's identification of historic properties occurs due to Section 106 planning and compliance versus regular stewardship and unspecified planning needs (Section 110)?

In compliance with Section 106 of the NHPA, the Laboratory's PA, and the Laboratory's Cultural Resources Management Plan (CRMP), the Cultural Resources Program regularly reviewed Laboratory projects and coordinated with project planners to protect historic properties and to avoid unnecessary delays, conflicts, and costs for undertakings. These projects ranged—in size and complexity—from routine maintenance to new construction. During the first two reporting years, more than 900 proposed undertakings were reviewed each year. Fiscal year 2023 exceeded 1,100 reviews.

Same as the last reporting period, approximately 35 percent of the newly identified historic properties were identified in the context of Section 106 activities, and approximately 65 percent were identified during unspecified planning activities. The implementation of the Laboratory's PA contributed to the identification of historic properties.

Notably, during this last year, the Cultural Resources Program developed a new tool in R Studio to automate much of the cultural resources data collection required to perform a project review for cultural resources. Using the GIS layer of the project area, the Cultural Review Tool identifies historic properties within or adjacent to the project area, gathers information on those properties from internal databases, assesses potential impacts based on resource evaluation status and eligibility, and recommends subsequent actions. Then, the Cultural Review Tool presents all collected data in an HTML report for a reviewer to use. The Cultural Review Tool was fully integrated into the cultural resources review process by the end of fiscal year 2023.

5. How has your site/office/program employed partnerships to assist in the identification and evaluation of historic properties over the last three years?

LANL regularly collaborated with nonfederal entities and marginalized communities with both agreements and partnerships. The DOE has a memorandum of agreement with the Pueblo de San Ildefonso to facilitate a cooperative effort regarding DOE's activities on Pueblo lands. The DOE National Nuclear Security Administration, Los Alamos Field Office (NA-LA) maintains active Accords with four Pueblos (Pueblo of Cochiti, Pueblo of Jemez, Pueblo de San Ildefonso, and Pueblo of Santa Clara, collectively the Accord Pueblos) that formalize the government-to-government relationship between themselves and the Accord Pueblos. Triad

[1] STEM = science, technology, engineering, and mathematics

National Security, LLC, has cooperative agreements with the Pueblo of Cochiti, the Pueblo of Jemez, and the Pueblo of Santa Clara that formalize the relationship between themselves and the three Pueblos. Lastly, NA-LA has an interagency agreement with the National Park Service for preservation assistance of Park properties at LANL.

Regarding partnerships, the 2022 University of New Mexico field school and the University of Arizona ethnographic study for the Park were good examples of collaborations with nonfederal entities that provided opportunities for members of local Pueblo communities. During each year of this reporting period, the Cultural Resources Program hired local summer students from regional Pueblo communities to assist with cultural resources management activities. LANL also hired members from the local Pueblos to assist with cultural resources surveys on non-LANL lands for a Laboratory project. Regularly, the Cultural Resources Program supported Tribal visits to cultural sites at LANL. The Laboratory also engaged the National Park Service's Historic Preservation Training Center (HPTC) to conduct specific historic preservation projects for properties associated with the Park.

Protecting Historic Properties

6. Have the policies and programs your site/office/program has in place to protect historic properties changed over the reporting period in ways that benefit historic properties?

During this reporting period, the LANL Cultural Resources Program operated under numerous comprehensive policies and procedures that directed cultural resources management activities, and the number of Cultural Resources Program professionals increased by a net of one. Efforts to make changes that benefited historic properties included the development of the VARP, the Park's engagement with HPTC, and the development of the Cultural Review Tool.

Section 106 project data are shared with affiliated Tribes and pueblos quarterly and with the SHPO annually, and the geospatial layer of historic properties is shared with the Pueblo de San Ildefonso annually. The Cultural Resources Program regularly engaged the Pueblo de San Ildefonso in the protection and management of properties significant to them during this reporting period, resulting in quarterly meetings and periodic site visits. Specifically, LANL engaged the Tribe about the Nake'muu Pueblo, the only archaeological site with standing walls within LANL boundaries. The Cultural Resources Program conducts annual condition assessments of the site and, in 2022, noted excessive deterioration, likely from animal activity (namely elk). Understanding the significance of this site to the Tribe, staff developed and gave a presentation to them that described the changing conditions and potential treatment options.

7. How has your site/office/program used program alternatives such as programmatic agreements, program comments, and other tools to identify, manage, and protect your site/office/program's historic properties over the last three years, if at all?

LANL has operated under a program-alternative PA since 2000 and has followed a CRMP since 2006. The Laboratory's current CRMP dates to 2015, and the PA expires in August 2027. NA-LA is currently engaging stakeholders and developing a new PA, and LANL is simultaneously revising its CRMP. The use of the streamlined processes outlined in the PA has been very effective and has supported the planning and implementation of LANL infrastructure projects well. By providing clear, LANL-specific processes and exemptions, the PA reduced both time and costs for Section 106 responsibilities performed by the Cultural Resources Program.

Using Historic Properties

8. How does your site/office/program coordinate historic preservation and sustainability/climate resiliency goals in project planning?

The Laboratory is just beginning to recognize the need for climate change adaption/mitigation principals for its historic properties. The 2022 VARP provided a baseline assessment that will guide the future development of policies, programs, and procedures to make historic properties more resilient to climate change. The VARP identified annual temperature increases, flooding and erosion events, wildfire, and severe windstorms as the most prevalent climate hazards for cultural resources on Laboratory property (Figure 3). Although LANL does not currently have a systematic way to address these impacts to cultural resources, the VARP made the following recommendations:

- Continue implementing the Laboratory's CRMP and PA consistent with the Manhattan Project National Historical Park enabling legislation
- Develop a method (e.g., predictive geographic-information-system model) for identifying archaeological sites, traditional cultural properties, and built-environment resources at risk for flooding or erosion; add erosion-control features as needed
- Create a process by which to monitor archaeological site conditions
- Develop a method to identify additional facilities that need vegetation-free buffer zones
- Conduct further research into additional resilience measures that can be taken to protect all cultural resources

Cultural Resources										
Sub-Tier Critical Assets	Hazards									
	Annual Temperature Increase	Increased Heat Wave Events	Annual Precipitation Changes	Increased Precipitation Events	Annual Water Decrease	Extreme Drought Events	Increased Thunder-storms	Increased Flooding Events	Increased Wildfire Frequency	Increased Severe Wind Events
Archaeolog-ical Sites										
Traditional Cultural Properties										
Cultural Landscapes										
Built Environment Resources										

Figure 3. Table from the VARP that reflects the assessment of the impact of identified climate change hazards for LANL on the cultural resources sub-tier critical asset categories.

In response to the VARP recommendations, the Laboratory continues to implement the CRMP and the PA consistent with the Manhattan Project National Historical Park enabling legislation. As noted above, both former documents are under revision. The Laboratory plans to develop a method to identify specific historic properties at risk for flooding and erosion and monitor their conditions. Notably, the Laboratory just began using a mobile-device application to make observations of specific erosional issues along its trails. Working with LANL's Wildland Fire Program, staff can identify historic properties that need vegetation-free buffer zones. Ultimately,

LANL needs to conduct further research into additional resilience measures to protect all historic properties from the effects of climate change.

9. How do your site/office/program's historic federal properties contribute to local communities and their economies, and how have their contributions changed over the reporting period?

The Laboratory continued to contribute to local communities through public-education efforts that promoted awareness of LANL's cultural resources management and Park activities. The extent to which LANL's historic properties directly contributed to local communities and their economies is limited due to public-access restrictions to Laboratory property; however, the Laboratory, in conjunction with the National Park Service, continued to promote the Manhattan Project National Historical Park. During the reporting period, the Cultural Resources Program held public tours of Park properties within LANL boundaries and provided Park presentations at public meetings, community lectures and events, and professional conferences. Additionally, staff continued to be active participants in Los Alamos community dialogues regarding the Park and worked closely with Los Alamos County historic preservation representatives and the Los Alamos Historical Society.

Successes, Opportunities and Challenges

10. Provide specific examples of major successes, opportunities, and/or challenges your site/office/program has experienced during the past three years.

Campus Master Plan: During fiscal year 2022, the Laboratory unveiled its long-term Campus Mater Plan, which details the need to strategize and modernize over the next 30 years. The Campus Master Plan serves as an evolving framework that describes the current condition of the campus, outlines projected needs, and proposes solutions. It is organized in three increments: near term (next 10 years), mid term (next 20 years), and long term (next 30 years).

Near-term plans include upgrading aged buildings and infrastructure; demolishing old buildings and constructing new ones; replacing aged internal-combustion fleet vehicles with electric models; and ramping up solar energy, steam power, and water reclamation. Mid-term plans include increasing sustainability through mass transit, sustainable building and landscape design, and renewable energy sources; redesigning the campus to be more pedestrian- and bike-friendly; and supporting wildlife and pollinator corridors. Long-term plans include attaining net-zero carbon emissions, realizing greater environmental sustainability and stewardship, and developing a comprehensive transportation plan.

Some of the goals and associated projects have the potential to affect and be affected by historic properties. The Cultural Resources Program supported the Campus Master Plan planning process by providing timely assessments and data to facilitate project planning and design. Additionally, staff prioritized cultural resources evaluations and re-evaluations in alignment with Campus Master Plan near-term goals.

Shingle Replacement Project: During this reporting period, the Laboratory took on a large project to replace the exterior shingles on five Manhattan Project National Historical Park properties—TA-16-0058 (S-Site magazine), TA-16-0516 and TA-16-0517 (V-Site), TA-14-0006 (Q-Site), and TA-22-0001 (Quonset Hut). See Figures 4–9. The primary objectives of this project were to remove and replace existing asbestos shingles and to protect the original exterior sheathing. The project led to increased protection of employee health by removing hazardous asbestos fibers from the environment and aided in the long-term preservation of these facilities by repairing the building envelopes. When Laboratory staff conducted research on the Manhattan Project facilities, they learned that most of them were clad in green-colored, triple-seal, gypsum board. By painting the replacement wood shingles the same green used during the war years, the facilities were brought back to an appearance more consistent with their period of significance.

Figure 4. TA-16-0516 and TA-16-0517 (V-Site) during the shingle-replacement project.

Figure 5. TA-16-0516 and TA-16-0517 (V-Site) after the shingle-replacement project was complete.

Figure 6. The TA-22-0001 Quonset Hut before the shingle-replacement project began.

Figure 7. The TA-22-0001 Quonset Hut after the shingle-replacement project was complete.

Figure 8. TA-14-0006 (Q-Site) during the shingle-replacement project.

Figure 9. TA-14-0006 (Q-Site) after the shingle-replacement project was complete.

National Energy Technology Laboratory

Identifying Historic Properties

1. ***How many, and what percentage of your assets, are historic as reported in: (a) your bureau or agency's proprietary database and/or (b) your agency's reports?***

National Energy Technology Laboratory (NETL): NETL has three sites as noted below in the site descriptions. his percentage is only for the Albany site.

Sixty percent of buildings (24 out of 40) are considered contributing to the historic district of the NETL - Albany site. This site was previously known as the Albany Research Center. Also, the park-like setting at the north end of the site is considered contributing to the historic district. No other structures on site are identified as contributing but there is equipment and the park like setting.

NETL Albany Site-Entrance

2. ***Have your identification methods changed during this reporting period? Approximately what total percentage or portion of inventory have now been surveyed and evaluated for the National Register, and does this represent an increase from your site/office/program's 2020 progress report, if applicable?***

The identification methods have not changed. The Albany site has been surveyed to date, but only to the extent of the buildings contributing to the historic district of the site. The other two sites listed below have not been surveyed. See general brief description of the three sites.

NETL facilitates the responsible and effective use of our Nation's extensive fossil resources. NETL has facilities in Pittsburgh (PA), Morgantown (WV), and Albany (OR).

The history of NETL's Pittsburgh site (58 acres) stretches back to 1910, when the newly created Bureau of Mines in the U.S. Department of the Interior opened the Pittsburgh Experiment Station in Bruceton, Pennsylvania, 12 miles south of Pittsburgh.

The original mission of NETL in Morgantown (132-acre site) centered on finding better methods of gasifying coal to produce synthesis gas. Through the years, NETL-Morgantown has continued to lead research that enables

domestic coal, natural gas, and oil to economically power homes, industries, businesses, and transportation while protecting the environment and enhancing U.S. energy independence.

The heart of the NETL's research site in Albany, Oregon, is its cutting-edge metallurgy and materials research capabilities. Situated on 42 acres, NETL- Albany complex has specialized facilities for materials fabrication and performance testing of advanced high-temperature, corrosion-resistant structural ceramic composites, and metal alloys.

NETL Albany Site

3. Has your site/office/program implemented any new policies or programs that promote awareness and identification of historic properties over the last three years?

No new policies or programs.

4. Federal agencies are encouraged to share information regarding the number and percentage of historic property identification completed in the context of Section 106 for specific undertakings and programs versus that completed for unspecified planning needs (Section 110 survey). In a given year, what percentage of your site/office/program's identification of historic properties occurs due to Section 106 planning and compliance versus regular stewardship and unspecified planning needs (Section 110)?

NETL has not increased the percentage of historic property identifications to date. Most of the work NETL conducts to identify and protect historic properties are conducted through the Funding Opportunity Announcement (FOA) process. DOE career professionals of NETL interact with Tribal Nations and State Historic Preservation Offices (SHPO) in conducting environmental reviews to comply with the National Environmental Policy Act (NEPA) and the National Historic Preservation Act (NHPA) across the United States, due to the nature of how research projects are awarded through cooperative agreements. The cooperative agreement is the mechanism that triggers the vast majority of when NETL begins the NEPA and Section 106 processes. NETL releases funding opportunity announcements to the public to competitively award research and development projects. Once projects are selected for a proposed award and a cooperative agreement is put in place, the NEPA compliance division is notified to begin the NEPA and Section 106 review processes.

Depending upon the objectives of the FOA; the type of research project, large scale demonstration, location and field sites will determine how involved the cultural resources management/historic properties process will become. The awarded projects are conducted on external project sites other than the three NETL sites. A thorough NEPA review is conducted for the awarded projects to determine the impacts to cultural resources and historic properties of the proposed activities on the external project site. The NEPA review is conducted to determine if the project will receive a Categorical Exclusion (CX), Environmental Assessment (EA) or Environmental Impact Statement (EIS). If the awarded project receives a NEPA determination of Environmental Assessment (EA) or Environmental Impact Statement (EIS), NETL will begin our consultation process with the respective Federal agencies, state agencies, and the Tribal Nations, and other potential consulting parties.

NETL projects may be sited in any state across the country, near or adjacent to Tribal lands as determined by the selection process of funding opportunity announcements from DOE. These projects have ranged from small-scale research projects, large-scale demonstration projects and the construction of new facilities.

5. How has your site/office/program employed partnerships to assist in the identification and evaluation of historic properties over the last three years?

Not applicable.

Protecting Historic Properties

6. Have the policies and programs your site/office/program has in place to protect historic properties changed over the reporting period in ways that benefit historic properties?

Nothing has changed in this area during the reporting period.

7. How has your site/office/program used program alternatives such as programmatic agreements, program comments, and other tools to identify, manage, and protect your site/office/program's historic properties over the last three years, if at all?

NETL- Albany site does have a programmatic agreement (PA) with the Oregon SHPO due to the several of the site's buildings contributing to the historic district designation. The property was the campus of Albany College, one of the earliest colleges in the region. During World War II the property was converted into a Federal metallurgical research facility operated by the U.S. Bureau of Mines and was the site of several important contributions to modern metallurgy. Due to the historic significance of these two points, in 1997 the property was evaluated by the Department of the Interior's Bureau of Reclamation and was consequently found to be eligible for the National Register of Historic Places (NRHP), as an Historic District, by the Oregon SHPO.

The site was transferred to DOE in 1996 and placed under the jurisdiction of NETL in 2005, which continues to operate it today as a working research institution. Research brings with it the associated need for some flexibility in the type of spaces and laboratories required as projects evolve, are completed, and new projects are started. This need, and the ongoing demands of building maintenance, repair, and refurbishment on the campus have the potential at times to affect the preservation of the site's historic qualities. To facilitate and guide this process, NETL and the SHPO entered a PA in 2002. Currently, 24 out of the 40 buildings at the Albany Site are considered "contributing" to the Historic District and fall under the requirements of the PA.

Using Historic Properties

8. How does your site/office/program coordinate historic preservation and sustainability/climate resiliency goals in project planning?

NETL- Albany site: Buildings 1 and 17 were modified with energy management, motion sensors, high efficiency HVAC and building controls.

9. How do your site/office/program's historic federal properties contribute to local communities and their economies, and how have their contributions changed over the reporting period?

The Albany Regional Museum in Albany currently has a museum exhibit highlighting the historic materials research, site history and buildings of NETL-Albany site. Also, the Albany site conducts site tours regularly to civic groups, congressional members, city and state government officials, local universities, and other Federal agencies. The typical tour is 1 to 4 hours in duration. The historical significance of the site, as well as the current research activities are discussed. Site tours are normally arranged through NETL's research organization and the Department of Energy's STEM (Science, Technology, Engineering & Mathematics) outreach program.

Successes, Opportunities and Challenges

10. Provide specific examples of major successes, opportunities, and/or challenges your site/office/program has experienced during the past three years.

NETL will continue to consult with Tribal Nations, the respective State Historic Preservation Offices to comply with NEPA and NHPA for future cooperative agreement projects that are sited at external site locations across the country. Also, NETL-Albany will continue to work with the Oregon State Historic Preservation Office under the existing programmatic agreement in maintaining and refurbishing the buildings and the landscape. The partnership with the Oregon SHPO and NETL has been very successful and will continue as agreed upon.

Nevada National Security Site

Identifying Historic Properties

1. ***How many, and what percentage of your assets, are historic as reported in: (a) your bureau or agency's proprietary database and/or (b) your agency's reports?***

On the Nevada National Security Site (NNSS), the National Nuclear Security Administration Nevada Field Office (NNSA/NFO) reports the following numbers:

- 417 National Register of Historic Places (NRHP)-eligible historic properties with Nevada State Historic Preservation Officer (SHPO) concurrence. They are categorized as follows:
    - 193 NRHP-eligible archaeological sites with SHPO concurrence. They encompass 6,732 acres of land out of 868,033 total acres. In terms of percentage of total land area, they make up 0.78% of the NNSS.
    - 143 NRHP-eligible buildings with SHPO concurrence. There are 432 Department of Energy (DOE)-owned buildings in the NNSS Facility Information System, so the NRHP-eligible buildings equal 33% of the total.
    - 75 NRHP-eligible structures with SHPO concurrence. There are 530 DOE-owned other structures in the NNSS Facility Information System, so the NRHP-eligible structures equal 14% of the total.
    - 6 NRHP-eligible historic districts with SHPO concurrence.
- An additional 885 archaeological sites have been evaluated as eligible but have not been submitted to the SHPO for concurrence to date. They encompass 4,943 acres, or 0.57% of the NNSS.
- An additional 2 historic district evaluations are in progress.

2. ***Have your identification methods changed during this reporting period? Approximately what total percentage or portion of inventory have now been surveyed and evaluated for the National Register, and does this represent an increase from your site/office/program's 2020 progress report, if applicable?***

The NNSA/NFO's methods to identify historic properties have not changed substantially during the reporting period. The NNSA/NFO Cultural Resource Management Program (CRMP) implemented existing procedures developed during the previous reporting period. The one aspect of identification methods that has been improved significantly is the functionality of the CRMP GIS database.

To locate historic properties and predict the likely location of potential properties, the CRMP relies on a GIS database that holds comprehensive records of archaeological and architectural inventory areas and known historic properties, historic districts, and unrecorded Cold War resources on the NNSS. The CRMP uses this database to access, update, analyze, and manage historic properties. Researchers also have access to the SHPO's Nevada Cultural Resource Information System (NVCRIS) database. For built-environment resources, the Facility Information Management System (FIMS) is updated annually as properties are recorded and evaluated for National Register of Historic Places (NRHP) eligibility.

Geospatial information about historic properties is most useful and referenced extensively prior to fieldwork when researchers conduct archival reviews to determine the types of cultural resources likely to be present within the area of potential effects (APE) for any proposed undertaking. In the past three years, specific improvements to the

database include merging data layers created over many years and setting up relational database tables that help researchers identify resources within a project area and understand those resources within a broader context. Additional work has been done on the convergence, or unification, of the data maintained in the GIS database with the records held by the SHPO. This facilitates the consultation and reporting process by maintaining data that match SHPO requirements. The GIS database, in conjunction with paper records, allows the CRMP to anticipate many of the cultural resources encountered in the field, which greatly improves fieldwork efficiency.

Within the reporting period, almost 1,810 acres were inventoried, which represents an increase of more than 4% in the acreage inventoried since the last reporting period, and an additional 253 cultural resources were documented. Not all the 253 were determined eligible for the NRHP; some were evaluated and determined to be ineligible and are not historic properties.

In total, to date, 8.95% of the 1,360 square miles of the NNSS has been inventoried for cultural resources (archaeological and architectural/built environment); however, some surveys have overlapped, so the true percentage of land area is less.

3. Has your site/office/program implemented any new policies or programs that promote awareness and identification of historic properties over the last three years?

The NNSA/NFO has not implemented any new policies or programs to promote awareness and identification of historic properties over the past three years, nor does it have any changes planned. The NNSA/NFO has continued its awareness and consultation programs, as described below, from the last reporting period.

The NNSA/NFO consults with the Nevada Test Site Historical Foundation regarding NNSS historic preservation issues for the Cold War built environment. This foundation is the parent organization of the Atomic Museum, a popular museum in Las Vegas and an affiliate of the Smithsonian Institution. The Atomic Museum has also been designated a national museum by Congress. Besides exhibits that educate the public on nuclear testing conducted at the NNSS, the Atomic Museum also showcases exhibits about the prehistory and ethnohistory of the original inhabitants of the NNSS and the historic ranching and mining that occurred there before the land was withdrawn for Federal use in 1951, and historical and present-day information about environmental cleanup under the Office of Environmental Management. The NNSA/NFO provides financial support to the museum as part of its promotion of NNSS history.

The NNSA/NFO sponsors the Nuclear Testing Archive (NTA) Public Reading Room at the Atomic Museum, which makes documents, including those related to historic properties, available to researchers, students, and the interested public.

The NNSA/NFO has produced over 70 fact sheets. These fact sheets provide snapshots of NNSS history, including select historic properties, as well as information on current mission and environmental management. Fact sheets are available in the reading room and online at https://www.nnss.gov/pages/resources/library/FactSheets.html.

The NNSA/NFO offers public tours monthly which are often booked up to a year in advance. Following a hiatus during the COVID-19 pandemic, the NNSA/NFO has resumed offering NNSS tours. The tours highlight and promote awareness of historic properties such as the town of Mercury, which was the main base camp for the NNSS; Frenchman Flat, where the first atmospheric nuclear test, Able, occurred in January 1951; News Nob, where journalists and visiting dignitaries observed atmospheric tests; the Apple-2 Houses, which replicated a typical American community complete with mannequins to study the effects of a nuclear blast; and Sedan Crater, which is listed in the NRHP. The NNSA/NFO also promotes its history and historic properties to the public via social media (@nnsanevada).

The NNSA/NFO posts complete cultural resource technical reports, such as architectural survey reports and individual historic property evaluations to the U.S. Department of Energy Office of Scientific and Technical

Information (OSTI) website at https://www.osti.gov/ once they have received SHPO concurrence. This makes them available to the public anywhere there is internet access and further promotes awareness of NNSS historic properties. The NNSA/NFO also summarizes cultural resource compliance activities, including the identification of historic properties, in its annual NNSS Environmental Report which is posted to its website and sent out via hardcopy to stakeholders. Examples of recent NNSS Environmental Reports are here: https://nnss.gov/publication-library/environmental-publications/.

For the identification of historic properties for Section 106 compliance, the NNSA/NFO sends quarterly letters to interested parties, including Clark and Nye counties and the Nevada Test Site Historical Foundation. The letters summarize active Section 106 report preparation and SHPO consultation. When projects will result in adverse effects, the NNSA/NFO consults with the interested parties specifically on resolving the adverse effects.

The NNSA/NFO has a thorough, successful program for consulting with Indian Tribes known as the American Indian Consultation Program (AICP). The AICP includes quarterly letters summarizing active Section 106 report preparation and SHPO consultation; additional letters for resolving adverse effects; an annual Tribal Update Meeting that promotes the exchange of information between Tribes and the agency via an in-person forum; and a six-member Tribal Planning Committee (TPC). The members are selected by the Tribes in the AICP. The TPC meets quarterly with the NNSA/NFO via teleconference and participates in two NNSS field visits per year to sites of Tribal interest. This affords the Tribes direct involvement with the stewardship and interpretation of archaeological sites. Tribal observations and recommendations are compiled into field visit summary reports following each visit that are distributed to the Tribes.

The threat of wildfires on the NNSS has increased and emerged as a primary climate change-related issue on the NNSS. As a result, the NNSA/NFO established a Land Management Council (LMC) to effectively prevent, plan for, and respond to wildfires. The LMC includes a representative from the NNSA/NFO's CRMP to ensure that cultural resources are considered appropriately in wildfire prevention, planning, and response. Fire response teams are educated on the need to contact cultural resources staff prior to initiating prevention and planning activities to ensure the protection of historic properties, as well as after an active fire starts to determine if there are any historic properties in the vicinity requiring protection and to avoid locating camps and equipment in sensitive locations.

The NNSA/NFO is initiating work on drainage improvements to prevent damage from flash floods, the risk of which is also increasing due to climate change. Project teams have engaged with cultural resources staff early in the planning stages for these projects to ensure cultural resource compliance activities are integrated into the project schedules.

4. Federal agencies are encouraged to share information regarding the number and percentage of historic property identification completed in the context of Section 106 for specific undertakings and programs versus that completed for unspecified planning needs (Section 110 survey). In a given year, what percentage of your site/office/program's identification of historic properties occurs due to Section 106 planning and compliance versus regular stewardship and unspecified planning needs (Section 110)?

On average, the NNSA/NFO completes between 10 and 16 Section 106 identification/evaluation reports and 1 to 2 Section 110 identification/evaluation reports per year. The NNSA/NFO also monitors the conditions of up to 6 historic properties per year pursuant to its stewardship role under Section 110. The monitoring report often results in new evaluations submitted to the SHPO for concurrence. This equates to roughly 82% Section 106 reports and 18% Section 110 reports per year.

The NNSA/NFO has one Programmatic Agreement currently in place for the modernization of the town of Mercury (Mercury PA). The Mercury PA has contributed to the identification of historic properties due to its requirement to evaluate certain properties for individual NRHP eligibility. An example within the last three years

is the Guard Shack at the Main Gate to the NNSS, which was determined to be individually eligible for the NRHP at the national level in an evaluation completed pursuant to the Mercury PA (see Figure 1). Information on the Main Gate, including is NRHP eligibility is available here: https://www.osti.gov/servlets/purl/1841564

Other Section 106 agreement documents have also prompted an increase in historic properties identification. These include Memoranda of Agreement that require documenting and evaluating properties beyond those directly affected by an undertaking. Examples include the Nuclear Rocket Development Station Historic District, Area 6 Control Point Historic District, Area 1 Subdock Historic District, Area 12 Camp Historic District, and the Pluto Test Bunker Facility Historic District.

5. How has your site/office/program employed partnerships to assist in the identification and evaluation of historic properties over the last three years?

The NNSA/NFO's primary method of partnering with Tribes is through its American Indian Consultation Program. The AICP includes 16 Tribes with cultural and historical ties to the NNSS lands. The NNSA/NFO invites participation in the identification and evaluation phase of the Section 106 process for undertakings via its quarterly letters and annual Tribal Update Meeting (see response to Question 3). Every other year, the meeting includes a field visit for representatives from all 16 Tribes to locations of interest on the NNSS, furthering the partnership. The NNSA/NFO also considers the Tribal Planning Committee to be a key component of its partnerships with the AICP Tribes. The TPC's quarterly meetings and semi-annual field visits provide meaningful interaction with the agency's Tribal partners throughout the year, in between annual meetings.

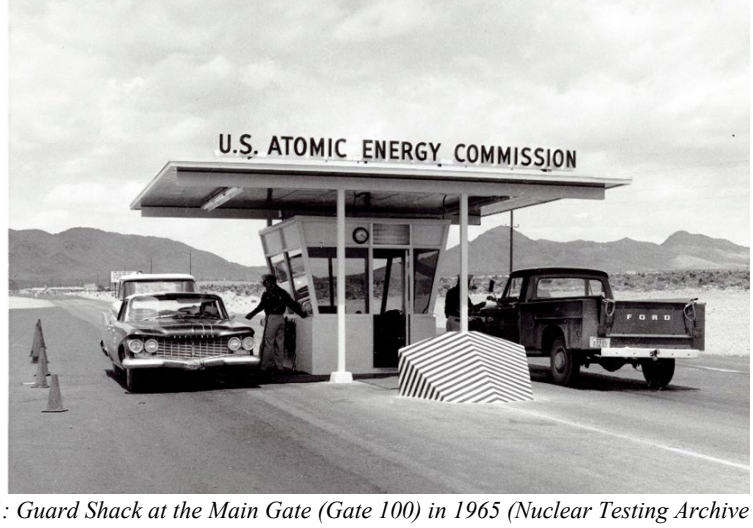


Figure 1: Guard Shack at the Main Gate (Gate 100) in 1965 (Nuclear Testing Archive 64-074).

Protecting Historic Properties

6. Have the policies and programs your site/office/program has in place to protect historic properties changed over the reporting period in ways that benefit historic properties?

Over the past three years, NNSA/NFO policies and programs related to historic preservation have remained constant and have not undergone substantial change. The CRMP staff continued to implement projects to comply with cultural resource laws, regulations, executive orders, and directives; to develop tools to better manage cultural resources, including updating current internal guidance and procedures manuals; and to assess the effects of NNSS projects on historic properties. To ensure effective compliance, all cultural resource professionals that support the NNSA/NFO CRMP meet the Secretary of the Interior's Professional Qualifications Standards for archaeology, architectural history, and/or historic architecture. The number of staff dedicated to the program has remained steady over the past three years with one in-house NNSA/NFO employee and the equivalent of seven full-time

cultural resource professionals. When hiring has been necessary, it has proved challenging with few qualified applicants responding to hiring ads.

As discussed in the response to Question 3, the NNSA/NFO has integrated consideration for historic properties into its wildfire and flood prevention, planning, and response. While it has integrated such consideration into these climate change-related programs, it has not directly incorporated climate change adaptation/mitigation principles into its historic properties policies or programs.

The NNSA/NFO's primary method of partnering with Tribes for the protection of historic properties is through its American Indian Consultation Program. As mentioned in the response to Question 3, every other year, the AICP Tribal Update Meeting includes a field visit to NNSS that provides the opportunity for representatives from all 16 Tribes to inspect and observe the condition of sites of interest to the Tribes. Following the field visit, the Tribes meet in an executive session and then provide written recommendations to the NNSA/NFO for the protection and treatment of the sites visited, as well as other locations of interest. Additionally, the Tribal Planning Committee within the AICP provides more frequent opportunities for Tribal representatives to participate in protecting historic properties via the semi-annual field visits. These field visits serve critical monitoring and interpretation functions for protecting historic properties and result in written recommendations to the NNSA/NFO for their protection and treatment. The NNSA/NFO utilizes the TPC field visits and annual Tribal Update Meetings as a means of engaging with Tribes to incorporate Indigenous Knowledge when preserving historic properties of direct concern to the Tribes.

The NNSA/NFO's use of digital information sources has not changed since the previous reporting period. The CRMP has continually maintained, updated, and utilized a GIS database that holds comprehensive records of archaeological and architectural inventory areas and known historic properties, historic districts, and unrecorded Cold War resources on the NNSS. The CRMP uses this database to access, update, analyze, and manage historic properties. The CRMP also uses the database to assist the Land Management Council with decisions related to climate change-related wildfires, as well as to provide project teams with preliminary feedback on the presence of historic properties and potential for effects in the vicinity of climate change-related infrastructure projects.

The NNSA/NFO has not experienced new challenges with Secretary of the Interior's Standards compliance for rehabilitation projects.

7. How has your site/office/program used program alternatives such as programmatic agreements, program comments, and other tools to identify, manage, and protect your site/office/program's historic properties over the last three years, if at all?

Since 2018, the NNSA/NFO has used the Mercury PA to implement its master plan for the modernization of Mercury. The Mercury PA effectively streamlines the Section 106 process for projects in Mercury, provides clarity to project teams, and takes uncertainty out of Section 106 compliance.

The Mercury PA supports infrastructure and clean energy projects by including up-front mitigation for new construction within the historic district and by clearly stipulating what is required to mitigate removal of outdated or inefficient infrastructure elements. The NNSA/NFO is developing plans for a second solar power array in Mercury, and the Mercury PA will be used to complete Section 106 consultation for the project.

The NNSA/NFO has not systematically evaluated the results of the Mercury PA since its signing in late 2018. It is geared toward redevelopment of the town of Mercury, so preservation outcomes from its implementation are limited to increased documentation of contributing elements prior to alterations or demolition. In terms of cost savings, while the dollar amounts have not been measured, the Mercury PA has yielded cost and time savings by eliminating the need for numerous, project-specific MOAs.

The NNSA/NFO is currently negotiating a PA for the entirety of the NNSS outside of Mercury (Sitewide PA). The Sitewide PA is designed to function similarly to the Mercury PA with the goals of improving clarity and

reducing uncertainty for undertakings on the NNSS. The Sitewide PA is expected to be implemented within the next three-year Preserve America reporting period. Like the Mercury PA, the Sitewide PA is expected to yield savings in cost and time per undertaking by eliminating project-specific MOAs under certain circumstances.

Using Historic Properties

8. How does your site/office/program coordinate historic preservation and sustainability/climate resiliency goals in project planning?

The NNSA/NFO does not specifically coordinate historic preservation and sustainability/climate resiliency goals in project planning. The NNSA/NFO has rehabilitated and adaptively reused buildings during the reporting period, but not with the specific goals of sustainability or climate resiliency. Rather, the buildings were rehabilitated and adaptively reused, because of their suitability for mission needs.

The NNSA/NFO has not used full life-cycle accounting to value the embodied carbon in historic buildings when considering rehabilitation versus new construction and has not faced resistance to reuse of historic properties due to the perceived incompatibility of preservation with sustainability and climate resiliency goals. Resistance to reusing historic properties is generally based on space and technology incompatibility with mission needs, contamination issues, and/or cost considerations.

9. How do your site/office/program's historic federal properties contribute to local communities and their economies, and how have their contributions changed over the reporting period?

The NNSS is a multi-mission, experimentation site that delivers technical and service solutions in partnership with national research laboratories to support national security missions. The NNSS, in general (not specific to historic properties), has a significant economic impact in Nevada.

The NNSA/NFO provides funding and support for public education about the historic properties under its care by supporting the lease and utilities for the Atomic Museum and by sponsoring programs at the museum. The NNSA/NFO also posts cultural resource technical reports from the CRMP to the OSTI website (https://www.osti.gov/), which is accessible by the public.

The NNSA/NFO dedicates funding annually to contracted cultural resource professionals who provide the full spectrum of cultural resource management services under the NNSA/NFO CRMP and AICP. The CRMP and AICP staff consists of archaeologists, architectural historians, researchers, and administrative professionals funded by the NNSA/NFO.

The NNSA/NFO supports heritage tourism and community involvement primarily through its guided, public tours of Cold War historic locations on the NNSS, such as the base camp of Mercury, Frenchman Flat, News Nob, Sedan Crater (which is listed in the NRHP), and the Apple-2 Houses (which replicated a typical American community—complete with furnished one- and two-story homes, mannequins, automobiles and more—and were built to measure the effects of a nuclear test). These tours are quite popular and are often booked up to a year in advance. Though public tours were paused during the COVID-19 pandemic, they resumed within the reporting period. Information on NNSS public tours is available here: https://nnss.gov/wp-content/uploads/2023/04/NNSS-TOUR-U-0030-Rev02.pdf.

Within this reporting period, NNSA/NFO began negotiation to transfer two railcars from the NNSS to a public museum for display. These railcars were used in historic nuclear rocket propulsion experiments in the 1960s/1970s. Transfer of the railcars, if successful, will allow the public access to these specific historic

properties and will provide information related to the experiments they supported and the broader historic mission of the NNSS.

Successes, Opportunities and Challenges

10. Provide specific examples of major successes, opportunities, and/or challenges your site/office/program has experienced during the past three years.

Several notable major successes in the past three years have been in the form of identifying and recording several large and unique historic districts.

Between 2020 and 2023, the NNSA/NFO has been documenting and evaluating the Nuclear Rocket Development Station (NRDS). The NRDS is a vast complex of highly technical facilities designed and built to test nuclear rockets for eventual journeys to Mars and beyond (see Figure 2). The NNSA/NFO has evaluated the NRDS and determined it constitutes an NRHP-eligible historic district composed of over 100 other individually eligible resources and contributing elements. Finalization of the NRDS documentation is nearly complete. The result will be the first recording of the entirety of the NRDS, a unique representative of both the Space Race era and the use of nuclear technology for peaceful purposes.

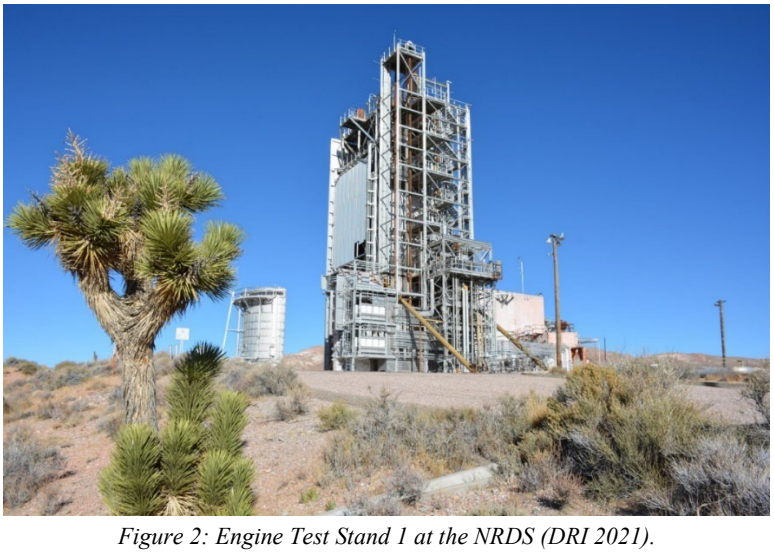


Figure 2: Engine Test Stand 1 at the NRDS (DRI 2021).

In 2021, the NNSA/NFO documented and evaluated the Area 6 Control Point (CP) Historic District and determined it eligible for the NRHP. The district centers around CP-1, the main control point building from which nearly all nuclear detonations were initiated on the NNSS. The district is composed of 27 contributing elements and includes CP-1, numerous support buildings, warehouses, infrastructure, and communications equipment (see Figure 3). Information on the Area 6 Control Point Historic District, including its NRHP eligibility, is available here: https://www.osti.gov/servlets/purl/1872216/.

Figure 3: Overview of the Area 6 Control Point Historic District, pictured in 2016 (Remote Sensing Laboratory).

In 2022-2023, the NNSA/NFO documented and evaluated the Pluto Test Bunker Facility Historic District and determined it eligible for the NRHP. The district, like NRDS, was associated with experimentation in nuclear rocketry, in this case nuclear ramjet engines. The district includes only a few buildings, but is large in land area, encompassing a former air storage yard that originally housed 3.4 miles of compressed air piping. The piping has largely been removed; however, some of the racks and pipes remain intact (see Figure 4).

Figure 4: Compressed air rack and pipe remnants with the Pluto Test Bunker in the background. (DRI 2022).

Other historic districts documented and evaluated in the reporting period include the Area 1 Subdock Historic District and the Area 12 Camp Historic District. The Area 1 Subdock is particularly interesting as it consists primarily of a large storage yard full of massive drill bits and drilling equipment used during the underground nuclear testing program on the NNSS. It was part of an AICP field visit in 2022. Information on the Area 1 Subdock, including its NRHP eligibility, is available here: https://www.osti.gov/servlets/purl/1872214/.

Area 12 Camp was a residential camp designed to supplement housing and residential services in Mercury. It was located near the north end of the NNSS and supported the numerous tunnel and underground activities located on the northern mesas. Information on the Area 12 Camp Historic District, including its NRHP eligibility, is available here: https://www.osti.gov/servlets/purl/1822369.

The NNSA/NFO considers the development of the Land Management Council and its work to incorporate cultural resource identification and protection into wildfire prevention, planning, and response another significant accomplishment in climate change adaptation within the reporting period.

Another major accomplishment within the reporting period is negotiation of the draft Sitewide PA. This effort was initiated in 2020 and involved multiple consultation meetings and conference calls with the SHPO and ACHP. The next step in the process is the review of the draft Sitewide PA by the 16 Tribes and interested parties affiliated with the NNSS. Once implemented, this PA will streamline compliance activities, clearing the way for important infrastructure and sustainability projects on the NNSS.

Within the reporting period, the NNSA/NFO instituted a new policy for preparing for current and future infrastructure funding. The policy involves coordination between the NNSA/NFO, its cultural resource professionals, the NNSS Management and Operations (M&O) contractor, and Environmental Management Nevada (EM NV) to develop an Integrated Planning List (IPL). The IPL is updated annually each spring. It compiles proposed projects in upcoming fiscal years and identifies the anticipated cultural resource compliance requirements for each. The NNSA/NFO, EM NV, and M&O contractor use the IPL to prioritize the timing and funding of projects. The NNSA/NFO's cultural resource professionals use it to develop annual scope and budget and ensure that Section 106 compliance is appropriately integrated into project schedules.

As discussed under previous questions, the Tribal Planning Committee's semi-annual field visits to the NNSS are examples of the NNSA/NFO's effective partnership with Tribal representatives with a focus on stewardship.

National Renewable Energy Laboratory

Identifying Historic Properties

1. ***How many, and what percentage of your assets, are historic as reported in: (a) your bureau or agency's proprietary database and/or (b) your agency's reports?***

A total of 20 structures at the South Table Mountain Energy Park (STEP) are historic, comprising 51% of the site. Structures include a pedestrian underpass, tent pads, and buildings. The South Table Mountain (STM) Campus has the Colorado Amphitheater and Foot Bridge, as well as the Ammunition Igloo. These structures comprise 3.5% of the STM Campus. The Flatirons Campus does not contain any historic properties.

2. ***Have your identification methods changed during this reporting period? Approximately what total percentage or portion of inventory have now been surveyed and evaluated for the National Register, and does this represent an increase from your site/office/program's 2020 progress report, if applicable?***

All National Renewable Energy Laboratory (NREL) sites have been completely inventoried, including STEP. The Field Test Laboratory Building (FTLB), built in 1985, would be the first building to be considered for historic place designation once the building is 50 years old in 2035.

3. ***Has your site/office/program implemented any new policies or programs that promote awareness and identification of historic properties over the last three years?***

NREL does not have any new policies or programs.

4. ***Federal agencies are encouraged to share information regarding the number and percentage of historic property identification completed in the context of Section 106 for specific undertakings and programs versus that completed for unspecified planning needs (Section 110 survey). In a given year, what percentage of your site/office/program's identification of historic properties occurs due to Section 106 planning and compliance versus regular stewardship and unspecified planning needs (Section 110)?***

Due to research needs and funding uncertainties, the Golden Field Office (GFO) completes Section 106 consultations as undertakings arise. Over the previous three years, the following undertakings at the STM Campus have required 106 consultation: Energy Materials and Processing at Scale (EMAPS); Research and Innovation Laboratory (RAIL); and Waste Handling Facility. These undertakings were surveyed, and consultation letters submitted to the Colorado State Historic Preservation Officer (SHPO). A Right of Discovery was developed for the EMAPS project. The Flatirons Campus Water System project also required a 106 consultation; the project area was surveyed, and consultation completed with the Colorado SHPO.

5. ***How has your site/office/program employed partnerships to assist in the identification and evaluation of historic properties over the last three years?***

GFO and Alliance for Sustainable Energy (DOE's O&M contractor) consults with interested parties. Specifically, GFO works with the Colorado SHPO and the Jefferson County Historical Commission (JCHC) to assist in the identification and evaluation of historical properties.

Protecting Historic Properties

6. Have the policies and programs your site/office/program has in place to protect historic properties changed over the reporting period in ways that benefit historic properties?

There have been no changes to NREL policies or programs since the last reporting period. More specifically, there have been no changes in how NREL manages compliance. The same number of FTEs are in place for the Cultural Resources program as the last reporting period.

7. How has your site/office/program used program alternatives such as programmatic agreements, program comments, and other tools to identify, manage, and protect your site/office/program's historic properties over the last three years, if at all?

N/A at this time.

Using Historic Properties

8. How does your site/office/program coordinate historic preservation and sustainability/climate resiliency goals in project planning?

N/A at this time.

9. How do your site/office/program's historic federal properties contribute to local communities and their economies, and how have their contributions changed over the reporting period?

N/A at this time.

Successes, Opportunities and Challenges

10. Provide specific examples of major successes, opportunities, and/or challenges your site/office/program has experienced during the past three years.

An opportunity that GFO and NREL are preparing for is the current and future operation of the STEP Campus. The STEP Campus is part of a historic district, which is new to GFO. The challenge for GFO and NREL is learning to operate historic properties within a historic district.

***Figure 1**: The Colorado Amphitheater.*

***Figure 2**: The Ammunition Igloo.*

***Figure 3**: South Table Mountain Energy Park*

Oak Ridge Reservation

Identifying Historic Properties

1. ***How many, and what percentage of your assets, are historic as reported in: (a) your bureau or agency's proprietary database and/or (b) your agency's reports?***

The Oak Ridge Reservation (ORR), managed by the U.S. Department of Energy (DOE), spans 32,258.54 acres in Roane and Anderson Counties, Tennessee. Originally established in the early 1940s by the Manhattan District of the U.S. Army Corps of Engineers, it served as the headquarters for the Manhattan Project and is now one of three locations for the Manhattan Project National Historical Park.

Today, the ORR stands as one of DOE's most complex sites, housing three major facilities managed by three DOE Program Secretarial Offices, undertaking various missions within the DOE portfolio. At the forefront of cutting-edge research, Oak Ridge National Laboratory (ORNL), DOE's largest multipurpose national laboratory, conducts studies in advanced materials, alternative fuels, climate change, and supercomputing.

The National Nuclear Security Administration, Y-12 National Security Complex (Y-12) plays a crucial role in maintaining the safety, security, and effectiveness of the U.S. nuclear weapons stockpile while working towards reducing the global threat of nuclear proliferation and terrorism. The Oak Ridge Environmental Management, East Tennessee Technology Park (ETTP), once a uranium enrichment complex, is undergoing a transition into a clean, revitalized industrial park. The ORR continues to evolve, adapting to changing national security requirements, cleanup efforts, and the pursuit of applied and basic research. Within its boundaries, the reservation has 45 known prehistoric sites, 32 cemeteries, 1 National Historic Landmark, and 201 buildings eligible for inclusion in the National Register of Historic Places.

2. ***Have your identification methods changed during this reporting period? Approximately what total percentage or portion of inventory have now been surveyed and evaluated for the National Register, and does this represent an increase from your site/office/program's 2020 progress report, if applicable?***

Out of the 32,285.54 acres on the ORR, 91.79 percent has been surveyed to determine eligibility for inclusion in the National Register of Historic Places. During this reporting period, the identification methods outlined in the National Historic Preservation Act, Section 110, for the Y-12 National Security Complex, the East Tennessee Technology Park, and the Oak Ridge National Laboratory have remained unchanged. Additionally, the ORR Program Sites utilize the Facilities Information Management System (FIMS) to document detailed information pertaining to the historic classification of properties within the reservation. At ORNL the previously unsurveyed 7700 Area grouping of buildings was surveyed and consultation with the Tennessee State Historic Preservation Officer was initiated. Also, at ORNL a Phase I archeological survey has been conducted to identify historic resources in previously undeveloped areas that are proposed for development.

3. Has your site/office/program implemented any new policies or programs that promote awareness and identification of historic properties over the last three years?

As part of the Department's steadfast commitment to outreach and preserving historical significance, the DOE ORR Programs have proactively implemented new activities to promote awareness of historic properties. One such milestone is the K-25 History Center, which was opened to the public in 2020, drawing tourists to the Oak Ridge area. The K-25 History Center serves as a testament to the immense significance of the K-25 Building, the gaseous diffusion process it housed for enriching uranium during World War II and the Cold War, and the remarkable people who designed, built, and operated this facility. The Center offers an immersive experience through numerous exhibits, captivating audiovisual productions, and an impressive display of over 300 artifacts sourced directly from the K-25 Site.

Furthermore, the Memorandum of Agreement (MOA) for the Demolition of the K-25 Site and Interpretation of the East Tennessee Technology Park (ETTP) plays a pivotal role in this endeavor, incorporating several key components. These initiatives are designed to foster a deeper understanding of the site's rich history and to engage visitors in a truly meaningful and enlightening manner. Among the most recently implemented components are:

1. Viewing Platform: The DOE Office of Environmental Management (OREM) is diligently working on the design and construction of a viewing platform, allowing visitors to grasp the scale and magnitude of the original K-25 Building.
2. Enriching Exhibits: Alongside our history center and virtual museum, OREM is actively developing additional exhibits that promise to elevate the visitor experience, further immersing them in the captivating history of the ETTP.

Despite temporary access constraints due to COVID-19, the control room and reactor face of the X-10 Graphite Reactor, situated at the Oak Ridge National Laboratory (ORNL) campus, are now once again accessible to the public through a DOE Oak Ridge office-sponsored bus tour. The tour showcases all three DOE Oak Ridge facilities, including ORNL, the Y-12 National Security Complex (Y-12), and the ETTP (formerly K-25).

In a momentous occasion, the Y-12 unveiled a National Park Service (NPS) sign at Building 9731, an integral part of the NPS Manhattan Project National Historical Park (MAPR), in April of 2022. Building 9731 holds historical significance as the first building constructed at Y-12 during the World War II Manhattan Project. Building 9731 served as the Pilot Plant for nine large electromagnetic separation facilities used to produce enriched uranium for the war effort. This sign installation marks a significant milestone as Building 9731 becomes the first facility within the MAPR to receive official NPS signage, signifying its national historical importance.

In May 2022, OREM launched "EnergyCast," a groundbreaking multimedia platform. "EnergyCast" is designed to be an engaging communication tool, providing easily understandable "energy bites" to a diverse audience, ranging from individuals working at the ORR Sites to local communities and lawmakers. Through “EnergyCast,” DOE OREM endeavors to convey the intricacies of their clean-up efforts, emphasizing the substantial progress achieved in addressing excess contamination at historic sites linked to the Manhattan Project. The primary goal of “EnergyCast”is to make this critical information accessible and comprehensible, fostering widespread appreciation for OREM's endeavors and encouraging active engagement and support from all stakeholders.

ORNL has provided public access to the National Register Listed Freels Bend Cabin on several occasions allowing visitors the rare opportunity to visit a premier ORR cultural and historic site dating back to the early 19th century.

4. Federal agencies are encouraged to share information regarding the number and percentage of historic property identification completed in the context of Section 106 for specific undertakings and programs versus that completed for unspecified planning needs (Section 110 survey). In a given year, what percentage of your site/office/program's identification of historic properties occurs due to Section 106 planning and compliance versus regular stewardship and unspecified planning needs (Section 110)?

The Oak Ridge Reservation (ORR) manages historic and cultural properties by implementing various agreements and plans. These include the 2001 Oak Ridge Reservation Cultural Resource Management Plan, the Y-12 Site-Wide Programmatic Agreement for the Y-12 National Security Complex, the Site-Wide Programmatic Agreement for the Management of Historical and Cultural Resources at the Oak Ridge National Laboratory, and the Memorandum of Agreement for the Demolition of the K-25 Site and Interpretation of the East Tennessee Technology Park.

Under these agreements, most ORR Program undertakings undergo internal review, as outlined in the agreement documents, and typically do not necessitate further Section 106 review or concurrence from the Tennessee State Historic Preservation Officer (TN SHPO) or the Advisory Council on Historic Preservation.

However, during the reporting period, there have been instances where the NNSA Y-12, the Office of Science Oak Ridge National Laboratory, and the Oak Ridge Office of Environmental Management have engaged in consultation with the TN SHPO and relevant consulting parties on proposed undertaking that may adversely affect historic properties on the ORR.

Over 90 percent of the ORR has previously been surveyed to identify historic and cultural properties.

5. How has your site/office/program employed partnerships to assist in the identification and evaluation of historic properties over the last three years?

Through the implementation of the Memorandum of Agreement (MOA) for the Demolition of the K-25 Site and Interpretation of the East Tennessee Technology Park, consulting parties and stakeholders remain actively engaged, providing support as the final MOA stipulations are being completed. While no geospatial data has been collected for the historical properties, important documents, maps, and drawings of the site are being diligently preserved. The collaboration between consulting parties and stakeholders continues through regular meetings and correspondence, fostering a collective effort to fulfill the MOA stipulations successfully.

Regarding the Y-12 National Security Complex's (Y-12), ongoing partnerships, The American Museum of Science and Energy (AMSE) and the East Tennessee Historical Society have established loan agreements with Y-12 for the display of historic artifacts. This collaboration ensures that the historical significance of these artifacts is shared with the public through the exhibits hosted by these institutions.

Y-12 is actively leveraging its partnership with the National Park Service through the Manhattan Project National Historic Park. As part of this partnership, Y-12 is working to design interpretive displays along the tour route in Building 9731, enhancing the visitor experience and providing deeper insights into the pivotal role this building played during the World War II Manhattan Project.

Protecting Historic Properties

6. Have the policies and programs your site/office/program has in place to protect historic properties changed over the reporting period in ways that benefit historic properties?

Over the past three years, additional measures taken to protect historic properties have seen limited significant changes. The Oak Ridge Reservation (ORR) Program has continued its management of historic and cultural properties, adhering to Agreement Documents that guide their preservation efforts. The Y-12 National Security Complex (Y-12) National Historic Preservation Act (NHPA) program and its associated procedures have remained effective in safeguarding the site's historic properties. The established working relationships between the Y-12 NHPA Coordinator, the National Nuclear Security Administration, and the DOE ORR Compliance Coordinator continue to facilitate communication and effective protection of Y-12's historical assets.

To enhance the progress of the Memorandum of Agreement (MOA) for the Demolition of the K-25 Site and Interpretation of the East Tennessee Technology Park (ETTP), DOE Oak Ridge Environmental Management has added additional project staff, tasked with overseeing the fulfillment of stipulations outlined in the ETTP MOA. Their responsibilities include planning and supervising the construction of the Viewing Platform, an integral part of the MOA.

7. How has your site/office/program used program alternatives such as programmatic agreements, program comments, and other tools to identify, manage, and protect your site/office/program's historic properties over the last three years, if at all?

The Y-12 National Security Complex (Y-12) and the Oak Ridge National Lab (ORNL) have utilized their individual Programmatic Agreements (PA) since 2003 and 2005, respectively. The PAs involve the Department of Energy Oak Ridge Operations Office, the National Nuclear Security Administration, the Tennessee State

Historic Preservation Office, and the Advisory Council on Historic Preservation, concerning the management of historical and cultural properties at both Y-12 and ORNL. The two separate PAs incorporate various programmatic exclusions that streamline the Section 106 review process and enhance mission implementation.

During the reporting period from 2017 to 2020, the Tennessee State Historic Preservation Officer (TN SHPO) requested Y-12 and ORNL update their PAs to better reflect the changes planned for the respective sites. Consequently, Y-12 and ORNL continue to collaborate in consultation with the TN SHPO and stakeholders to finalize updates to their Section 110 surveys.

Additionally, the Oak Ridge Office of Environmental Management has executed an additional Memorandum of Agreement to address adverse effects related to the demolition of excess contaminated historic facilities at both ORNL and Y-12.

Using Historic Properties

8. How does your site/office/program coordinate historic preservation and sustainability/climate resiliency goals in project planning?

The National Nuclear Security Administration Y-12 (Y-12) has worked to rehabilitate Building 9731, Y-12's first building constructed in 1943 to pilot the calutrons used for the electromagnetic separation of uranium isotopes. It will return to its original function as a training facility for site employees and will be preserved through this use. Certain modifications to areas of the building have proven necessary, which include making the building more energy efficient through updated systems and weatherproofing.

The mission for DOE OREM is to remove environmental legacies resulting from nuclear weapons development and government sponsored nuclear energy research. Historic preservation program staff work with the demolition projects to plan adequate time and resources in field schedules to perform mitigation measures for resolving the adverse effects of demolishing historical buildings. With the May 2023 release of DOE Order 436.1A Departmental Sustainability, OREM will incorporate the requirements in that Order into Historic Preservation activities as necessary through future contract modifications. OREM managed historical facilities are located on sites where OREM is not the landlord. Purchasing of electricity is covered by a site user fee at the Oak Ridge National Laboratory, the Y-12 National Security Complex, and from the City of Oak Ridge on East Tennessee Technology Park land so that the goal of carbon free electricity by 2030 will be the responsibility of the landlord. Evaluations will be made of all OREM assets regarding the requirements of the DOE Order 436.1A for Sustainability and Climate resilience. This information is submitted annually through the Sustainability Dashboard.

9. How do your site/office/program's historic federal properties contribute to local communities and their economies, and how have their contributions changed over the reporting period?

The K-25 History Center at (ETTP opened to the public in 2020, continues to attract tourists to the Oak Ridge area, offering a fascinating journey into the historical significance of the K-25 Building. Through exhibits, audiovisual productions, and display of over 300 artifacts from the K-25 Site, visitors gain an understanding of the building's role in the gaseous diffusion process for enriching uranium during World War II and the Cold War.

K-25 History Center

While heritage tourism faced challenges in resuming following the COVID-19 pandemic, some initiatives have seen a positive restart. In particular, the DOE's American Museum of Science and Energy public tours resumed in 2022, and the Y-12 National Security Complex, ETTP, and ORNL remains a prominent component of these tours.

Successes, Opportunities and Challenges

10. Provide specific examples of major successes, opportunities, and/or challenges your site/office/program has experienced during the past three years.

The National Nuclear Security Administration Y-12 (Y-12), in consultation with the Tennessee State Historic Preservation Officer has moved forward on its effort to re-use Building 9731 as a "state-of-the-art" training facility and interpretive center. Building 9731 was the first production facility completed at Y-12 and housed the first calutrons built and used in an industrial setting. The processes piloted in this building enriched the uranium used for the world's first atomic bomb and culminated in an Allied victory and end to World War II. The modifications to and re-use of Building 9731 will return it to its original function as a training facility and will allow for an improved interpretive area that will be available for limited public tours in the future. Both functions will contribute to the continued preservation of this historic property.

As with any program, Y-12's National Historic Preservation Act (NHPA) program has experienced challenges over the last three years. The Y-12 mission requires changes to building uses and the overall site footprint. Many of the areas the NHPA program used for interpretation and storage of artifacts have been reclaimed for other uses, meaning interpretive space has been reduced and artifact storage capabilities have been severely curtailed. This has led to challenges producing a comprehensive inventory of artifacts and developing a plan for proper curation and preservation of artifacts.

However, challenges often lead to opportunities. One such challenge has been the continued use of the 2003 Y-12 National Security Complex Site-Wide Programmatic Agreement for the Management of Historical and Cultural Resources (PA), which no longer reflects the changes occurring at the Y-12 site. Because of this, the Tennessee State Historic Preservation Officer (TN SHPO) has requested an updated Programmatic Agreement. Y-12 began working to update the PA during the previous reporting period by completing a new Section 110 survey of the Y-12 complex. In this survey, Y-12 has expanded its proposed period of historical significance to include the conclusion of the Cold War so that all buildings constructed before 1992 have been evaluated. The survey is currently in final internal reviews before its submission to the TN SHPO for concurrence. The Y-12 NHPA program is currently using the information from this survey to develop a new PA and Historic Preservation Plan (HPP). A new PA and HPP will provide opportunities to address the challenges previously discussed and any others affecting Y-12's historic preservation efforts.

The Department continues to face challenges with the Beta-3 building, an original Manhattan Project facility on the Oak Ridge Reservation. The building has been unused since 2013. In 2015, a water line break flooded the basement, spreading radiological and chemical contamination. While ground water leakage into the basement of the building has occurred throughout its life, sump pumps had been used to collect and remove the water. When they became inoperable in 2016, allowing water to remain in the basement, mold growth throughout the facility resulted, and respiratory protection and other exposure controls are now required for entry. The building requires near-term efforts to stabilize its condition as well as ongoing maintenance to prevent further deterioration.

At the Oak Ridge National Laboratory (ORNL), an opportunity to restore the National Register Listed Freels Bend Cabin located on the Oak Ridge Reservation to support contemporary uses is being planned. A log cabin restoration specialist has been engaged to assist in planning the restoration techniques. Revising the 2005 ORNL PA continues to be a challenge to reflect the changes at ORNL site. ORNL continues to move forward in historic property stewardship by supporting the Manhattan Project National Historical Park for the Interpretation of the National Historic Landmark Graphite Reactor located on the ORNL site.

The Memorandum of Agreement (MOA) for the Demolition of the K-25 Site and Interpretation of the East Tennessee Technology Park required that DOE design and construct an Equipment Building and Viewing Tower for preserving and interpreting the history of the K-25 Building and Site. Bids for constructing these facilities far exceeded the budget allocation. It became necessary to open consultation with the MOA Signatories and Invited Signatories to discuss how to deal with the budget constraint. The Signatories and Invited Signatories presented priorities and recommendations, which were instrumental in restructuring the remaining stipulations and downsizing the project scope to keep costs within the allocated budget. Because authentic process equipment was not available due to radiological contamination, the intent and purpose of the Equipment Building was greatly diminished, and the Signatories and Invited Signatories agreed to delete this stipulation from the MOA. In like manner, the Viewing Tower was re-visioned as a Viewing Platform which reduced the cost of the facility but retained the primary objective of providing the public with a view that allows visitors to envision the size and scope of K-25. To facilitate construction of the Viewing Platform, a partnership was created through an interagency agreement between DOE and the U.S. Army Corps of Engineers who will manage construction of the building. DOE contractor UCOR and their subcontractor, Smee + Busby Architects who designed the Viewing Platform, will provide engineering support to the Corps. It is noteworthy that the U.S. Army Corps of Engineers presence at the K-25 site is coming full circle from managing the construction of K-25 as part of the Manhattan Project during World War II to managing the construction of the Viewing Platform that commemorates K-25 some 75 years later.

K-25 Viewing Platform Rendering

Paducah Site

Identifying Historic Properties

1. ***How many, and what percentage of your assets, are historic as reported in: (a) your bureau or agency's proprietary database and/or (b) your agency reports?***

   Out of the 543 types of assets tracked in FIMS, 19% of the assets are eligible for the National Register of Historic Places (101 buildings/structures), 26% have been evaluated and deemed not historic, 3% are noncontributing elements to the NHL/NRL district, 0.5% are contractor-leased, and 52% have not been evaluated.

   Out of the 19% that are eligible assets for the National Register, 52 assets are buildings and 49 are other structure facilities.

2. ***Have your identification methods changed during this reporting period? Approximately what total percentage or portion of inventory have now been surveyed and evaluated for the National Register, and does this represent an increase from your site/office/program's 2020 progress report, if applicable?***

   There has been no change in the identification methods during this reporting period. Approximately 48% of the inventoried assets have been evaluated for the National Register.

3. ***Has your site/office/program implemented any new policies or programs that promote awareness and identification of historic properties over the last three years?***

   The Paducah Site was constructed on land that was previously disturbed for the Kentucky Ordinance Works facilities. The facilities were constructed for the purpose of enriching uranium. No underserved communities are located within 10 miles of the Paducah Site boundary. There are no local Tribes and to date, no Tribal interest. Historic property awareness is built into the site contractor's environmental management system (EMS) and is evaluated as a part of the EMS programs (i.e., environmental aspect determination and environmental legal register). For the Deactivation and Remediation (D&R) site contractor, an EMS checklist that evaluates environmental impacts in which Cultural/Historical Resource Disturbance is assessed is also completed for each project. For the infrastructure contractor, an evaluation is completed as part of the National Environmental Policy Act checklist. No historic properties are in an area with the potential for climate impacts. As a part of the programmatic agreement, the *Cultural Resource Survey for the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, BJC/PAD-688/R1; and the *Cultural Resource Management Plan for the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, BJC/PAD-691/R1, were completed. Historic properties have been managed in accordance with BJC/PAD-691/R1; however, no mitigating measures have been completed in the past three years.

4. ***Federal agencies are encouraged to share information regarding the number and percentage of historic property identification completed in the context of Section 106 for specific undertakings and programs versus that completed for unspecified planning needs (Section 110 survey). In a given year, what percentage of your site/office/program's identification of historic properties occurs due to Section 106 planning and compliance versus regular stewardship and unspecified planning needs (Section 110)?***

   No historic properties have been identified since the completion of the 2006 *Cultural Resource Survey for the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, BJC/PAD-688/R1; and the 2006 *Cultural Resource Management Plan for the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, BJC/PAD-691/R1.

5. ***How has your site/office/program employed partnerships to assist in the identification and evaluation of historic properties over the last three years?***

As a part of the programmatic agreement, the *Cultural Resource Survey for the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, BJC/PAD-688/R1, and the *Cultural Resource Management Plan for the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, BJC/PAD-691/R1, were completed. Historic properties have been managed in accordance with BJC/PAD-691/R1, however; no mitigating measures have been completed in the past three years.

Protecting Historic Properties

6. ***Have the policies and programs your site/office/program has in place to protect historic properties changed over the reporting period in ways that benefit historic properties?***

   As a part of the programmatic agreement, the *Cultural Resource Survey for the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, BJC/PAD-688/R1; and the *Cultural Resource Management Plan for the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, BJC/PAD-691/R1, were completed. Historic properties have been managed in accordance with BJC/PAD-691/R1; however, no mitigating measures have been completed in the past three years. If cultural resources are found during D&R activities, the emergency discovery procedures will be enacted, and the Kentucky State Historic Preservation Office and local stakeholders will be consulted. The Paducah Site has contaminated facilities that are being deactivated and remediated. As the site works through deactivation and toward the demolition of site facilities, more of the mitigating measures will be completed, which will include digital photographs and measured floor plans for each of the National Register-eligible facilities. An agreement was reached in 2019 with the Kentucky State Historic Preservation Office that digital photographs were allowed to document all exterior elevations as well as close-up photographs of significant, character-defining features (i.e., brackets, hood moldings, decorative millwork, log notching/chinking, traditional timber frame joinery/truss systems, mantels, historic hardware/lighting, interior finishes, and stair details).

7. ***How has your site/office/program used program alternatives such as programmatic agreements, program comments, and other tools to identify, manage, and protect your site/office/program's historic properties over the last three years, if at all?***

   The Paducah Site operates under a PA. An agreement was reached in 2019 with the Kentucky State Historic Preservation Office that digital photographs were allowed to document all exterior elevations as well as close-up photographs of significant, character-defining features (i.e., brackets, hood moldings, decorative millwork, log notching/chinking, traditional timber frame joinery/truss systems, mantels, historic hardware/lighting, interior finishes, and stair details). This will allow for the site's historic properties to be documented thoroughly before their eventual demolition. No new agreements or mitigation measures have been completed in the last three years.

Using Historic Properties

8. ***How does your site/office/program coordinate historic preservation and sustainability/climate resiliency goals in project planning?***

   The current mission of the Paducah Site is environmental cleanup and waste management, depleted uranium conversion, deactivation, remediation, and surveillance and maintenance. The Paducah Site continues its efforts to reduce the use of site utilities through continued targeted efficiency measures and projects. The *Fiscal Year 2022 Vulnerability Assessment and Resilience Plan* was developed using observed and projected climate data at the Paducah Site. The data was used to define various threats (i.e., heat waves, cold waves, lightning, and tornadoes) and to gauge the current and future threats to site assets. Most assets are threatened

to some degree by current weather events such as heavy rain and tornadoes. More damaging impacts are heat waves, ice storms, lightning, and wildfire; and assets that would be affected by these events received the highest vulnerability ratings. As part of the current actions, vehicle charging stations have been installed at the Paducah Site. Future projects may include the increase of heating, ventilation, and air conditioning (HVAC) system capacity/efficiency, the installation of more electrical charging stations for electrical vehicles, the limitation of outdoor exposure time by increasing the number of outdoor workers in order to reduce an individual's time in the field and assuring that any new infrastructure improvements meet higher efficiency standards.

9. ***How do your site/office/program's historic federal properties contribute to local communities and their economies, and how have their contributions changed over the reporting period?***

On May 10, 2023, an excess bulldozer is loaded onto a truck for transfer to the Paducah Area Community Reuse Organization (PACRO). FRNP Supply Chain, Property, and Fleet Manager, Jessica Pedersen (left) and Paducah Area Community Reuse Organization Executive Director, Greg Wiles (right) pose for a photo with the bulldozer before it leaves the site.

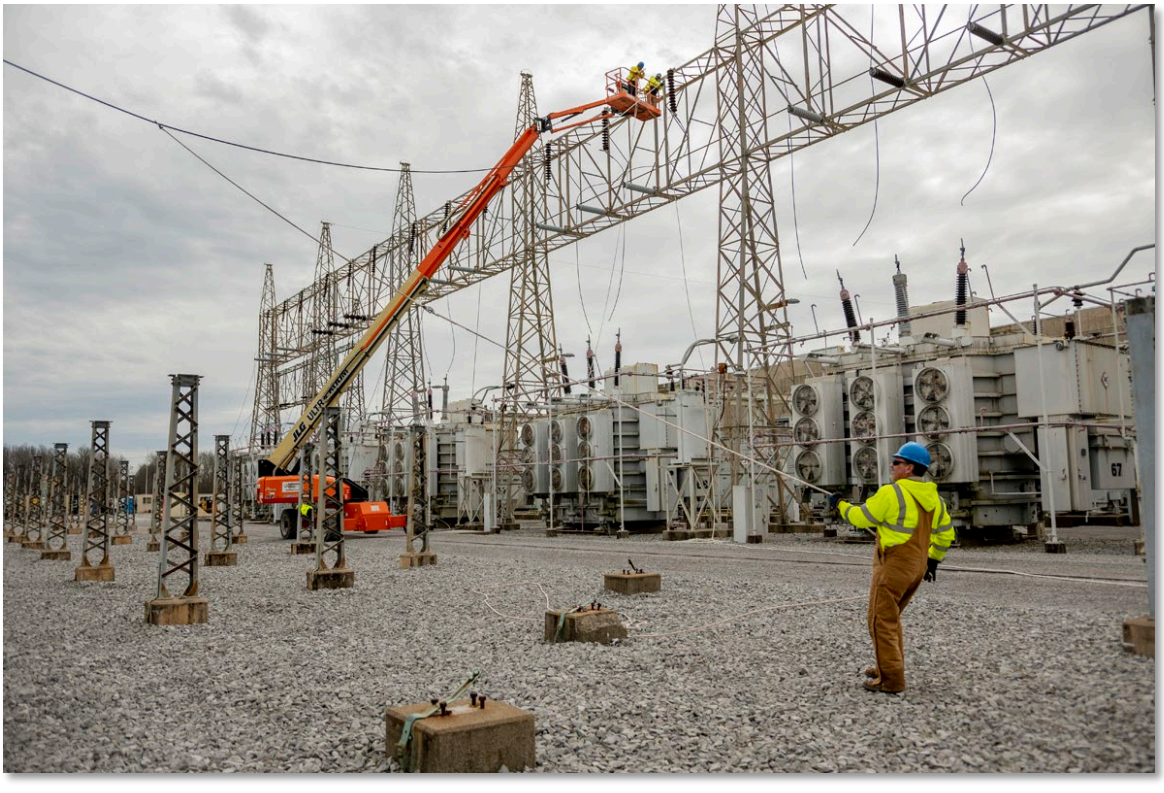
The current mission of the Paducah Site is environmental cleanup and waste management, depleted uranium conversion, deactivation, remediation, and surveillance and maintenance. As a part of deactivation, the Paducah Site partners with the Paducah Area Community Reuse Organization (PACRO) to support economic development with reuse and recycle initiatives. These Federal properties stimulate the local communities and economies by providing jobs to complete the site mission. The Paducah Site participates in educational sessions to help connect the site contractor to resources and paperwork related to becoming a vendor for the U.S. government. The Paducah Site also sets goals to work with small businesses in the community and fosters heritage tourism by providing tours of the site to the community. Since the COVID-19 pandemic, public tours have resumed.

Successes, Opportunities and Challenges

10. ***Provide specific examples of major successes, opportunities, and/or challenges your site/office/program has experienced during the past three years.***

The Paducah Site has had many major successes over the past three years. As part of deactivation, the isolation of the last of the site's four switchyards was completed.

Approximately 3.8 million pounds of ozone depleting chemicals (R-114) have been removed, 700,000 gallons of transformer oil were recycled, and utility optimization has allowed for water and electrical usage to be reduced.



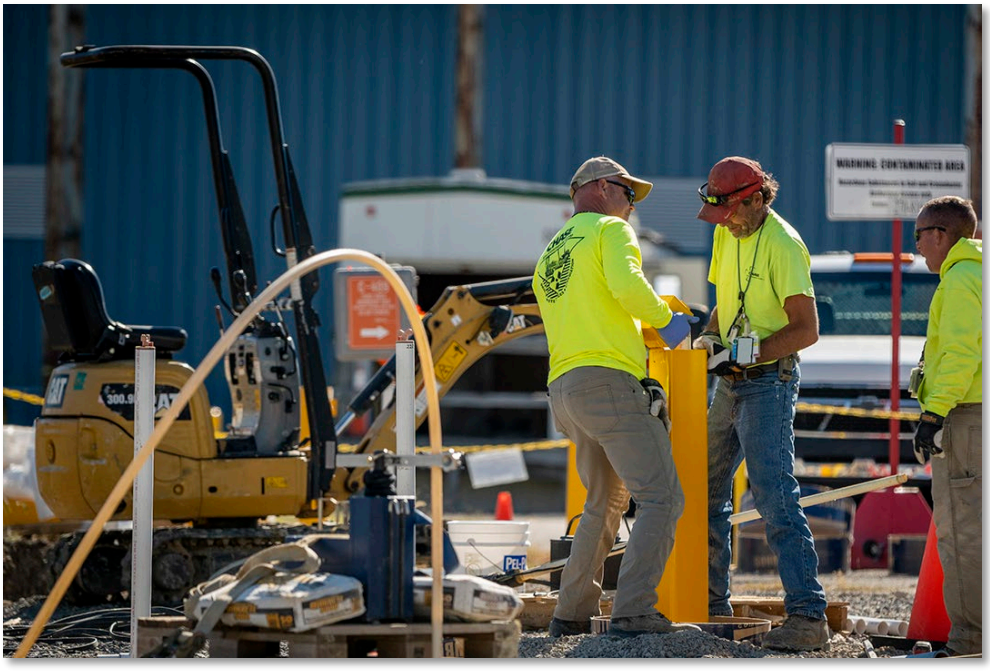
On January 24, 2022, demolition crews lower wires from transmission towers at the C-537 switchyard at the Paducah Site.

On May 1, 2023, casings surrounding Iso-Phase bus work are removed as crews begin work on the dismantlement of the C-535 switchyard.

On June 29, 2022, a shipping vendor hooks-up to an ISO container with R-114 refrigerant to be dispositioned from the Paducah site.

In August 2020, geologist Mitch Stewart, radiological control technician Dan Lang, and geologist Ken Davis examine soil cores prior to collecting samples during the Remedial Investigation/Feasibility Study.

On January 14, 2021, workers conduct Remedial Investigation/Feasibility Study activities inside the C-400 Cleaning Building, following deactivation of the facility.



On September 29, 2022, subcontractors install well enclosures for the Solid Waste Management Unit 211-A Bioremediation project at the Paducah site.

As part of groundwater source remediation, field work was started and completed for the C-400 Remedial Investigation/Feasibility Study and the Solid Waste Management Unit (SWMU) 211-A *in situ* bioremediation remedial action.

On June 26, 2023, workers completed construction of the new Emergency Operations Center.

As a part of future operations at the Paducah Site, a significant number of site upgrades have been completed, which includes improvements to several security buildings and the construction of a new Emergency

Operations Center. As a part of resiliency planning, many site HVAC systems are being upgraded and employees' work areas are being consolidated to allow for inefficient facilities to be closed.

Due to the nature of the site mission, use/reuse of historic properties is challenging. Per the Cultural Resources Management Plan and as the National Register-eligible assets get closer to demolition, use of mitigation measures will be instrumental in documents pertaining to facilities. To help document historic activities at the Paducah Site, a virtual museum, The Paducah Gaseous Diffusion Plant Virtual Museum (pgdpvirtualmuseum.org), has been established, which includes the enrichment process; the plant's history; and the different faces, sights, and sounds of the site. The Paducah Site partnered with the McCracken County Public Library to install a computer that allows access to citizens who are interested in the virtual museum as well as creating a historic photograph display that honors the service of Paducah Gaseous Diffusion Plant workers and the work that was performed from 1952 to 2013.

Pantex Plant

Identifying Historic Properties

1. ***How many, and what percentage of your assets, are historic as reported in: (a) your bureau or agency's proprietary database and/or (b) your agency's reports?***

The Pantex Plant building inventory consists of 518 individual structures. Of these structures, 178 are National Register Eligible and are treated as such. A total of 34% of our structures are historic in nature. At present, the Pantex Plant preserves 10 buildings in-situ. Each of these buildings are representative of architectural themes related to the preservation context statements for the site.

2. ***Have your identification methods changed during this reporting period? Approximately what total percentage or portion of inventory have now been surveyed and evaluated for the National Register, and does this represent an increase from your site/office/program's 2020 progress report, if applicable?***

During this reporting period, no new buildings have been surveyed for historic integrity or preservation. The original building survey was conducted in 2001 in support of the plant's Programmatic Agreement.

3. ***Has your site/office/program implemented any new policies or programs that promote awareness and identification of historic properties over the last three years?***

No new policies or programs have been implemented in the last three years to promote awareness and identification of historic properties.

4. Federal agencies are encouraged to share information regarding the number and percentage of historic property identification completed in the context of Section 106 for specific undertakings and programs versus that completed for unspecified planning needs (Section 110 survey). In a given year, what percentage of your site/office/program's identification of historic properties occurs due to Section 106 planning and compliance versus regular stewardship and unspecified planning needs (Section 110)?

The implementation of the plant's PA contributed to the identification of historic properties on the site. As plans continue to evolve for new construction and re-purposed use of buildings at the site, historic integrity and status are considered by all parties.

5. How has your site/office/program employed partnerships to assist in the identification and evaluation of historic properties over the last three years?

In the late 1990s, Pantex Plant staff conducted a Tribal survey of all interested Indian Tribes. The results of this survey indicated that no lands at the Pantex Plant are considered sacred to the interested parties. Per Federal law, notification would be made if a discovery of funerary objects, pottery, or other artifacts were to be made on the site.

Relationships have been established with several entities in the area who have an interest in the Pantex Plant and it's significant historical impact on the Texas Panhandle Region. Staff have worked with the archaeological staff and curatorial staff at the Panhandle Plains Historical Museum to identify potential archaeological resources and to learn about preservation techniques. Additional relationships have been formed through West Texas A&M University's history program. Staff have an established relationship with the Amarillo Railroad Museum and Preserve Amarillo, both of which are concurring parties to the latest Programmatic Agreement for the Pantex Plant.

Protecting Historic Properties

6. Have the policies and programs your site/office/program has in place to protect historic properties changed over the reporting period in ways that benefit historic properties?

No changes have been made to Section 106, 110, or 111 compliance activities.

In the last three years, Pantex Plant staff have replaced one FTE responsible for cultural resources management. No plans are in place to add to the cultural resources management staff.

The Pantex Plant is required to consider environmental issues, sustainability, and environmental management in decisions related to construction, demolition, leasing, and other activities.

Digital information is used for building inventory and data management. Future plans include digital preservation of building related to the Plant's preservation context statements.

No building rehabilitation's have been undertaken in the previous three years.

7. How has your site/office/program used program alternatives such as programmatic agreements, program comments, and other tools to identify, manage, and protect your site/office/program's historic properties over the last three years, if at all?

Pantex Plant staff are in the final stages of signature on the 2023 Programmatic Agreement for the Management and Operation of the Pantex Plant. Once executed, this agreement will replace the 2004 agreement and contains updates to the overall program at the site.

Using Historic Properties

8. How does your site/office/program coordinate historic preservation and sustainability/climate resiliency goals in project planning?

During the reporting period, no historic properties have been reused. In past reporting periods, historic buildings have been reused in accordance with the principles of adaptive re-use. Currently, the Pantex Plant has run out of space and is actively looking at alternatives for new construction of space, lease space, etc. Historic buildings are being utilized for work.

Staff actively work with the infrastructure planning team to evaluate retrofitting of historic properties to improve operational efficiency.

9. How do your site/office/program's historic federal properties contribute to local communities and their economies, and how have their contributions changed over the reporting period?

The Pantex Plant is located approximately 10 miles from the City of Panhandle and 15 miles from the City of Amarillo. The site's historic properties currently have no impact on local economic development or job creation. Further preservation of historic properties or retrofitting of properties would contribute to local economic development and would be assessed at the infrastructure planning level.

Due to the nature of the site, the Pantex Plant does not currently have education historic preservation trades training and does not foster heritage tourism as these are not consistent with the site's mission.

Successes, Opportunities and Challenges

10. Provide specific examples of major successes, opportunities, and/or challenges your site/office/program has experienced during the past three years.

Staff conducted a Lunch and Learn in May 2023 to promote awareness of the historic preservation program at the plant. Thirty-five employees were present, and the presentation was recorded. This is the first on-site outreach of its kind relating to historic preservation awareness. Plans are being made for additional preservation awareness outreach events soon.

Funding continues to be a challenge for historic preservation. Other challenges include stakeholder engagement, storage space, and overall interest in historic preservation.

Each year cultural resources management staff participate in an average of 80 outreach events including public presentations, new employee orientation history briefings, windshield tours of the site, and meetings with external stakeholders.

May 2023 – Current Pantex Plan Historian, Katie Paul speaks to Boy Scouts at the Amarillo Railroad Museum about the plant's White Train.

Staff completed the installation of a history display in the John C. Drummond Center at the Pantex Plant. This display includes photographs related to women in the workforce, infrastructure, innovation, community outreach, and the Plant's mission. Additional objects in the history display include weapon shapes.

The new Pantex history display installation was completed in July 2020 thanks to the creativity of former Pantex historian Katie Braughton and graphic artist Deron Lucero

In April 2023, cultural resources management staff completed an internal Historic American Engineering Record for the Elmes Press. The press was used for high explosives development from the 1960s to 1980s.

The 20,000psi Elmes Press utilized for high explosives development during the Cold War.

Pacific Northwest National Laboratory

Identifying Historic Properties

1. ***How many, and what percentage of your assets, are historic as reported in: (a) your bureau or agency's proprietary database and/or (b) your agency's reports?***

23 assets (25.8%) identified as Historic *based on FIMS validation data.

- Buildings: 11
- Land: 10
- Other: 2
- District: 2

2. ***Have your identification methods changed during this reporting period? Approximately what total percentage or portion of inventory have now been surveyed and evaluated for the National Register, and does this represent an increase from your site/office/program's 2020 progress report, if applicable?***

No.

3. ***Has your site/office/program implemented any new policies or programs that promote awareness and identification of historic properties over the last three years?***

No, nothing significantly new in the last three years.

No formal program evaluations have been conducted during the reporting period. The site office engages in regular interactions with staff and with contractor personnel to ensure there is general awareness and an appropriate level of knowledge at varying degrees throughout both organizations.

The laboratory has multiple programs to involve underserved communities. Their primary focus has been STEM outreach, scholastic assistance, and internships. While there hasn't been a specific focus on historic properties the site office was requested to speak to a group involved in a summer program about the historic and cultural aspects of the primary campuses.

Our management area is small enough that the laboratory has not prioritized the identification of historic properties in areas with the highest potential for climate impacts.

4. ***Federal agencies are encouraged to share information regarding the number and percentage of historic property identification completed in the context of Section 106 for specific undertakings and programs versus that completed for unspecified planning needs (Section 110 survey). In a given year, what percentage of your site/office/program's identification of historic properties occurs due to Section 106 planning and compliance versus regular stewardship and unspecified planning needs (Section 110)?***

Zero new Historic Properties have been identified through Section 110 activities during this reporting period as 100% of the area under DOE-PNSO control was surveyed during previous reporting periods. Any identification of NEW Historic Properties is due to compliance/Section 106 inventory.

The implementation of Section 106 agreements has not contributed to the identification of historic properties during this period.

5. ***How has your site/office/program employed partnerships to assist in the identification and evaluation of historic properties over the last three years?***

No significant change occurred in the amount or type of engagement with other groups in the last three years as specifically related to the identification of historic properties. The site office has regular interaction with multiple parties including Tribal representatives and discusses upcoming activities with the potential to affect historic properties.

PNNL conducts outreach to multiple underrepresented groups. However, the focus is primarily on STEM outreach, as well as scholarship and internship opportunities.

PNSO/PNNL engages in various undertakings throughout the Nation and engages in regular community interactions and outreach in areas local to our primary campuses. These interactions have proven fruitful in developing meaningful relationships with local communities.

Protecting Historic Properties

6. Have the policies and programs your site/office/program has in place to protect historic properties changed over the reporting period in ways that benefit historic properties?

Since the last progress report DOE has executed a Programmatic Agreement for operations and maintenance activities at the PNNL Richland Campus, and a Memorandum of Agreement for campus development at PNNL Sequim Campus. Both agreement documents effectively changed the way DOE manages compliance with 54 U.S.C. 306108 by providing a streamlined process for reviewing and approving projects on both campuses.

The number of full-time cultural resources professionals to help fulfill responsibilities under the NHPA has not changed over the last three years.

PNNL has not encountered any best practices or challenges in the hiring process.

PNNL has incorporated climate change adaptation/mitigation principles into its policies, programs, and procedures in place to protect historic properties over the last three years, as appropriate for the varying situations.

PNSO utilizes partnerships with local Tribes during stewardship activities conducted under Section 110 of NHPA. Annual site conditions inspection and monitoring is conducted by contractor staff and Tribal representatives. Agreements have been established between PNSO, WA SHPO and Tribes that include management practices and actions developed for the purpose of protection and management of resources important to Tribes.

PNSO and contractor have adopted new language in consultation correspondence (APE notifications for example) that are intended to encourage consideration of IK and Traditional Ecological Knowledge during identification efforts performed under S106.

There have been no significant changes in PNNL's use of digital information sources since the last reporting period. We continue to utilize various online systems/resources to share/control/protect historic property information.

PNNL has not faced challenges or seen costs increase in attempting to ensure historic rehabilitations or comply with the Secretary of the Interior's Standards for the Rehabilitation of Historic Properties.

7. How has your site/office/program used program alternatives such as programmatic agreements, program comments, and other tools to identify, manage, and protect your site/office/program's historic properties over the last three years, if at all?

PNSO executed a PA for operations and maintenance of facilities and infrastructure on the PNNL Richland Campus in 2021. PNSO is currently developing PAs for operations and maintenance of facilities and infrastructure at the PNNL Sequim Campus, PNNL Facilities in the 300 Area of the Hanford Site, and the PNNL Richland Campus Historic District facilities.

Provisions of the PA for PNNL Richland campus allows for a streamlined process for Section 106 activities which improves efficiency, reduces cost, and minimizes schedule impacts which supports implementation of projects, including projects intended to improve sustainability/clean energy transition at facilities.

PNSO/PNNL has one PA to cover operations and maintenance activities at the PNNL Richland Campus. The PA has proven very successful in facilitating such activities with quick turnaround and minimal controversy from consulting parties. It has eased the regulatory and bureaucratic burden not only on the department and its contractor but also on consulting parties and the state.

It has proven so fruitful that we are currently pursuing three other similar PAs at other locations.

Using Historic Properties

8. How does your site/office/program coordinate historic preservation and sustainability/climate resiliency goals in project planning?

Many of the active laboratory facilities at PNNL Richland Campus are historic properties. Sustainability and usability improvements have been completed in the reporting period. All cases of modifications have adhered to the *Secretary of the Interior's Standards for the Rehabilitation of Historic Properties* during the reporting period.

Over the past three years PNNL has increased the number of historic buildings that have been retrofitted to improve operational energy efficiency.

PNNL has not used full life-cycle accounting to value the embodied carbon in historic buildings when considering rehabilitation versus new construction.

PNNL has not faced resistance to reuse of historic properties due to the perceived incompatibility of preservation with sustainability and climate resiliency goals.

PNNL does not believe it has seen a reduction in sustainability performance (e.g., reduced energy efficiency, increased carbon-intensive materials use, or failure to integrate renewable energy) because of historic rehabilitations needing to comply with the Secretary of the Interior's Standards for the Rehabilitation of Historic Properties.

9. How do your site/office/program's historic federal properties contribute to local communities and their economies, and how have their contributions changed over the reporting period?

During the last three years PNSO/PNNL has completed an Environmental Assessment and associated Finding of No Significant Impact for the future development of the PNNL Sequim Campus, which consider, among other things, the economic impact of the proposed activity on the local community.

PNNL also produces, and regularly updates, master planning documents which consider the potential impacts of laboratory operations, development, and research activities.

PNNL does not use its historic properties for educational purposes, such as to support or sponsor historic preservation trades training and does not use historic properties to foster heritage tourism.

Successes, Opportunities and Challenges

10. Provide specific examples of major successes, opportunities, and/or challenges your site/office/program has experienced during the past three years.

To prepare for current and future infrastructure funding or projects PNSO executed a Programmatic Agreement for operations and maintenance of facilities and infrastructure on the PNNL Richland Campus in 2021. PNSO is currently developing PAs for operations and maintenance of facilities and infrastructure at the PNNL Sequim Campus, PNNL Facilities in the 300 Area of the Hanford Site and the PNNL Richland Campus Historic District facilities.

Partnerships with WA SHPO and consulting Tribes have been established through recurring Section 106 and 110 actions that have helped PNSO develop processes to assist in historic properties stewardship.

A portion of the PNNL Richland Campus is a Traditional Cultural Property and Historic Property of Cultural and Religious Significance to Indian Tribes, referred to as the Preservation Designated Area (PDA). Several protection and preservation actions have been conducted on the PDA that exemplify PNSO's partnerships with Tribes in the context of resource protection and stewardship.

- Fence installation (see image below): pursuant to a stipulation in the MOA for the Richland Campus Development project our office constructed a fence with locking gates and no trespassing signs around the perimeter of the PDA to improve security and prevent unauthorized access.

- Telecommunications Equipment Removal (see image below): pursuant to a stipulation in the MOA for the Richland Campus Development project our office successfully completed the removal of legacy telecommunications equipment within the PDA. This equipment served no mission need, was considered an eyesore by the Tribes and was an obstacle to completing preservation and habitat restoration goals set by the Tribes.

Portsmouth Site

Identifying Historic Properties

1. ***How many, and what percentage of your assets, are historic as reported in your agency's proprietary database and/or agency report?***

PORTS has a total of 37 historic properties. They are comprised of 33 structures and four archaeological sites. As of 2012, 100% of the PORTS real property – for both archaeology and architecture – has been surveyed, and all sites have been previously identified. Of the 33 architectural structures, four have been demolished, with the balance to be demolished as a part of site cleanup and closure. One of the archaeological sites was recovered in 2015; the other three are extant. All surveys were performed by professional archaeologists and/or architectural historians and have been provided to both the State of Ohio and the Advisory Council and the site's consulting parties. There are no heritage assets at PORTS.

2. ***Have your identification methods changed during this reporting period? Approximately what total percentage or portion of inventory have now been surveyed and evaluated for the National Register, and does this represent an increase from your site/office/program's 2020 progress report, if applicable?***

100% - PORTS has completed all surveys prior to the past three years. The final survey was completed in 2016 (an easement, not on land owned by DOE) and was performed to satisfy the requirements of Section 110 of the NHPA. This does not represent a change from the 2020 progress report.

3. ***Has your site/office/program implemented any new policies or programs that promote awareness and identification of historic properties over the last three years?***

ASC Group, Inc., subcontractor to FBP, has completed the curation of 26 archaeological collections from the former Portsmouth Gaseous Diffusion Plant (PORTS) and adjacent private properties. The archaeological collections, totaling more than 50,000 artifacts, as well as reports, notes, photographs, and digital documentation are now curated in perpetuity at the Ohio History Connection (OHC), Columbus, Ohio. These materials are now available for archaeologists and scholars for study in the years to come. All the projects were conducted by cultural resource management firms as the result of compliance-related activities related to the National Historic Preservation Act (NHPA). Section 106 and Section 110 of the NHPA provides for a process of investigation and preservation of important archaeological resources. These investigations were carried between 1996-2014. The three firms conducting the investigations were ASC Group, Inc. (ASC), Gray & Pape, Inc. (G&P), and Ohio Valley Archaeology, Inc. (OVAI). Most of the work took place on PORTS property, but six projects were carried out on private lands adjacent to PORTs, where some water lines and related infrastructure were later installed. These archaeological investigations provide invaluable historical and archaeological information to the people of the United States about the lives of the prehistoric and historic inhabitants of the area where the PORTS facility is in Pike County, Ohio.

4. ***Federal agencies are encouraged to share information regarding the number and percentage of historic property identification completed in the context of Section 106 for specific undertakings and programs versus that completed for unspecified planning needs (Section 110 survey). In a given year, what percentage of your site/office/program's identification of historic properties occurs due to Section 106 planning and compliance versus regular stewardship and unspecified planning needs (Section 110)?***

No historic properties have been identified since the completion of the Comprehensive Summary Report of Cultural Resource Investigations Conducted at the Portsmouth Gaseous Diffusion Plant (PORTS Facility), Scioto and Seal Townships, Pike County, Ohio FBP-ER-GEN-BG-RPT-0055 Revision 4, May 2014 and the Historic

American Buildings Survey (HABS) and Historic American Engineering Record (HAER) for Selected Processing and Support Facilities at the Portsmouth Gaseous Diffusion Plant, Pike County, Ohio (DOE/PPPO/03-0610&D3) (FBP-ER-NHPA-BG-RPT-0066, Revision 8) January 2022.

5. ***How has your site/office/program employed partnerships to assist in the identification and evaluation of historic properties over the last three years?***

PORTS has worked closely with members of four Shawnee Tribes that were removed from Ohio to Oklahoma because of the Indian Removal Act. Representatives of the four Tribes, including Tribal Historic Preservation Officers and Tribal leaders met with DOE PORTS leadership on several occasions beginning in 2012. The Tribes assisted PORTS with the evaluation of historic properties and the identification of measures to avoid and mitigate adverse effects that would occur due to site cleanup. DOE identified the four prehistoric archaeological sites pursuant to Section 110 of the NHPA in support of site cleanup under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

Protecting Historic Properties

6. ***Have the policies and programs your site/office/program has in place to protect historic properties changed over the reporting period in ways that benefit historic properties?***

The PORTS site mission is cleanup, the majority of which is being conducted under CERCLA. DOE PORTS has the equivalent of one part time employee through contractor support for historic preservation. DOE PORTS has performed its Section 110 archaeological surveys that occurred between 2011 and 2014 as part of the site characterization aspect of CERCLA. The information was used to support siting studies for waste management disposal options on site. Section 106 was implemented in conjunction with CERCLA compliance. Consultation occurred as part of the greater public involvement process that occurs under CERCLA. DOE coordinated with the Site Historic Preservation Office (SHPO), the Advisory Council on Historic Preservation (ACHP), Tribes, and members of the public through the CERCLA process. The parties were integral in helping DOE identify alternatives for avoidance, minimization, and mitigation of adverse effects to historic properties. No MOA was signed (because it is administrative) but a robust series of preservation commitments was included in the RODs between DOE and the State of Ohio. The two PORTS CERCLA RODs are enforceable agreements and are the decision documents that contains the means of NHPA compliance.

The ARARs process of CERCLA was designed to streamline cleanup decision-making so that improvements to human health and the environment can be realized sooner. Rather than waiting for permits to be obtained and executed, or NHPA MOAs to work through a lengthy consultation and negotiation process, the CERCLA process and its documents are used. The process is public and in the case of NHPA is not limited to a group of consulting parties but instead seeks broader public involvement in a process that tracks along as a part of CERCLA. CERCLA calls for alternatives analysis as does NHPA, and the cardinal aspects of NHPA – avoidance, minimization, or mitigation of adverse effects – are implemented. PORTS found that the use of the CERCLA ARARs process for NHPA compliance streamlined both the identification of historic properties, the consideration of alternatives to avoid historic properties where PORTS is aggressively working through the mitigation measures identified in the RODs which include, but are not limited to, a Virtual Museum (established with periodic updates), the development of a Historic Context Report on the site (completed), and preparation of Historic American Engineering Reports for seven unique historic properties on the site (completed). PORTS is undergoing cleanup for eventual closure and cessation of DOE EM activities. Some DOE LM activities will remain to assist with management of an on-site waste disposal facility. DOE intends to transfer the land at PORTS for economic development purposes. All buildings have been identified for demolition as a part of cleanup. Transfer of the property that contains the three remaining archaeological sites would include deed restrictions to be followed by a transferee, as called for in 36 CFR 800.5(a)(2)(vii).

PORTS has a site cultural resource guidance memorandum for the protection of the historic archaeological sites that will not be affected by cleanup.

HAER documentation has been completed for each of the PORTS core processing facilities and processing support facilities. DOE electronically transmitted the approved Historic American Engineering Records (HAER) for Selected Processing and Support Facilities at the Portsmouth Gaseous Diffusion Plant, Piketon Ohio (HAER Report) to National Park Service (NPS) on February 3, 2022 and received an acceptance letter from the NPS on March 10, 2022.

7. ***How has your site/office/program used program alternatives such as programmatic agreements, program comments, and other tools to identify, manage, and protect your site/office/program's historic properties over the last three years, if at all?***

No programmatic agreements exist at PORTS.

Using Historic Properties

8. ***How does your site/office/program coordinate historic preservation and sustainability/climate resiliency goals in project planning?***

The physical preservation of specific PORTS facilities is not possible due to the environmental challenges posed by the contaminated status of the facilities and the necessary task of environmental restoration. The buildings and structures located at PORTS, including its (architectural) historic properties will be demolished as a part of cleanup pursuant to a CERCLA Record of Decisions (ROD), which addresses environmental contamination and associated risks and hazards. With regard to architectural historic properties, DOE PORTS is aggressively working through the mitigation measures identified in the ROD which include, but are not limited to, a Virtual Museum (established and updated periodically), the development of a Historic Context Report on the site (completed), preparation of Historic American Engineering Reports for seven unique historic properties on the site (completed), final coordination with SHPO and DOE Federal Preservation Office on the location for the PORTS archive for long-term curation of artifacts (in progress).

Due to the nature of the work toward environmental restoration of the site, no rehabilitation has been performed to the historic structures. The PORTS site has established green initiatives that address sustainability and climate resiliency standards. These may include but are not limited to, replacing light bulbs with an energy efficient alternatives, purchasing EPEAT compliant electronics and installing electric vehicle charging stations. The PORTS site will not be adaptively reusing or repurposing any historic buildings, as such, the mitigation measures ordered through the CERCLA ROD and NHPA mitigating process have been deemed acceptable. The site has not been evaluated the on the equity of rehabilitation and retrofitting of the historic properties due to the nature of the cleanup work that is required by the human health standards governed by our regulatory bodies and implemented by the site.

DOE is preserving the unique story of PORTS through documentation and other interpretive measures. Several mitigation measures to document the site's history have been and will continue to be implemented. Additionally, the site has transferred two parcels of approximately 300 acres and will continue to transfer land in the future for economic development and overall site restoration for new industries.

9. ***How do your site/office/program's historic federal properties contribute to local communities and their economies, and how have their contributions changed over the reporting period?***

The current mission of the PORTS Site is environmental remediation, deactivation, and surveillance and maintenance. As a part of the deactivation, the PORTS Site partners with the Southern Ohio Diversification Initiative (SODI) to support economic development with reuse and recycle initiatives. The plant is currently in

shutdown status and an extensive decontamination and decommissioning (D&D) environmental cleanup of the site is underway to prepare for the site's future use. Throughout the cleanup process, parcels of land will continue to be deeded to the SODI for the purpose of reindustrialization for regional economic development. These Federal properties stimulate the local communities and economies by providing jobs to complete the site mission. The PORTS Site participates in educational sessions to help connect the site contractor to resources and paperwork related to becoming a vendor for the U.S. government. The PORTS Site also sets goals to work with small businesses in the community and fosters heritage tourism by providing tours of the site to the community. Since the COVID-19 pandemic, public tours have resumed.

DOE aids the community directly by helping to grow a science, technology, engineering, and math (STEM) environment for rural Appalachian schools including the Ohio University Voinovich School's PORTSfuture Program. Through a grant funded by the Portsmouth/Paducah Project Office, PORTSfuture has been able to reach over 13,000 students in the four-county area in Southern Ohio around PORTS. The PORTSfuture Program engages K-12 and college students in STEM activities focused on technology, energy, environment, entrepreneurship, and water quality. In addition, in support of community outreach, PORTS has collaborated with Ohio University to develop a program in which local high school students produce a summary of the Annual Site Environmental Report (ASER) for distribution to the public. The ASER presents the results from the various environmental monitoring programs and activities carried out during the year and includes information on archaeological and historic preservation.

In further pursuit of partnership and providing opportunities for the local community, the PORTS Annual Science Alliance event brings more than 1,500 high school juniors to the PORTS site for an interactive science fair that includes scientific demonstrations from multiple universities and companies and provides information on careers in STEM fields. PORTS sponsors a specific demonstration focused primarily on historic preservation at PORTS and the historical role the site played in the cold war, which is one of the most popular demonstrations of the event. DOE and PORTS contractors also support the annual South Central Ohio Regional Science Bowl, an academic competition for middle school and high school students. Student teams answer questions about biology, chemistry, earth sciences, math, and physics, and the regional winners advance to the National Science Bowl in Washington, D.C.

In January of 2012, the DOE released the PORTS Virtual Museum to the public. The PORTS Virtual Museum is a website designed to provide a detailed historical description of the site, including anecdotal information from employees and retirees (captured in oral histories), photos, and video. Additional interviews are included with local citizens to provide insight into the local impact of the plant during construction and operation. One of the unique features of the museum is a virtual tour of plant buildings. This aspect of the Virtual Museum is intended to be especially interesting to museum visitors due to the sensitive nature of the operations at the site, which have prevented anyone other than those with the necessary security clearance from site access. The Virtual Museum can be accessed at the following link: http://www.portsvirtualmuseum.org. Additionally, DOE offers an opportunity to participate in a limited number of public tours held monthly during the summer and fall. The public tour provides an opportunity for people to get a first-hand look at the progress taking place for the future and learn about the past of the PORTS site. The guided tour typically takes visitors around the site by bus with stops at the X-300, a visit to the observation tower at the OSWDF, and a stop to learn more about the safe demolition of specific facilities.

Western High School students, DOE's Jeremy Davis with Ohio University facility pose for picture following the completion of their ASER Summery report of the 2022 ASER.

FBP representative, Prime D&D Contractor to DOE PORTS, presents ASER information to local high school students.

Jeremy Davis, DOE Portsmouth Site Lead, speaking to local high school students at recent Science Alliance.

Marc Hill, FBP's NHPA Site Lead, presenting to local high school students during the recent Science Alliance.

Public Tour Group meeting at The Ohio State University Endeavor Center on July 15, 2023.

Public Tour group on the Onsite Waste Disposal Facility Observation Tower on July 15, 2023.

Successes, Opportunities and Failures

10. ***Provide specific examples of major successes, opportunities, and/or challenges your site/office/program has experienced during the past three years.***

PORTS has no specific successes or challenges experienced with incorporation of equity and climate change adaptation/mitigation due to PORTS not evaluating the historic buildings onsite for repurposing or other use. Notable accomplishments in protection of the property since 2020 include the Virtual Museum updates; the completion of HAER reports for seven PORTS facilities; the completion of reports based on the content requirements of the Historic American Building Survey for 26 site facilities; monthly panoramic photo-documentation of site D&D progress; and the continuation of outreach and communication activities such as site bus tours during the spring and summer months; and presentations to local groups and gatherings on site history that include showing items from PORTS' operational period. A contractor to DOE has completed the curation of 26 archaeological collections from the former Portsmouth Gaseous Diffusion Plant (PORTS) and adjacent private properties. The archaeological collections, totaling more than 50,000 artifacts, as well as reports, notes, photographs, and digital documentation are now curated in perpetuity at the Ohio History Connection (OHC), Columbus, Ohio. A copy of the prehistoric and historic-era reports can be obtained at the U.S. DOE Environmental Information Center by contacting 740-289-8898 or at portseic@ports.pppo.com. Additionally, an electronic copy can be found at https://www.energy.gov/pppo/downloads/national-historic-preservation-act-documents-portsmouth.

To help document historic activities at the PORTS Site, the virtual museum, The Portsmouth Gaseous Diffusion Plant Virtual Museum (PORTSVirtualMuseum.org), has been created to document activities at the PORTS Site, which includes the plant's history; and the different faces, sights, and sounds of the site. The PORTS Site has granted public access which allows access to citizens who are interested in the virtual museum, as well as creating a historic photograph display that honors the service of PORTS Site workers and the work that was performed from 1952 to 2013, and through FY 2023, respectively.

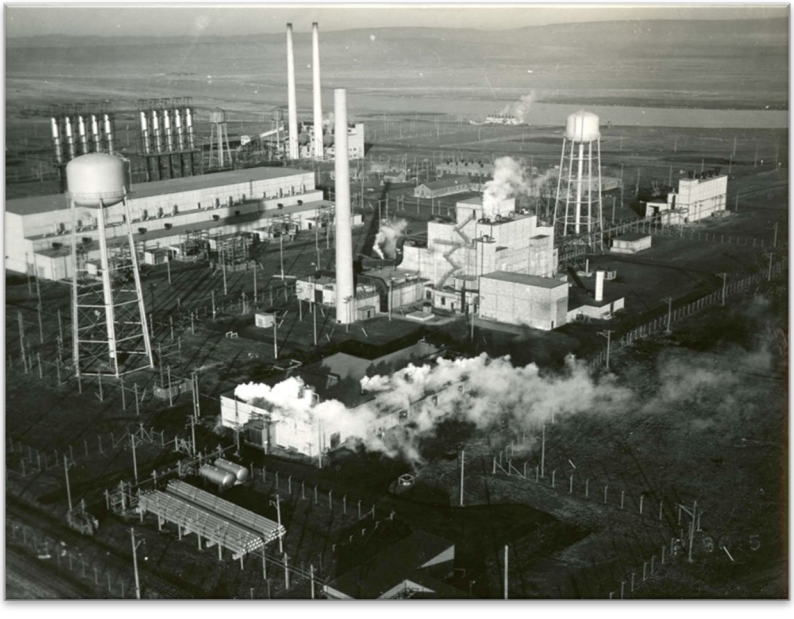
Richland Operations Office/Hanford Site

Identifying Historic Properties

1. ***How many, and what percentage of your assets, are historic as reported in: (a) your bureau or agency's proprietary database and/or (b) your agency's reports?***

Data on all historic properties at Hanford, under the purview of DOE – Richland Operations Office (DOE-RL) are maintained separately in the secure Cultural and Historic Resources Program (CRHP) database. There are nine historic/archaeological districts on the Hanford Site. All the Manhattan Project / Cold War buildings, structures, sites, objects, and/or districts are in the database, but the number continuously changes as buildings are demolished as a part of the cleanup effort, while others are being maintained and rehabilitated (in accordance with the built environment Programmatic Agreement.

Of particular interest is the B-Reactor. The 105-B Reactor (B Reactor, 105-B, or the 105-B Building in the 100-B/C Area at Hanford) is a contributing property to the Hanford Site Manhattan Project and Cold War Era Historic District, a Signature Facility selected by U.S. Department of Energy Headquarters (DOE-HQ) for its association with the Manhattan Project, a National Register-listed property, a National Historic Landmark (NHL), and a component of the Manhattan Project National Historic Park (Marceau et. al. 2003). The B Reactor is a public-federal structure designated as a National Historic Landmark under Criterion 1 as the first production-scale nuclear reactor, as well as under Criterion 4 as the model for World War II and Cold War reactors. B Reactor played a significant technological role in both the Manhattan project and in shaping the Cold War Arms Race.



B Reactor Complex Circa 1944

2. ***Have your identification methods changed during this reporting period? Approximately what total percentage or portion of inventory have now been surveyed and evaluated for the National Register, and does this represent an increase from your site/office/program's 2020 progress report, if applicable?***

Since the last progress report in 2020, DOE-RL's identification methods have not changed. DOE-RL continues to use a variety of methods to identify cultural resources. This includes conducting background searches using published and non-published sources relating to the Hanford Site. Many of these sources are housed in DOE-RL archives located in the secure Cultural and Historic Resources Program (CHRP)'s record room. These include archaeological survey reports and project files dating from 1987 to the present, archaeological site files, historic building documentation, technical reports, journal articles, books, historic photographs and aerials, engineer drawing, and historic maps. In 2014, CHRP transitioned to a paperless record keeping system. All archaeological survey reports, project files, Historic Property Inventory Forms (HPIFs), and archaeological sites & isolate

records have been scanned and are stored on the secure CHRP server[2]. The CHRP is currently working to scan reference documentation stored in the CHRP Records Room for addition into the server. Cultural Resource reports, site records, and Historic Property Inventory Forms (HPIFs) are also available through the Washington State Department of Archaeology and Historic Preservation (DAHP) Washington Information System for Architectural and Archaeological Records Data (WISAARD) database.

Another source of information is the program's secure Geographic Information System (GIS) digital database. This database contains spatial and contextual information on archaeological surveys as well as archaeological sites/isolates. Much of this spatial data is also available from WISAARD.

Identification methods also include standard archaeological fieldwork, such as pedestrian surveys and subsurface testing.

At the time of this report, approximately 62% of the Hanford Site's DOE-RL's owned and managed lands have currently been surveyed, and a total of 82 historic-period properties have been identified. From 2020 until present, a total of 50 surveys have been completed, which have resulted in the identification or updating of 58 cultural resources. Of these 58, three were determined eligible for the NRHP. Most of these resources were identified within the context of Section 106.

3. Has your site/office/program implemented any new policies or programs that promote awareness and identification of historic properties over the last three years?

All DOE employees and contractor employees are required to take orientation training (HGET) on intake and annually which includes a module on Cultural Resources awareness. DOE-RL regularly offers Cultural Resources Management/NHPA training to DOE employees and contractor employees. Toolbox Cultural Resource Awareness training is provided on a project-specific basis.

4. Federal agencies are encouraged to share information regarding the number and percentage of historic property identification completed in the context of Section 106 for specific undertakings and programs versus that completed for unspecified planning needs (Section 110 survey). In a given year, what percentage of your site/office/program's identification of historic properties occurs due to Section 106 planning and compliance versus regular stewardship and unspecified planning needs (Section 110)?

Approximately 80% of the NHPA workload is in support of 106 compliance and 20% for Section 110.

Stewardship work by DOE-RL under Section 110 includes annual surveys to identify historic properties. Most of the Section 110 work on the Hanford Site

Section 110 Site Monitoring with Tribal Participants

[2] Access to the CHRP server is granted by request to the CHRP Records Manager as well as the DOE CRP Manager

focuses on assessing the condition and identification of resources at previously recorded sites. When applicable, site records are updated and NRHP evaluations completed for those sites that have not been evaluated.

The Section 106 agreements that DOE-RL enters (MOAs) are to resolve adverse effects.

5. How has your site/office/program employed partnerships to assist in the identification and evaluation of historic properties over the last three years?

Tribal

As discussed, through DOE-RL's cooperative agreements and use of subcontract—Area Tribes are provided the opportunity to actively engage in the Section 106 and Section 110 processes through participating in fieldwork, providing feedback on compliance documents, and participating in ongoing working group meetings.

Through on-going consultation with Area Tribes, DOE-RL receives inputs from Tribal representatives regarding how resources are managed. As Area Tribes consider natural resources to be cultural resources, DOE-RL is working with Area Tribes to develop best practices for managing the Hanford Site's natural resources. These best practices often incorporate traditional indigenous knowledge.

Vital to identification efforts on the Hanford Site is ongoing consultation with Area Tribes.

In some cases, Memorandums of Agreement (MOAs) developed with Area Tribes, have resulted in Tribes conducting Traditional Cultural Property (TCP) studies or studies on traditional knowledge. This allows Area Tribes to identify historic properties that are significant to their communities.

As part of outreach with local communities, DOE-RL's contractor, subcontracts local college students to work as interns. These interns assist with a variety of tasks, including fieldwork, curation, research, and the ongoing effort to digitize CRHP's older records. This internship allows interns to gain valuable experience in their field of study—which may translate to future job opportunities outside of Hanford. The digitizing of records additionally benefits Area Tribes, as records can be sent to them digitally in minutes rather than a trip needing to be made to access these records.

United States Fish and Wildlife Service—Hanford Reach National Monument

In 2000, a Presidential Proclamation under the American Antiquities Act protected the last free-flowing stretch of the Columbia River, from approximately Priest Rapids Dam to Richland. This stretch, including the river itself and lands on both sides of the river, was deemed the Hanford Reach National Monument (Hanford Reach). Most of the land included in the Hanford Reach National Monument is managed by the U.S. Fish and Wildlife (USFWS) under agreements with DOE. DOE-RL works closely with USFWS on projects that have overlapping interests and regularly share information on cultural resources located within the National Monument. A recent example of a collaborative approach to managing cultural and natural resources is provided under project successes.

Protecting Historic Properties

6. Have the policies and programs your site/office/program has in place to protect historic properties changed over the reporting period in ways that benefit historic properties?

The Environmental Protection Agency (EPA) interprets the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) section 121 requirements to meet Applicable or Relevant and Appropriate Requirements (ARARs) as applicable to all remedial activities undertaken pursuant to CERCLA. The National Historic Preservation Act (NHPA) is identified as an ARAR therefore CERCLA remedies must comply with the NHPA. The DOE in partnership with the EPA has developed new methods to conduct NHPA as an

ARAR to CERCLA on the Hanford Site. The new process allows for information about historic properties and NHPA processes to be considered in making decisions about remedial actions under CERCLA.

Inclusion of inventory level cultural resources data in Remedial Investigation, Feasibility Study (RI/FS) documents provides the opportunity to consider impacts to resources during the development and selection of remedy alternatives. Continuing the section 106 process through identification of historic properties and evaluation of effects is conducted once an alternative remedy is selected and remedial actions are defined through the development of a Proposed Plan (PP). Documentation of how the agency met the substantive requirements of NHPA as an ARAR either though a finding of No Historic Properties Affected, No Adverse Effects or the development of an MOA to resolve Adverse Effects to Historic Properties is then incorporated in the development of a final Record of Decision (ROD).

DOE-RL employs a prime contractor to assist its Cultural Resource Manager in meeting the agency's responsibilities under NHPA, NEPA, and other applicable Federal regulations. Since 2020, the prime contractor has lost 2.5 full time employees. Although the contractor is in the process of replacing these employees, an industry-wide shortage of qualified cultural resource professionals has reduced the pool of potential applicants and impacted hiring.

DOE-RL has long-standing cooperative agreements with the three federally recognized Tribes affiliated with the area, including the Nez Perce Tribe, the Confederated Tribes of the Umatilla Indian Reservation, and the Confederated Tribes and Bands of the Yakama Nation. These cooperative agreements provide these Tribes with funding which allows them to employ cultural resource specialists who participate in cultural surveys or monitoring, review documents, and consult with DOE-RL through regular meetings. The Wanapum Band, a non-federally recognized Tribe affiliated with the Hanford Site area, is provided funding to do the same as the federally recognized Tribes through a sub-contract managed by one of DOE-RL prime contractors. Monthly meetings are held with the four Tribes and the Washington State Department of Archaeology and Historic Preservation. This provides consulting parties an additional opportunity to hear about current Section 106 and 110 projects, to provide feedback, and work with DOE-RL to develop policies or best practices.

Developing written processes is in progress. Identification of Traditional Cultural Properties and utilizing indigenous knowledge, when made available, is incorporated into the DOE-RL cultural resource process (see examples provided under #5 and under #10).

DOE-RL has not faced challenges or seen costs increase in attempting to ensure historic rehabilitations and compliance with the Secretary of the Interior's Standards for the Rehabilitation of Historic Properties.

7. How has your site/office/program used program alternatives such as programmatic agreements, program comments, and other tools to identify, manage, and protect your site/office/program's historic properties over the last three years, if at all?

DOE-RL has not developed any new Section 106 program alternatives or revised existing program alternatives during the reporting period.

Regarding Section 106 agreements and planning and implementation of infrastructure projects, such as those linked to large-scale infrastructure, sustainability, or clean energy projects, DOE-RL has been providing Section 106 support to proposed solar energy and small modular (nuclear) reactor projects on the Hanford Site.

DOE-RL has not executed any programmatic agreements over the last three years, nor other program alternatives. However, RL-DOE has developed an improved/streamlined process for certain cleanup activities.

Using Historic Properties

8. How does your site/office/program coordinate historic preservation and sustainability/climate resiliency goals in project planning?

DOE-RL continues to assess ways to mitigate the impacts of climate change on the cultural resources it manages. Most of the current work focuses on documenting impacts or identifying the potential for future impacts. DOE-RL also looks to develop initiative approaches through consultation with Area Tribes. Examples of potential approaches includes drones to collect high resolution aerial imagery or LIDAR; or 3D Laser Scanning to document cultural resources. These newer technologies may provide more fine-grained data than using traditional methods of documentation and are invaluable when impacts to cultural resources from climate change or other factors cannot be prevented.

9. How do your site/office/program's historic federal properties contribute to local communities and their economies, and how have their contributions changed over the reporting period?

The 2015 National Defense Authorization Act directed the establishment of the Manhattan Project National Historical Park (NHP). Under this Act, three locations were identified as eligible for the Park: Oak Ridge, Tennessee; Los Alamos, New Mexico; and Hanford, Washington. On November 10, 2015, the Manhattan Project National Historical Park was established when a Memorandum of Agreement (MOA) was signed between the U.S. Secretary of the Interior and the U.S. Secretary of Energy. This MOA, outlines how each agency will work together to preserve, protect, interpret, and provide access to the historic resources associated with the three park locations. Within the Hanford Site, DOE-RL retains ownership and is responsible for managing the park properties, while the National Park Service (NPS) manages the historical interpretation. Properties included within the Hanford portion of the park include the B Reactor NHL, and four Pre-1943 buildings: Bruggemann's Warehouse, Allard Pumphouse, White Bluffs Bank, and Hanford Highschool. DOE-RL and the NPS regularly work together on how to manage these properties, especially in the context of preservation and use of these buildings in support of interpretation for visitors. DOE-RL also regularly consults with NPS subject matter experts on proposed undertakings related to managing and preserving these properties.

DOE-RL supports the NHP through the coordination of public tours and public interpretation materials and the NHP visitor center.

Successes, Opportunities and Challenges

10. Provide specific examples of major successes, opportunities, and/or challenges your site/office/program has experienced during the past three years.

COVID-19 Pandemic

The COVID-19 pandemic presented several challenges to DOE-RL's cultural resource program. Stay-home orders prevented in-person meetings as well as participation in fieldwork by Area Tribes. As a result, DOE-RL started holding monthly meetings remotely—which has been continued as it eliminates travel time and allows more individuals to participate. Additionally, a regular monthly meeting topic was added that provides a summary of fieldwork conducted since the last meeting. This allows Tribes to be informed of the results of fieldwork if they could not attend, and to ask questions about the fieldwork.

The pandemic also impacted the Section 110 monitoring program. As the site condition monitoring program was not considered essential work, required to keep the site running and Tribes could not participate, only limited Section 110 activities were conducted until FY2022. Those trips originally planned for FY2020 have since been completed.

Opportunities

Development of a Programmatic Agreement

One of the biggest challenges that Hanford faces is not being able to efficiently conduct NHPA for routine undertakings on sites. No programmatic agreement currently exists to cover such activities. It is hoped that with development of the HCRMP in consultation with Area Tribes, that a PA can be developed for certain routine activities. This would streamline NHPA compliance for such activities and reduce overall cost.

Project Successes

Memorandum of Agreement for C-L8 Electrical Distribution Line

DOE successes include the establishment of a Memorandum of Agreement (MOA) for the rebuild and installation of a distribution line on the Hanford Site. This MOA contained collaborative elements with Area Tribes and the Washington State Department of Archaeology and Historic Preservation (DAHP). Through Section 106 consultation, it was determined that project activities would create adverse impacts to a Traditional Cultural Property (TCP). Among the MOA stipulations, mitigation strategies include the closure of a borrow pit at the TCP and collaborative development of a habitat improvement plan with components that address visualization of the area to be rehabilitated, and defining goals, criteria, and steps in consultation and collaboration with Area Tribes. Through consultation, DOE-RL will also develop digital interpretive content for use in public education materials. This content will discuss habitat as a cultural resource for Area Tribes and how restoration of habitat can be implemented as part of cultural resources mitigation.

Protection of Múun

This NRHP determined eligible archaeological site is the historic location of the village of *Múun* (water swirl place). This area is a Historic Property of Religious and Cultural Significance to Indian Tribes (HPRCSITs). Previous archaeological work has also documented this site as having an occupation that spans from the Vantage Phase (8,000 to 4,000 BP) into the historic era; and is one of the oldest potentially continuously occupied sites on the Hanford Site. A groundwater monitoring well, and its associated dirt pad and access road was installed within this location as early as 1952. This well is accessed multiple times a year to perform maintenance and take groundwater samples. The need to access this well by vehicle has led to an increase in the amount of erosion within this area and to artifacts being exposed. Exposure of the artifacts puts them at risk from vehicle damage as well as possible looting. As this monitoring well plays a critical role in tracking groundwater contamination, it is not currently an option to decommission this well. DOE-RL is working with their contractor to develop an alternative approach for collecting groundwater samples from this location while also meeting the Environmental Protection Agency's sampling requirements. In the meantime, whenever work is conducted at the well, a cultural resource monitor is present during work and assists the samplers with avoiding artifacts during sampling.

Restoration of Umtanum Desert Buckwheat

Archaeological Fieldwork on Umtanum Ridge

In partnership with USFWS and Area Tribes, DOE-RL is working to restore and conserve Umtanum Desert buckwheat (Eriogonum codium). This rare plant is only known to occur within a small area on the DOE-RL managed portion of the Hanford National Monument and has recently been impacted by several fires. The plant and its location are both culturally significant to Area Tribes, and a MOA is currently in development that creates a collaborative process between all parties for the protection and restoration of the plant. This collaborative process is envisioned to allow for the use of traditional ecological knowledge to play a part in informing how this area is managed in the long-term while also making sure that cultural resources are protected over a project that is expected to span many years.

SLAC National Accelerator Laboratory

Identifying Historic Properties

1. ***How many, and what percentage of your assets, are historic as reported in: (a) your bureau or agency's proprietary database and/or (b) your bureau's or agency's reports.***

12 assets (3.1% of SLAC's assets) are designated as eligible for historic status. All 12 historic properties are buildings. 1 is individually eligible for listing in the NRHP; there is one historic district, and all 12 historic properties are eligible as contributors to the historic district, known as the Fixed Target Linac Historic District.

2. ***Have your identification methods changed during this reporting period? Approximately what total percentage or portion of inventory have now been surveyed and evaluated for the National Register, and does this represent an increase from your site/office/program's 2020 progress report, if applicable?***

No changes in identification methods during this report period. Approximately 16% of SLAC's assets have been evaluated for the National Register, which does not represent an increase from 2020.

3. Has your site/office/program implemented any new policies or programs that promote awareness and identification of historic properties over the last three years?

SLAC's Section 106 process includes notification of interested Tribal groups, identified through the Native American Heritage Commission, of Section 106 undertakings.

3. ***Federal agencies are encouraged to share information regarding the number and percentage of historic property identification completed in the context of Section 106 for specific undertakings and programs versus that completed for unspecified planning needs (Section 110 survey). In a given year, what percentage of your site/office/program's identification of historic properties occurs due to Section 106 planning and compliance versus regular stewardship and unspecified planning needs (Section 110)?***

None; historic properties are identified during the Section 110 process. The SHPO concurred in June 2016 with the Historic Resource Study (HRS) report *SLAC National Accelerator Laboratory History Property Survey Report, February 2016*, which identifies historic properties during the agreed upon period of historic significance from the inception of SLAC until 1970. The report includes an inventory and evaluation of buildings and structures located at the SLAC site, a historic context of the facility's development, and State of California Department of Parks and Recreation (DPR) 523A (Primary Record) forms for all resources constructed within the established period of significance (1962-1970). Those properties built after 1970 require the passing of additional time to objectively evaluate their context and potential significance. SLAC and the DOE acknowledge that later eras of significance may be identified in the future. As agreed to with the SHPO in the HRS, the DOE intends to update the HRS in 2026 to continue to analyze buildings that fall outside the presently established period of significance. SLAC's Section 106 analyses are based on the HRS.

5. How has your site/office/program employed partnerships to assist in the identification and evaluation of historic properties over the last three years?

SLAC's Section 106 process includes notification of interested Tribal groups, identified through the Native American Heritage Commission, of Section 106 undertakings. SLAC also works regularly with Stanford University's Director of Heritage Services/University Archaeologist during the Section 106 process to ensure continued collaboration between SLAC and Stanford and consistency in regulatory consultation processes.

Protecting Historic Properties

6. Have the policies and programs your site/office/program has in place to protect historic properties changed over the reporting period in ways that benefit historic properties?

One meeting with the SHPO under Section 106 with the SHPO has occurred over the last three years. The meeting helped to establish the relationship between the SHPO office and SLAC personnel and allowed for discussion and agreement about projects' Section 106 submittal expectations. There has been no change in the number of full-time cultural resources professionals assigned to help the program fulfill its responsibilities under the NHPA changed over the last three years.

As part of meeting sustainability goals, SLAC continues to identify and mitigate risk to assets, including historic properties, from increased inclement weather from climate change. Mitigations include roofing repairs, slope stabilization, vegetation management, and equipment/infrastructure modernization. These activities are reviewed under SLAC's National Environmental Policy Act (NEPA) program to ensure that potential impacts to historic properties are avoided or addressed.

Regarding partnerships, refer to response to question number 3.

7. How has your site/office/program used program alternatives such as programmatic agreements, program comments, and other tools to identify, manage, and protect your site/office/program's historic properties over the last three years, if at all?

No.

Using Historic Properties

8. How does your site/office/program coordinate historic preservation and sustainability/climate resiliency goals in project planning?

Projects that involve updates to building utilities/energy systems to meet energy efficiency and sustainability goals are reviewed through SLAC's National Environmental Policy Act (NEPA) program, which is integrated with SLAC's NHPA program to ensure that the work does not impact historic properties.

Also, refer to response to question number 6.

9. How do your site/office/program's historic federal properties contribute to local communities and their economies, and how have their contributions changed over the reporting period?

N/A.

Successes, Opportunities and Challenges

10. Provide specific examples of major successes, opportunities, and/or challenges your site/office/program has experienced during the past three years.

SLAC works regularly with Stanford University's Director of Heritage Services/University Archaeologist during the Section 106 process to ensure continued collaboration between SLAC and Stanford and consistency in regulatory consultation processes.

Sandia National Laboratories

Identifying Historic Properties

1. ***How many, and what percentage of your assets, are historic as reported in: (a) your bureau or agency's proprietary database and/or (b) your agency's reports?***

The Sandia Field Office (SFO) oversees the four sites that make up Sandia National Laboratories – SNL/New Mexico (NM), SNL/California (CA), Tonopah Test Range (TTR), and Kauai Test Facility (KTF). The Cultural Resources Program includes one Federal employee for oversight of SNL Cultural Resources program, two SNL employees under organization ES&H 643, and one SNL employee under Record Management organization 9732, who is the corporate historian and historical built infrastructure subject matter expert.

Based on the Facilities Information Management System, SNL currently has:

SNL/CA – 0 out of 121 assets are National Register Eligible; however, a new site survey and assessment is recommending 1 historic district of 4 buildings and an additional 7 buildings are National Register Eligible – consultation on this survey has not occurred yet.
SNL/NM – 66 out of 973 assets are National Register Eligible
KTF – 0 out of 93 assets are National Register Eligible; Section 106 review and consultation is undertaken when properties face renovation or demolition; nothing has been determined to be eligible so far.
TTR – 57 out of 134 assets are contributing elements to 1 historic district that is National Register Eligible

Based on internal Archaeological Resources database for management, SNL currently has:

SNL/CA – No archaeological resources– Baseline survey in 2022- consultation on this survey is in process.
SNL/NM – 70 out of 204 archaeological sites are recommended eligible to the National Register.
KTF – Baseline survey in 2023- reporting on this survey is in process. Six archaeological sites were recorded with one site recommended eligible under Criterion A. Consultation with SHPD is in process.
TTR – 2 archaeological sites are recorded on SNL managed properties. One site is recommended eligible to the National Register.

The number of historic properties that are buildings, structures, sites, objects, and/or districts include:

SNL/CA – 11 eligible properties are all buildings; 4 are in 1 district.
SNL/NM – 66 eligible properties include 7 structures and 59 buildings; 7 potential districts are under consultation; 204 archaeological sites.
KTF – 0 eligible properties
TTR – 57 eligible properties include 23 structures and 34 buildings; they all contribute to 1 district; 2 archaeological sites on SNL managed properties.

2. ***Have your identification methods changed during this reporting period? Approximately what total percentage or portion of inventory have now been surveyed and evaluated for the National Register, and does this represent an increase from your site/office/program's 2020 progress report, if applicable?***

Since 2020, we have undertaken a new built-environment and archaeological survey and assessment of the SNL/CA site, which was last surveyed in 2003. Previous survey and resulting consultation identified no historic properties at the site; the current built-environment survey recommends one small district of 4 buildings and an additional 7 historic buildings; the current archaeological survey identified no resources.

We are about to undertake a new survey of SNL/TTR, as the existing survey is out of date and NV SHPO expects a new one.

An archaeological baseline survey was conducted in 2023 at the SNL/KTF site. Six sites were recorded with one site recommended eligible under Criterion A. Consultation with SHPD is in process.

SNL/NM has surveyed for the built-environment and archaeological resources under Section 106, but we have not significantly increased the percentage of the total inventory surveyed. For archaeological resources, current eligible sites are being updated for further review. Additionally, we are working on a Programmatic Agreement with NM SHPO.

3. Has your site/office/program implemented any new policies or programs that promote awareness and identification of historic properties over the last three years?

We have initiated an annual Cultural Resources Town Hall for the SNL workforce. The first Town Hall was held in May 2023, with individuals attending in person or online. Material covered the requirements and purposes of cultural resources management, members of our team's individual motivations in participating, the methods used, and the cultural resources identified so far at SNL's different sites. It was well attended and well received. We expect to continue the event annually.

The Cultural Resource Program- archaeology meets monthly with our Facilities Program managers and Contractor mangers to discuss upcoming work and present awareness. An annual presentation to the group occurs on awareness.

Since 2020, SFO has undertaken consistent consultation efforts under Section 106 requirements, having observed lapses in implementation in the past.

SNL has not identified opportunities to consider equity, access, and involvement of underserved communities in its Federal stewardship activities and has not yet implemented policies that promote equity and diversity in the identification process. SNL has also not yet prioritized the identification of historic properties in areas with the highest potential for climate impacts. SNL is developing its site plans in response to goals of zero impact. The Cultural Resources Program expects to coordinate with those efforts.

4. Federal agencies are encouraged to share information regarding the number and percentage of historic property identification completed in the context of Section 106 for specific undertakings and programs versus that completed for unspecified planning needs (Section 110 survey). In a given year, what percentage of your site/office/program's identification of historic properties occurs due to Section 106 planning and compliance versus regular stewardship and unspecified planning needs (Section 110)?

100% of the historic property survey and identification was undertaken as part of Section 106 at SNL/NM, SNL/TTR, and SNL/KTF. The new surveys at SNL/CA and SNL/KTF were done as Section 110.

5. How has your site/office/program employed partnerships to assist in the identification and evaluation of historic properties over the last three years?

In the initiation of a new Site-Wide Environmental Impact Statement (SWEIS) at SNL/NM, and in the consultation on a particular property within SNL/NM, SFO has begun partnership discussions with pueblos that have expressed interest in consultations/collaboration.

Initiating consultations via certified mail and email to governors/chairman/presidents, Tribal members, and environmental and Tribal historic preservation office (THPO) representatives. There are established Tribal liaison individuals for SNL and SFO.

Protecting Historic Properties

6. Have the policies and programs your site/office/program has in place to protect historic properties changed over the reporting period in ways that benefit historic properties?

SFO has reprioritized cultural resources management and is now consistently evaluating and consulting on all properties facing effects within Section 106. We have also begun discussion with NM SHPO regarding a Programmatic Agreement, have initiated a new survey and assessment of SNL/CA, and are in discussion with NV SHPO regarding a new survey and what Programmatic Agreement should include.

The subcontractor operating SNL has hired one additional archaeologist for cultural resources management in this period. Currently, there are currently three cultural resource professionals overseeing historic properties at SNL/NM, SNL/TR/ SNL/KTF and SNL/CA. Getting the one additional archaeologist for support has been long overdue. Getting funding and approval for more support is very tedious.

SNL archaeologists are in active contact with the Pueblo of Isleta THPO regarding sites of significance and approaches to protection. This is done in coordination with SFO and with the US Air Force cultural resources personnel on Kirtland Air Force Base.

Currently, SNL is working with the Pueblo of Isleta to incorporate indigenous knowledge when locating and/or preserving historic properties. The two archaeologists talk with and meet with THPO and environmental personnel to share knowledge and provide site visits. This is the goal for surrounding Tribes. This is ongoing.

The SNL cultural resources program has updated the site and location maps for all the properties at all the sites. This has greatly improved understanding of what we have and where it is at.

Costs for historic rehabilitations and compliance are going up – all resources cost more as time passes. Budgets do not appear to be keeping up. Additional challenges include conflicts over window replacement – in spite of requirements to improve thermal qualities and reduce emissions (as they are required to do); SHPO does not see a reason for window replacement unless existing windows are damaged (even though proposed new windows match existing in design and appearance). There is one project currently on hold as this is unresolved.

7. How has your site/office/program used program alternatives such as programmatic agreements, program comments, and other tools to identify, manage, and protect your site/office/program's historic properties over the last three years, if at all?

Our program has initiated discussions with the SHPOs in Nevada and New Mexico regarding Programmatic Agreements. We have paths forward in each state. In New Mexico, we have a draft Programmatic Agreement and are moving forward to finalize it.

SNL's Section 106 agreements do not yet support the planning and implementation of infrastructure projects, such as those linked to large-scale infrastructure, sustainability, or clean energy projects.

We will measure the effectiveness of program alternatives once the Programmatic Agreements are in place.

Using Historic Properties

8. How does your site/office/program coordinate historic preservation and sustainability/climate resiliency goals in project planning?

Results on proposed sustainability actions in historic buildings have been mixed. We have one project stopped because we not reached agreement with NM SHPO on how the windows should be handled. It is being worked but is slow. We have a second project replacing windows in which the preservation goals are exceeding initial hopes.

SNL has not yet increased the number of historic buildings that have been retrofitted to improve operational energy efficiency, or used full life-cycle accounting to value the embodied carbon in historic buildings when considering rehabilitation versus new construction.

SFO has not faced resistance to reuse of historic properties due to the perceived incompatibility of preservation with sustainability and climate resiliency goals, but we face resistance to accommodating preservation goals due to time and cost.

9. How do your site/office/program's historic federal properties contribute to local communities and their economies, and how have their contributions changed over the reporting period?

Our resources are not accessible, so beyond consideration of appearances and the local context in assessments, we see no effect of the historic properties on the community. This is true at all four sites.

Only in our online presentation of historic properties do we use them for educational purposes. If historic properties are still in use by their programs, they are not accessible to the public.

SNL does not yet use historic properties to foster heritage tourism. Again, accessibility is an issue for our sites. Tourists and other unbadged visitors cannot access any of our four sites.

Successes, Opportunities and Challenges

10. Provide specific examples of major successes, opportunities, and/or challenges your site/office/program has experienced during the past three years.

The program is once again in discussions with NV SHPO and has Section 106 consultation underway again in that state. These efforts had dropped off in previous years but have been reinstituted in the past two years. NV SHPO is insisting on a new survey and assessment and re-consultation on everything at the site. We will not be able to establish a Programmatic Agreement with NV SHPO without completing that work. This effort is underway.

The program has greatly increased Section 106 consultation in New Mexico. Again, efforts in this area had dropped off due to lack of resources. We reorganized the effort and SNL now provides the letters and enclosures to support consultation, streamlining the process and making it feasible to meet our requirements.

We have conducted new archaeological and historic buildings surveys and assessments at the SNL/CA site. We expect to consult with the CA SHPO on the results of these assessments in the coming months.

SNL/KTF is also undergoing a new archaeological survey, the results of which will be consulted on once the work is completed.

In terms of partnerships, working with Isleta Pueblo we assisted in both proposed modification to a scientific facility at the SNL/NM site and advanced conversations regarding nearby sites of significance to the Pueblo.

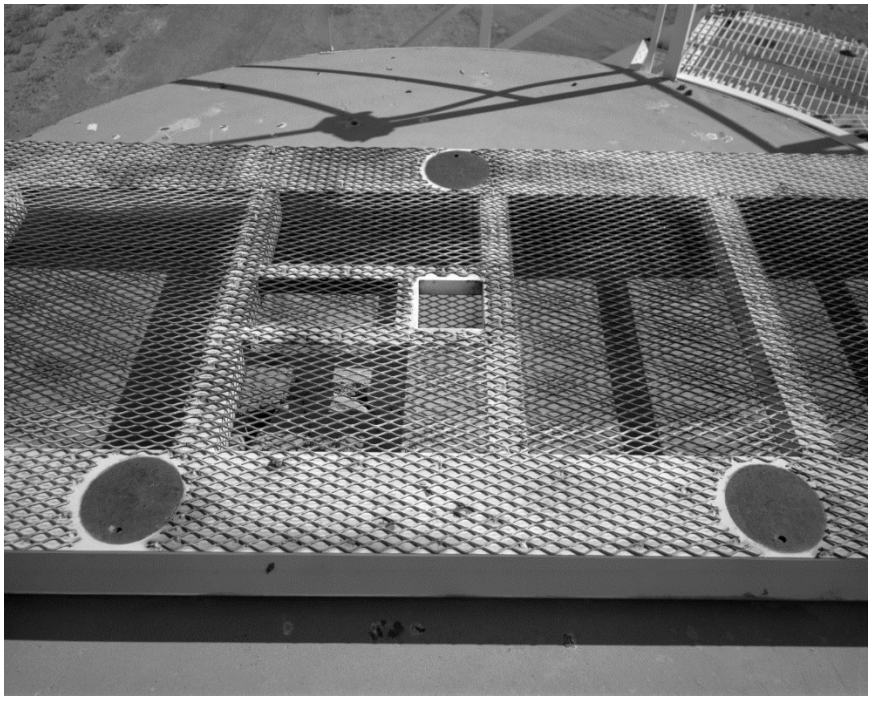
Our recent successes have largely involved demolition that has been held up for years waiting for consultation to be completed. We have finally completed the consultation and have an MOA in place for the removal of an Askania Tower at SNL/TTR and an MOA for the removal of a standby steam plant at SNL/NM. Photos from the documentation of each of the sites follow.

We have also established MOAs for additional demolition at the SNL/NM site and have established a template with the NM SHPO for those documents.

A few photos from the documentation of Tower 02-00, Askania Tower at Tonopah Test Range are provided below:

Landscape view north from TTR Control Point north to Tower 02-00 (visible as narrow white structure at photo midline on left).

South and east sides of Tower 02-00, Askania Tower.



Top of Tower 02-00, Askania Tower; Askania theodolite and dome cover no longer extant

A few photos from the documentation of Building 862 Standby Power Plant, SNL/NM are provided below:

East and south sides, Building 862

Building 862, east side entrances

Building 862, south and east sides, featuring rows of glass block windows on low- and high-bay sections

Building 862, interior, high-bay ceiling

Savannah River Site

Identifying Historic Properties

1. ***How many, and what percentage of your assets, are historic as reported in: (a) your bureau or agency's proprietary database and/or (b) your agency's reports?***

Using DOE's Facilities Integrated Management System (FIMS) database, Cold War historic properties compose .05 percent of SRS' total assets. Archaeological sites are not included in the number of total assets.

SRS' historic property inventory currently contains a Cold War historic district with 149 contributing properties (91 buildings, 57 structures, 1 site) and 10 individually NRHP-eligible buildings (also contributing to the district). Over 2,000 archaeological sites have been identified through Section 110 survey.

2. ***Have your identification methods changed during this reporting period? Approximately what total percentage or portion of inventory have now been surveyed and evaluated for the National Register, and does this represent an increase from your site/office/program's 2020 progress report, if applicable?***

There are two programs onsite that assist DOE with its cultural resources compliance: the Savannah River Archaeological Research Program (SRARP) and the Cold War Historic Preservation Program (CWHPP).

The SRARP, under the auspices of the South Carolina Institute of Archaeology and Anthropology, handles the Site's compliance for archaeological resources. It serves as a primary facility for the investigation of archaeological research problems associated with cultural development within the Savannah River Valley. The results of which are used to assist DOE in the management of more than 2,000 known archaeological sites on the SRS.

The CWHPP originated in 1997. It assists DOE-SR in managing its compliance with Sections 106, 110, and 111 of the NHPA for Cold War and later era properties. DOE-SR chose to develop a PA, in consultation with the South Carolina State Historic Preservation Office (SCSHPO), the Advisory Council on Historic Preservation (ACHP), the SRS Citizens Advisory Board (SRS CAB), the Citizens for Nuclear Technology Awareness (CNTA), and the cities of Aiken, Augusta, and New Ellenton, for the preservation, management, and treatment of the NRHP-eligible historic properties within the SRS Cold War Historic District and the establishment of the CWHPP

The identification methods for historic properties by the SRARP have remained the same during this recording period. The SRARP continues to employ identification methods for historic properties (i.e., archaeological sites) according to procedures and policies outlined in the following document:

> *Archaeological Resource Management Plan of the Savannah River Archaeological Research Program*, 1989. Submitted to the Savannah River Operations Office, U.S. Department of Energy. Savannah River Archaeological Research Program, South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia (Revised version 2013).

The CWHPP's identification methods for historic properties have also remained the same for buildings, structures, sites, and districts since the last update. The program has surveyed and evaluated, to the best of our knowledge, 100% of the Site's Cold War built landscape. We acknowledge that there is always the potential for a few miscellaneous unrecorded resources to be discovered. For an example, a military logo painted on a concrete parking lot that dates to the antiaircraft installation at SRS from 1955-1959 was identified post inventory by an eagle-eyed DOE staff member from his multi-story office building.

We are currently developing a second historic context focusing on environmental management at SRS from the 1975 through 2010. Once completed that will provide an impetus to initiate a new survey for associated resources.

We have developed a new method for the identification and evaluation of large-scale objects/equipment. A laydown yard associated with the Site's separations processes is getting a new mission and its contents needed assessment. Program historians and knowledgeable staff worked as a team identifying equipment that could help interpret Separations and identify those pieces that need to be preserved. The difference was that the fieldwork was captured in a video. It will serve double duty as a research tool but also an educational tool for those onsite not only about the immediate history of the objects but also the overall history of the Site and the part that previous generations played in that history.

3. Has your site/office/program implemented any new policies or programs that promote awareness and identification of historic properties over the last three years?

The SRARP has not specifically implemented any new policies/programs that promote awareness and identification of historic properties over this reporting period, but through continued outreach endeavors that provide public outreach opportunities afforded residents of the Central Savannah River Area with avenues to learn about archaeology and historic preservation. Approximately 1,500 students participated in classroom and homeschool programs, while approximately 3,100 guests viewed displays at public events during this reporting period. The SRARP's outreach program was also responsible for several local museum and library exhibits.

Aside from public school presentations, homeschool group presentations, STEM events, and community events, the SRARP continued its site tour outreach by providing tours of the abandoned towns onsite for former residents, DOE employees, and members of the public. The SRARP's volunteer program, cinematic outreach, and Facebook page are additional outreach programs that provided residents opportunities to learn about the archaeology conducted at the SRS.

The SRARP also uses dedicated volunteers to assist in archaeological research. Volunteers aid in a variety of tasks, including washing and sorting artifacts, primary and secondary artifact analysis, analysis of archaeological sediments (i.e., sieving), flotation, data entry, and photocopying. Indeed, much of the research that we conduct would not be possible without the assistance and support of the volunteers.

The photograph to the left shows SRARP senior volunteer George Lewis Heath (left) along with SRARP Program Manager Keith Stephenson (right) classifying artifacts from the historic rural Hawthorne community on the SRS. The artifacts are from Mr. Heath's homesite where he was born in 1933. As a program volunteer, Mr. Heath participated in the survey of his homesite as well as other locations in the Hawthorne area. He is also directly involved in the geographical reconstruction of this historic community through numerous oral interviews and documentary research. This project contributes to the preservation of the memory of this rural community and its citizens who forfeited their ties to land on the SRS for the greater good the United States.

Like SRARP, the CWHPP promotes awareness and appreciation of historic properties through constant and vigilant public outreach both on and off site. On site we work with Public Affairs to provide bus tours of historic areas that show the Site's developmental history including, historic town sites, reactor areas, and our artifact curation facility. We provide historic images through our *Throwback Thursday* program quarterly and our manager has reached out to those retiring to remind them that they may have historic artifacts that need to be in the Site collection. We provide tours and presentations about the Site's past to leadership

groups, societies, and retirees around the Central Savannah River Area (CSRA). We organize, participate, and host quarterly heritage tourism meetings (about 25 participants representing locations across the CSRA) that allow us to engage with fellow preservation professionals about our resources so that they are familiar with the Site's historic buildings and structures. It is also a stepping-stone toward the development of regional partnerships.

We evaluate the efficacy of these endeavors by the number of donations coming into the facility, the popularity of the public bus tours and survey comments, and the volume of calls asking for presentations and site tours. Since the end of the pandemic, all members of the team have been pressed into service.

The most impactful endeavor, a museum exhibit, that has led to a better understanding of underserved communities, was funded by a grant from the Office of Legacy Management in DOE. The grant came with one stipulation that the central thrust of the exhibit should deal with the theme of environmental justice in the establishment of the Site. This led to the creation of the *6,000 Stories* exhibit, which explores the sacrifice made by 6,000 former residents of the SRS and the necessity of that sacrifice. Blending oral histories, artifacts, and historic photography, the exhibit looks at five years of intense cultural change in this area of the rural south. The voices of those who gave up their farms and homes are easily accessed on computers, iconic artifacts associated with the four themes: the Announcement, Leave-taking, Where Will I Live? and Engineering Change fill the center of the room, and the side walls are filled with historic photography and maps. Cold war artifacts are on display. A cemetery database sits in a window well for researchers interested in learning about those interred on the Site and those whose graves have been moved. The exhibit opened late in 2019 as the pandemic was on the rise and finally received in-person public attention in the last year.

As we have identified 100% of our Cold War NRHP-eligible properties, prioritizing resource identification is not applicable.

4. Federal agencies are encouraged to share information regarding the number and percentage of historic property identification completed in the context of Section 106 for specific undertakings and programs versus that completed for unspecified planning needs (Section 110 survey). In a given year, what percentage of your site/office/program's identification of historic properties occurs due to Section 106 planning and compliance versus regular stewardship and unspecified planning needs (Section 110)?

Our Cold War Historic District was a result of the development of a Cold War historic context and a Section 110 survey that occurred in 2004. The identification and evaluation of associated properties with that context is complete.

Each year in general, and specifically for this reporting period, none of the SRARP's identification of historic properties has occurred due to Section 106 planning and compliance. In comparison, all the SRARP's identification of historic properties has occurred during regular stewardship and unspecified planning needs (Section 110).

5. How has your site/office/program employed partnerships to assist in the identification and evaluation of historic properties over the last three years?

The SRARP partners daily with the USFS, SREL/UGA, DOE/SRNS to ensure compliance with cultural resources on the SRS. The Cold War Historic Preservation Program also partners with those agencies where and when appropriate and the two preservation programs work collegially.

In addition, the SRS Cold War Historic Preservation Program partners with knowledgeable individuals and retirees who provide input to our resource evaluations via oral history and provide background information for the

Cold War artifact collection. The program from the outset has depended on community voices to provide technical information and first-hand accounts of the places and matter on site.

The CWHPP works in partnership with the SRS Heritage Foundation (501c3), the Ruth Patrick Science Center, and Savannah River Archaeological Research Program (SRARP). Our partnership with the Foundation was cemented by a grant from DOE's Office of Legacy Management for a permanent exhibit that spoke to the Site's establishment and environmental justice issues. The *6,000 Stories* exhibit was completed late in 2019, telling the story of five years of significant changes for former residents (see above). The creation of this well received exhibit allowed DOE-SR to fulfill a public outreach stipulation in the Site's PA for the management of Cold War historic properties. Funding from the National Nuclear Security Administration (NNSA) for a second permanent exhibit followed quickly and led to the installation of *Defense, Deterrence and Discovery* in 2022. This exhibit explored tritium's role in the history of the Site and our Nation and took visitors behind the fence to the atomic workplace at Savannah River. In addition, DOE-SR has supported the SRS Museum Executive Director and Education Specialist positions in 2022-2023.

The CWHPP shares an education specialist with Aiken's Ruth Patrick Center. This partnership began this year. The Ruth Patrick Science Education Center is a cooperative effort between the University of South Carolina Aiken, business, industry, and schools in the CSRA that practices hands-on education for science and math education.

As noted above, the program works collegially with SRARP in providing bus tours, curation facility tours, and in the development of an Ellenton Heritage walking tour.

Finally, we look for partnership opportunities at the quarterly Heritage Tourism meetings (see question 3). These include exhibit opportunities, particularly travelling exhibits.

Protecting Historic Properties

6. Have the policies and programs your site/office/program has in place to protect historic properties changed over the reporting period in ways that benefit historic properties?

DOE elected to modify its Cold War preservation and public outreach objectives by returning C Reactor and its associated historic properties (106-C, 107-C, 108-1C, 108-2C, 109-C, 151-1C, 151-2C, 701-1C, 704-C, 706-C, 186-C, and 190-C) to the SRS Decommissioning schedule (D&D). This change in status for C Reactor and its associated facilities warranted revision and replacement of the 2004 PA signed by DOE, SHPO, and the ACHP. Accordingly, an invitation to consult on this matter was sent to the PA signatories and concurring parties in August/September 2015. The PA revision, completed in July of 2020, commits DOE to robust offsite public outreach, the development of preservation plans for highly significant facilities, and the preservation of C Reactor Control Room panels.

There has been no change in the manner SRS complies with Section 106 etc. over the last three years.

The staffing for the CWHPP has remained static with two off-site historians; a full-time curator, part-time curator, and curatorial assistant in Curation Facility on-site; and a museum director and education specialist at SRS Museum. The number of preservation professionals in the SRARP has also remained static with a program manager, a program coordinator, a GIS coordinator, a curator, a public outreach/curatorial assistant, a coordinator of field survey, and several field/laboratory technicians all with archaeological training meeting the Secretary of Interior's professional standards.

Currently due to the building materials, types of historic properties, and their setting at SRS, climate change adaptations/mitigation principles have not been prioritized. The nature of industrial construction, coupled with the

site landscape that provides open buffer areas around facilities, limits that potential for wind damage and forest fire threat while the elevation of the site and drainage patterns mitigate against the threat of flooding. This may change in the future as the forms and magnitude of climate change impacts in the area become better known. The updated PA in 2020 involved Tribal consultation with the Muscogee Tribe. Due to the nature of the resources, they elected to not sign the agreement but were part of the consultation process.

There has been no change in our use of digital information sources in the last three years except for the now common practice of virtual meetings and knowledge of the platforms needed to communicate.

There have not been any historic rehabilitation projects at SRS in the last three years. We have been able, however, to conserve a large original building model (777-10A) of the Physics Assembly Laboratory constructed by Voorhees Walker Foley and Smith, a "Reactor On" light, and an early electrified oversized topographic wall model of the Site.

7. How has your site/office/program used program alternatives such as programmatic agreements, program comments, and other tools to identify, manage, and protect your site/office/program's historic properties over the last three years, if at all?

Both programs use a PA to streamline the management and treatment of historic properties.

DOE-SR signed an updated PA in 2020 for the treatment of Cold War Historic Properties. The 2023-2027 Cold War Cultural Resource Management Plan (CRMP) is in draft and is under review.

The PA and CRMP for both programs provide a road map for Section 106 compliance and allow time to do the planning needed to get in front of large projects like these.

Prior to the execution of a PA and the adoption of the CRMP, Section 106 for Cold War era properties was handled on a case-by-case basis that resulted in MOAs and numerous meetings to reach consensus. The streamlined process developed in the CRMP has worked extremely effectively allowing the Historian to compile a complete notification within 2-3 weeks with a historic narrative, field photography, NRHP status, and an assessment of effects for review by the State Historic Preservation Officer, who has 30 days to review. If needed, a mitigation plan is included and a schedule set for mitigation actions.

Equally important for this success, is the awareness and recognition that historic properties matter on site. The CWHPP is asked annually to update the FIMS list on evaluations and eligibility of properties. Site managers are knowledgeable about compliance and are working it into their project schedules. To this end, the CRMP includes both a full description of this process and an "at-a-glance" chart of the Section 106 process on the inside front cover for busy Site managers to get a sense of what is involved and their roles and responsibilities. CRMPs are not for everybody. An Annual Report summarizing all actions is drafted sent for SHPO review.

Finally, SRS has developed a series of thematic context studies much like multiple property nominations to document its NRHP-eligible properties many of which are replicated building types associated with specific historic processes. The program has completed nine thematic studies. We just completed the final thematic study in 2022: *Hot Labs, Cold War: Process Improvements 1950-1989.* This thematic study provides a history of research and development at SRS and describes the properties associated with research and development on Site prior to the designation of the Savannah River National Laboratory. This approach has streamlined the documentation effort and the illustrated context studies, conceived as tools for Section 106 compliance, have become building blocks for education and research as well.

Using Historic Properties

8. How does your site/office/program coordinate historic preservation and sustainability/climate resiliency goals in project planning?

The Site curation facility is a historic warehouse converted into a Curation Facility and we are preparing a preservation plan for the 1950s era Main Administration Building.

9. How do your site/office/program's historic federal properties contribute to local communities and their economies, and how have their contributions changed over the reporting period?

SRS continues to support safe community reuse of excess assets where possible and appropriate. The SRS Community Reuse Organization (SRSCRO) serves as the DOE public/community interface for the review of proposals for the use of excess DOE-SR equipment to create local community jobs and/or enhance area economic development opportunities. The CWHPP worked closely with SRSCRO in 2019 using their financial expertise to manage a DOE Legacy grant for a museum exhibit designed and curated by the Program in the City of Aiken. While no SRS historic properties were involved in local economic development, a successful partnership was forged between the CRM program and the Community Reuse Organization that can be built upon.

Many of our historic properties still have a mission and are used accordingly. Many SRS historic properties were purpose built and do not lend themselves easily to other uses. Also, their geography within an area off limits to the public makes their reuse for educational purposes currently unlikely.

DOE-SR's sponsorship of Heritage Tourism meetings for CSRA members is a success story. These meetings are stipulated in the PA and have become a very strong plank with the Site's public outreach. As noted, DOE-SR sponsors community wide Heritage Tourism Meetings for the exchange of information of tourism ideas but also for their role in the greater community's recognition that SRS is also a historic place – a historic property with state, local, and national significance. The region's preservation and tourism community attend these meetings, organized on a quarterly basis by DOE-SR in compliance with the PA. The well-attended meetings are held at museums, historic sites, heritage centers, and libraries throughout the Central Savannah River Area. All or most are held in historic properties. Tours are typically given at the host site and the sometimes 30-person strong group will patronize the local restaurants. These rotating meetings provide an excellent opportunity for DOE-SR to report on the Site's preservation initiatives and to see how they maybe joined or complemented by outside tourism efforts. They also establish a cooperative basis for partnerships, allowing the Site to develop its public outreach. This is also a diverse group that when united shows a community in full. SRARP has been an active and vital member of this group from its inception.

Successes, Opportunities and Challenges

11. Provide specific examples of major successes, opportunities, and/or challenges your site/office/program has experienced during the past three years.

See below:

SRS Cold War Historic Preservation Program

Case Study 1

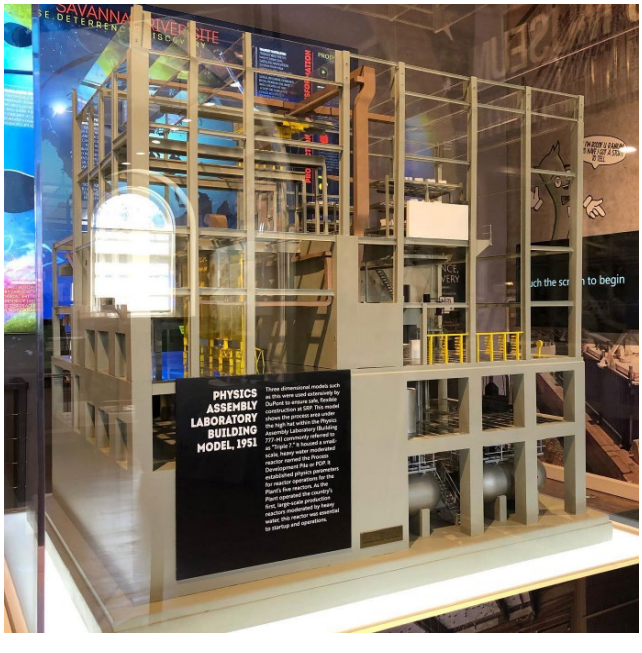
Location:
Aiken County **South Carolina**

Dates:
2022-Present

Partners:
SRS Museum/ SRS Heritage Foundation

DEFENSE, DETERRENCE, & DISCOVERY

This exhibit features focused interpretation areas: Site construction, heavy water production, reactor operations, separations, and safety and security. Each corner is devoted to a specific theme that includes interactives as well as traditional interpretation. A wall-sized light box mural overlooks the exhibit space that shows the historic reach of Savannah River Site and its products and contributions.



FEATURES

- Large-scale historic imagery provided by DOE-SR from the Site's historic photograph collection
- A conserved 1950 building model created by Voorhees, Walker, and Smith, Architects, anchors the center of the space. The building model shows the process area of 777-M, the Physics Assembly Laboratory. This building is no longer extant but was fully documented in a Historic American Building Record (HAER SC-48) prior to its demolition.
- A conserved historic oversized wall topographic map that shows all the building areas on the Site.
- "Heavy Water" pails that show the difference in weight between light and heavy water.
- A three-dimensional model of P reactor vessel created by the SRNL and a forest simulator.
- Cartoon video of Roddy and His Atomic Adventure at SRP created by New South for the exhibit.
- A re-created SRP "guard shack" houses the museum desk and entry.

The conservation of the building model (left) and topographic map (above) is a first for the Program. The completion of a second permanent exhibit at the SRS Museum is a major compliance milestone set in the PA that was accomplished in 2022.

SRS Cold War Historic Preservation Program

Case Study 2

CURATION, DURING AND AFTER A PANDEMIC, 2020 - 2023

Location: Aiken County **South Carolina**

Forward progress at our Curation Facility was halted by the pandemic during the first half of the performance review period. It hit hardest on activities involving face-to-face meetings, presentations, tours, conferences, museum visitation, etc. Work conducted during the final half of the review period, however, was a dramatic contrast as numerous request came in to visit the Curation Facility and reengage on other public outreach objectives.

Clockwise from Top Left: Fabric designed with SRS security slogans was used to make masks during the pandemic and will be used for other projects in the future; Curator Linda Smith next to the Nuclear Materials Vault in the curation facility; 1950's-era AT&T 2520 blast proof phone.

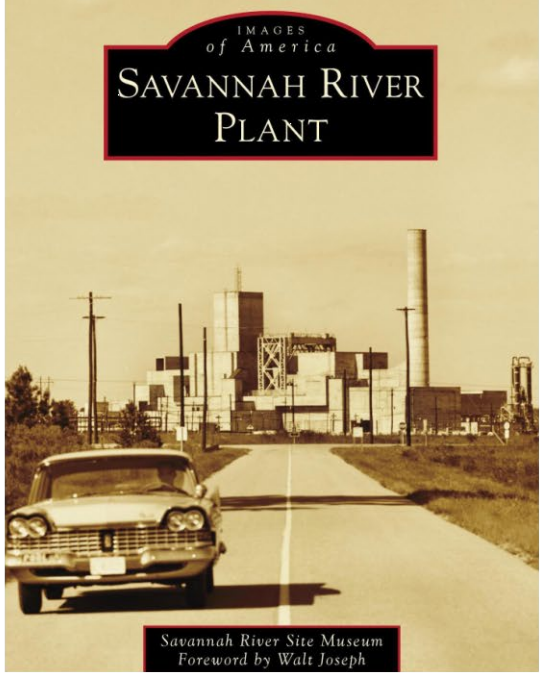
Thematic Studies

Hot Labs, Cold War is the final volume in a series of similar studies that documented historic Cold War processes at SRP and its contributions to the Atoms for Peace Program. Each thematic study draws on historical research, architectural fieldwork and photography, engineering drawings, and most importantly oral history provided by knowledgeable SRS retirees and current employees. The completion of this ninth thematic study is a mitigation milestone for the Cold War Program.

Heritage Tourism

A collaborative team involving Public Affairs, SRARP, and the Historic Preservation Program, developed a history-based, onsite tour that was offered to the public on an annual basis prior to the pandemic. A Heritage Trail was established with interpretive signs as well as street signs placed along a six-block area within the historic townsite of Ellenton as well as an interpretive panel, at the historic town site of Dunbarton. These tours were restarted in October of 2022 and were very well received as comments and a long waiting list indicated. The team has agreed to increase the tours from four this year to eight in 2023 allowing the public to visit a former town site, Curation Facility and a historic reactor area.

Artifact Curation



Arcadia Book

The SRS Museum and Curation Team collaborated on the compilation of ***Savannah River Plant*** an Arcadia Images of America photographic history. Then Director Kelly Brown spearheaded the book's development. The book shares never-before-released photographs (courtesy of the U.S. Department of Energy) to connect SRS employees, retirees, and the public to a local story with national impact. Proceeds of book sales will benefit the SRS Museum.

SRS Archaeological Research Program

Case Study 3

THE LIFE OF AN ARTIFACT

In 2020, The SRARP began to publish five-minute long documentaries titled The Life of an Artifact. These were initiated during the pandemic and have remained in production to the present. So far, producer George Wingard has filmed 23 episodes that follow an individual artifact's "biography" from discovery, analysis, curation, to its use in research and eventually as a tool for public education. These shorts films along with other items of archaeological interest can be viewed by the public on the SRARP Group Website at Website at https://www.facebook.com/groups/559211574892.

Location: Aiken County **South Carolina**

Dates: 2020

Southwestern Power Administration

Identifying Historic Properties

1. ***How many, and what percentage of your assets, are historic as reported in: (a) your bureau or agency's proprietary database and/or (b) your agency's reports?***

Southwestern's Section 110 National Historic Preservation Act (NHPA) cultural resources survey efforts have identified no historic properties on its facilities or undeveloped acreage in Federal ownership. Identified historic properties (eligible for or listed in the NRHP) are restricted to locations along transmission line easements in Arkansas, Missouri, and Oklahoma. Historic properties located on other Federal lands [e.g., U.S. Forest Service, U.S. Army Corps of Engineers, (USACE)] within Southwestern's transmission line easements are the responsibility of those Federal agencies.

2. Have your identification methods changed during this reporting period? Approximately what total percentage or portion of inventory have now been surveyed and evaluated for the National Register, and does this represent an increase from your site/office/program's 2020 progress report, if applicable?

Southwestern's historic property identification methods have not changed since the last *Preserve America* reporting period (2018-2020). Archaeological field survey methods include the systematic excavation of screened shovel tests with grid spacings between five and thirty meters (5–30 m) to facilitate site detection and boundary delineation. In areas with good surface visibility, systematic surface inspection at close intervals is employed. Because Southwestern upholds a "no collection" policy, there are no artifact collections that require curatorial attention under the applicable regulations (36 CFR 79 "Curation of Federally Owned or Administered Archaeological Collections"). Artifacts located during field investigations are analyzed and quantified by the investigating archaeologists and left on site.

A limited number of facilities in Federal ownership greater than fifty years of age have been subjected to detailed evaluation by an architectural historian. The above-ground structures include various specialized electrical generation and transport equipment and modules, support buildings, and maintenance facilities. No standing structures on Southwestern's Federal property have been determined eligible for listing in the NRHP.

One hundred percent of Southwestern's federally owned property has been subjected to Section 110 NHPA historic property identification efforts. This is the same as the percentage reported for the period 2018-2020.

3. Has your site/office/program implemented any new policies or programs that promote awareness and identification of historic properties over the last three years?

One hundred percent of Southwestern's federally owned property has been subjected to Section 110 NHPA historic property identification efforts and thus far no historic properties have been identified. Existing policies, programs, and guidelines have proven sufficient to the formulation of management decisions related to the use or promotion of this resource type. It is important to note that the lack of historic properties is not due to insufficiently rigorous or inadequate identification efforts, but more to the relatively small amount of Federal acreage owned by Southwestern and the well-known statistical rarity of finding properties eligible for listing in the NRHP. Regarding the implementation of policies that promote equity and diversity in the identification process, Southwestern has contracted with a Tribal entity (Wyandotte Technologies) to assist in the cultural resources management (CRM) activities of the Division of Environmental, Health, Safety & Security (EHSS).

4. Federal agencies are encouraged to share information regarding the number and percentage of historic property identification completed in the context of Section 106 for specific undertakings and programs versus that completed for unspecified planning needs (Section 110 survey). In a given year, what percentage of your

site/office/program's identification of historic properties occurs due to Section 106 planning and compliance versus regular stewardship and unspecified planning needs (Section 110)?

Prior to the current reporting period, historic properties identification efforts along Southwestern's transmission line easements have been initiated exclusively because of Section 106 NHPA compliance in advance of specific projects. As noted, Section 110 surveys have already been completed on federally owned parcels. Beginning in 2021, Southwestern initiated its Systemwide Archaeological Survey effort along the various transmission line corridors as part of its Section 110 NHPA stewardship responsibilities. Table 1 summarizes the Section 106 and Section 110 efforts during the past three years. This summary includes archaeological field survey projects slated for completion prior to the end of the current fiscal year. It is anticipated that approximately 50 to 75 percent of the mileage slated for examination during the upcoming reporting period (2024-2026) will be related to regular stewardship and unspecified planning needs (Section 110).

Table 1. Southwestern Transmission Line Survey, 2021–2023.

Project	Section 106 (miles)	Section 110 (miles)
Line 3005, Liberty-Van Buren, OK-AR	13.0	-
Line 3017, Kerr-Van Buren, OK-AR	7.4	-
Line 3010, Jonesboro-Paragould, AR-MO	-	23.0
Line 3001, Dardanelle-87 Tap, AR	20.0	-
Line 3101, Tupelo-Allen, OK	19.4	-
Line 3005, Gore-Sallisaw, OK	21.2	-
Lines 3004, 3011, MO	-	141.0
Line 3010, Jonesboro-Kennett, AR-MO	-	51.2
Totals (miles)	***81.0***	***215.2***
Percentages	***0.27***	***0.73***

The Systemwide Archaeological Survey is also directly related to the development of our Section 106 program alternative (36 CFR 800.14) Programmatic Agreements (PA) for the states of Arkansas, Missouri, and Oklahoma. Southwestern has been in consultation on the development of the PAs since 2018. The single-state PA consultation has ended and Southwestern has received SHPO signatures from Oklahoma and Arkansas. Both PAs have been sent to the ACHP for signature. Historic properties identification efforts are designed to support our annual reporting requirements to the SHPOs, ACHP, and consulting Tribes. In addition to standard Section 106 documentation, Southwestern's annual historic preservation reporting includes site-specific monitoring reports and annual reports of routine maintenance projects covered by the PAs.

5. How has your site/office/program employed partnerships to assist in the identification and evaluation of historic properties over the last three years?

Southwestern's historic properties identification efforts have been augmented by consulting with regional Tribes (Cherokee Nation, Delaware Tribe, Muscogee Nation, Osage Nation, Quapaw Nation, Thlopthlocco Tribal Town, Chickasaw Nation, Ponca Tribe, Seminole Nation, Wichita & Affiliated Tribes, United Keetoowah Band of Cherokee Indians) on the location of traditional cultural properties (TCPs), indigenous sacred sites, and other landscapes of significance to Tribes. Our approach to these Tribal partnerships and ongoing consultations is guided by the information recently compiled in the *Best Practices Guide for Federal Agencies on Protecting and Providing Access to Indigenous Sacred Sites*.

Protecting Historic Properties

6. Have the policies and programs your site/office/program has in place to protect historic properties changed over the reporting period in ways that benefit historic properties?

Southwestern's policies and programs have not changed significantly over the course of the current reporting period. Our digital information program remains tied to the use of Geographic Information System (GIS) software (Esri's ArcGIS), Google Earth mapping tools, and handheld GPS devices. Historic property's location data generated by archaeological contractors is uploaded to our main digital database as part of the project deliverables.

7. How has your site/office/program used program alternatives such as programmatic agreements, program comments, and other tools to identify, manage, and protect your site/office/program's historic properties over the last three years, if at all?

Beginning in 2018, Programmatic Agreements (PAs) for the states of Oklahoma, Missouri, and Arkansas have been developed through a series of in-person and virtual meetings with SHPOs, THPOs, Tribal representatives, and ACHP staff. The PAs are designed to address routine maintenance and operations undertakings with little to no potential to adversely affect historic properties.

Using Historic Properties

8. How does your site/office/program coordinate historic preservation and sustainability/climate resiliency goals in project planning?

SWPA does not own historic buildings.

9. How do your site/office/program's historic federal properties contribute to local communities and their economies, and how have their contributions changed over the reporting period?

N/A (no ownership of historic buildings).

Successes, Opportunities and Challenges

10. Provide specific examples of major successes, opportunities, and/or challenges your site/office/program has experienced during the past three years.

Both the Section 106 surveys conducted ahead of specific transmission line upgrade/maintenance projects and the Systemwide Archaeological Survey (Table 1) have identified a limited number of historic properties within the transmission line rights-of-way. Historic properties have also been identified through archival research undertaken in conjunction with fieldwork. Site types range from prehistoric open habitation sites, rockshelters, aboriginal tool stone quarries, protohistoric Indian villages, and depression-era architectural features.

In recognition of the 1999 modifications to the Section 106 implementing regulations that eliminated the "exceptions to the Criteria of Adverse Effects," Southwestern seeks to employ field methodologies during archaeological site identification and assessment that result in the minimal amount of destructive excavation necessary to contribute to making NRHP eligibility determinations. Preservation in place and avoidance of unnecessary adverse effects to historic properties, including controlled scientific excavations, are the preferred treatment options. Leaving artifacts on-site also contributes to this minimalist approach to Section 106 compliance.

Southwestern has implemented the following protocols for awareness of culturally sensitive areas; (1) Southwestern's Esri ArcGIS 10.6.1 cultural resources database is utilized to identify sites, and to convey soil disturbances near or at culturally sensitive areas to managers, project engineers, Tribes and SHPOs; (2) Tribal Sensitivity Training given by the staff archaeologist has been incorporated into the NEPA and Section 106

compliance training given each year to the Field Managers and Maintenance Crews; (3) Tribes, THPOs and SHPOs are updated to the archaeological surveys or monitoring at various stages during the project's construction and preconstruction operations.

During the current reporting period, Southwestern has had PA meetings and follow-up phone consultations of construction projects with the Osage and Cherokee Nation, obtaining information on sensitive areas of cultural vegetation, stomp grounds, historical buildings, cemeteries, and Trail of Tears regions. These areas are monitored, and construction plans are modified if required by the location of the sensitive regions. Southwestern is working with each of the Tribes, SHPOs, and THPOs with connection to or having a vested interest in the Southwestern rights-of-way corridors or facilities lands or structures.

The EHSS Division Director and Environmental and Cultural Staff attends the "Bridging the Gap Meeting" hosted each year at a Tribal facility by the U.S. Forest Service and a local Tribe. The FY2023 meeting was held in Quapaw, Oklahoma. These meetings have given Southwestern a unique opportunity to listen to Tribal concerns, share stories, and discuss topics of mutual interest with the Tribes, SHPOs, THPOs, and other Federal agency personnel and to obtain personal information concerning each Tribe and their needs to protect the sensitive historical regions, historical buildings, caves, and connected lands.

Due to the predominantly rural locations of Southwestern's facilities and rights-of-ways, a large percentage of the transmission system acreage is devoted to farming, ranching, or forestry.

Southwestern is implementing a Systemwide Archaeological Survey that began in FY2021.

Western Area Power Administration

Identifying Historic Properties

Introduction

As a part of the creation of the Department of Energy (DOE) in 1977, the enabling act (Pub. L. 95–91, §2, Aug. 4, 1977, 91 Stat. 567) called on the Secretary of Energy to assume ". . . the power marketing functions of the Bureau of Reclamation, including the construction, operation, and maintenance of transmission lines and attendant facilities . . ." and ". . . the transmission and disposition of electric power and energy generated" at two international dams on the Rio Grande River (42 U.S.C. §7152(a)(D) and (E)). The marketing and distribution of this hydropower was to be assigned to a new power marketing administration. Thus, WAPA was created as a part of the reorganization of the Federal power generation and distribution system and the fledgling DOE.

Today, WAPA, markets the power from 57 Federal hydroelectric facilities through 100s of substations and 17,600 circuit miles of transmission line to over 700 customers. WAPA's customer base is made up of such organizations as municipalities, military installations, Indian Tribes, electrical coops, and various other public or governmental units. Some power is also sold to private energy companies. These customers, in turn, provide about 40,000,000 consumers with clean, reliable electricity in 15 states from Minnesota to California and North Dakota to Texas. WAPA supports this extensive electrical transmission system from 20 maintenance and/or operations centers and 100s of communications sites most of which are owned by WAPA.

WAPA is also constrained by its Open Access Transmission Tariff to provide interconnection to the Federal grid for private power producers if transmission capacity is available. Consequently, WAPA presently hosts several renewable energy generators and has a substantial queue of applicants for interconnection.

1. ***How many, and what percentage of your assets, are historic as reported in: (a) your bureau or agency's proprietary database and/or (b) your agency's reports?***

In total, WAPA's geographic information system indicates 2976 of the following assets: 316 substations, 1,299 buildings, 891 transmission lines, 470 communications sites. Excluding the communications sites, 1,092 assets are greater than 50 years old, 1,315 are less than 50 years old, and 99 assets are of unknown age. As for the communications sites, the Bureau of Reclamation began construction of WAPA's Microwave Communication System in the mid-1950s, but between 1994 and 1997, the system's analog equipment was updated to digital and fiber optic equipment. WAPA determined all individual communications sites, and its system (as a whole) as not eligible for NRHP listing under any criteria. Unfortunately, we really have no reliable record of how many WAPA assets (buildings, structures, sites, objects, or districts) have been surveyed, documented, and evaluated to professional standards. Each region is at varying stages of inventory and consultation. The data is not readily available to address this question as each Region captures data differently and some are further along in their identification efforts than other Regions. WAPA is working to rectify this situation and centralize the data if possible and has already begun discussions with our GIS and lands departments to augment a database or create a system where we can easily access this information in the future. For example, WAPA's Desert Southwest Region (DSW) has far surpassed the other regions in their inventory and consultation efforts. DSW has evaluated and consulted on 85 of its 98 substations (87 percent). Only two substations were found eligible for National Register of Historic Places (NRHP) listing with one contributing to a National Historic District. In addition, DSW has evaluated and consulted on 103 of its 123 (84 percent) WAPA owned transmission lines. Only one was found eligible for NRHP listing and contributes to a National Historic Landmark.

2. ***Have your identification methods changed during this reporting period? Approximately what total percentage or portion of inventory have now been surveyed and evaluated for the National Register, and does this represent an increase from your site/office/program's 2020 progress report, if applicable?***

WAPA's identification methods have not changed during this reporting period. WAPA's transmission lines are typically located in rights-of-ways (ROW)/easements (WAPA non-fee lands). These easements average just over 102 feet wide (ranging from 20'-200') consisting of over 218,711 acres mostly on other Federal (WAPA non-fee lands), state, Tribal and private lands. We estimate 60 percent of these easements are surveyed (~131,227 acres). These numbers do not account for access roads outside the ROW/easements that are also maintained by WAPA. We estimate that WAPA's fee lands have been surveyed to current professional standards on the order of 33 percent.

3. ***Has your site/office/program implemented any new policies or programs that promote awareness and identification of historic properties over the last three years?***

WAPA has not implemented any new policies or programs that promote awareness or identification of historic properties over the last three years.

4. ***Federal agencies are encouraged to share information regarding the number and percentage of historic property identification completed in the context of Section 106 for specific undertakings and programs versus that completed for unspecified planning needs (Section 110 survey). In a given year, what percentage of your site/office/program's identification of historic properties occurs due to Section 106 planning and compliance versus regular stewardship and unspecified planning needs (Section 110)?***

In a given year, 100 percent of WAPA's identification efforts occur due to Section 106 planning and compliance. WAPA's transmission lines are subject to regular maintenance and repair and are typically located in rights-of- ways (ROW)/easements (WAPA non-fee lands). These easements average just over 102 feet wide (ranging from 20'-200') consisting of over 218,711 acres mostly on other Federal (WAPA non-fee lands), state, Tribal and private lands. We estimate 60 percent of these easements are surveyed (~131,227 acres). These numbers do not account for access roads outside the ROW/easements that are also maintained by WAPA.

This extensive transmission system is located, for the most part on lands under the jurisdiction of other agencies, most notably the Bureau of Land Management or the U.S. Forest Service, or on private holdings. Fee lands (~9,232 acres) primarily contain the substations, communications sites, and similar facilities. Well over 95 percent of the transmission lines are on easements or rights-of-way on non-fee lands. Cultural resources on these lands are, then, not under WAPA jurisdiction though we have obligations for their protection within limits set by the land holder.

WAPA's web of transmission lines and supporting facilities scattered over so many jurisdictions present significant Section 106 challenges. To help with the implicit variety of compliance practices, WAPA has divided responsibility for maintenance, repair, and new construction among four geographic regions with support from the Headquarters (HQ) in Lakewood, Colorado. Reflecting its origins in the Bureau of Reclamation power distribution facilities the WAPA four regions cover 15 western states. Upper Great Plains (UGP) covers all or parts of Montana, North and South Dakota, Minnesota, Missouri, Iowa, and Nebraska. Rocky Mountain Region (RM) covers all or parts of Wyoming, Colorado, Nebraska,

New Mexico, Arizona, Utah, Texas, and Kansas. Desert Southwest Region (DSW) covers all or parts of Arizona, southern California, and Nevada, and our Sierra Nevada Region (SN) covers parts of Northern California and Nevada.

Each of these regions has a Regional Preservation Official that handles National Historic Preservation Act (NHPA) Section 106 compliance responsibilities that do not require interaction with the Advisory Council on Historic Preservation (ACHP). Matters requiring ACHP contact, such as adverse effects and their resolution or SHPO dispute resolution, or other high level cultural resources issues are the province of the Federal Preservation Officer (FPO) stationed at the Headquarters facility in Lakewood, Colorado. Consequently, most site National Register of Historic Places (NRHP) evaluations and effect findings take place at the regional level as that is the level at which most projects are otherwise administered. Three regions meet their NHPA Section 106 obligations for routine maintenance and repair, including vegetation management, by means of programmatic agreements which support project planning and redundant paperwork elimination both for WAPA and the involved SHPOs. These Section 106 agreements have contributed to the identification of historic properties. Beyond these programmatic agreements or memoranda of agreements, WAPA has not established any partnerships to assist in the identification or evaluation of historic properties over the last three years.

5. ***How has your site/office/program employed partnerships to assist in the identification and evaluation of historic properties over the last three years?***

Aside from our programmatic agreements and memoranda of agreements, WAPA has not established any partnerships to assist in the identification or evaluation of historic properties over the last three years.

Protecting Historic Properties

6. ***Have the policies and programs your site/office/program has in place to protect historic properties changed over the reporting period in ways that benefit historic properties?***

WAPA has not implemented any new policies or programs that promote awareness or identification of historic properties over the last three years; however, WAPA encourages its applicants for renewable energy projects to consider the development of digital media or story books as a form of mitigation when applicable.

WAPA has not changed its historic property identification procedures during the reporting period beyond preparing for the mandated changes in our records management system. WAPA cultural resources staff has nine full-time employee Federal positions, eight of which are presently filled. The FPO position at HQ is currently advertised. While there are no cultural staff on contract, we rely heavily on contract employees in Geographic Information Systems (GIS) and Administrative Services to support our cultural resources team. We contract outside of WAPA for major field work projects as our present staffing levels are not adequate to support major inventory or mitigation efforts. For example, we anticipate contracting out the preparation of the cultural resources management plan and for continuing inventory and monitoring work on a transmission line rebuild project which is nearing its construction start date. This pattern has not changed in the last three years and seems likely to remain unchanged for at least the next three-year period. All cultural resources staff have Section 106 responsibilities. The FPO also has primary Section 110 responsibilities.

WAPA treats every Tribal consultation as an effort at partnership. This is particularly evident in the work done on renewable energy projects where we encourage full Tribal participation in inventory and evaluation efforts. Depending on the circumstances and availability, Tribes have provided annual

cultural resources awareness training to WAPA maintenance and construction staff. We have several other areas of contact with Tribal organizations regarding the development of energy resources and transmission or distribution systems on Tribal lands. But we do not have a formal partnership program with any Tribe, other Federal or state agency, or public group. Security of our infrastructure and reliability of our power distribution currently limit activities of this sort.

WAPA has instituted a few changes in its cultural resources program in the last three years. WAPA joined the Cooperative Ecosystems Studies Units (CESU) in 2021 as a means of furthering our historic preservation efforts. WAPA has also stepped up its Tribal government-to-government consultation efforts to include listening sessions and pursuant to the March 7, 2022 White House Memo, titled, *Announcing Tribal Consultation and Public Input Opportunities Traditional Ecological Knowledge in Federal Policy*, WAPA is making efforts to integrate indigenous traditional ecological knowledge (ITEK) into its National Environmental Policy Act (NEPA) analysis and National Historic Preservation Act (NHPA) Section 106 consultations when appropriate to do so.

Progress was made on elements of the Cultural Resource Management Plan, including standard operating procedures, and the development of the enterprise geodatabase but it is still at least 2 years from deployment.

7. ***How has your site/office/program used program alternatives such as programmatic agreements, program comments, and other tools to identify, manage, and protect your site/office/program's historic properties over the last three years, if at all?***

WAPA currently has seven PAs in place for conducting routine maintenance and repair activities utilized by the DSW, RM, and SN regions. WAPA is currently preparing an amendment to one agreement at DSW and an amendment to the RM region PA. In addition, we have employed PAs to support longer term new transmission construction efforts and interconnections for wind and solar projects throughout WAPA's territory.

We have developed a draft template for a PA on renewable energy interconnections that will better synchronize the Section 106 and NEPA processes. We are in preliminary internal discussions about the efficacy of the Prototype Agreement through the ACHP that could make the renewable energy project Section 106 component more consistent from state to state. In addition, WAPA, along with the other three Power Marketing Administrations are pursuing a nationwide PA for routine maintenance and vegetation management of utility facilities to allow for consistency regarding Section 106 consultation, project effects and reporting.

These agreements are important to the cultural resources program as they allow WAPA to carry out repetitive maintenance or repair work without repeating the full Section106 process and yet, with full SHPO participation, and meet the goals of the NHPA in a timely manner. WAPA does not track the actual labor savings involved.

Such savings are evident, however, in the reduced number of formal consultations that take place when minor repairs or routine maintenance such as vegetation management are needed.

Using Historic Properties

8. ***How does your site/office/program coordinate historic preservation and sustainability/climate resiliency goals in project planning?***

Because of its critical infrastructure and fundamental importance to national security and general wellbeing, WAPA has no facilities suitable for lease or other public use. Consequently, we have no Section 111 related activities. Given the restrictions we face in opening our facilities to the public our contribution to local communities and their economies comes not from our historic properties but from simply performing our mission of reliable delivery of clean energy. WAPA's ability to open our facilities with historic property standing are constrained by Federal Energy Regulatory Commission statutes and regulations, North American Electric Reliability Corporation standards, and Occupational Safety and Health Act regulations that are too numerous to detail here. In summary, individuals without proper safety training and appropriate personal protective equipment cannot enter any facilities for the transmission of electricity on the national grid. Furthermore, all WAPA's facilities also have stringent security requirements that limit access by visitors to those with specific business related to facility management or WAPA's electric transmission mission. These conditions essentially eliminate the possibility of public access. Over the last three years sensitivity to acts of hostile parties that may interfere with reliable electric transmission have increased and our adherence to appropriate security protocols have likewise been more widely applied. WAPA has no Section 111 activities outside of the appropriate disposal of retired historic structures.

9. How do your site/office/program's historic federal properties contribute to local communities and their economies, and how have their contributions changed over the reporting period?

See response to question #8.

Successes, Opportunities and Challenges

10. Provide specific examples of major successes, opportunities, and/or challenges your site/office/program has experienced during the past three years.

WAPA has an effective Section 106 program which keeps the agency abreast or ahead of matters that may impact the agency's mission of delivering clean electric power to its customers. WAPA's, DSW Region has far surpassed the other regions in its historic properties identification efforts and has evaluated 359 facilities (substations, transmission lines and communications sites) for NRHP eligibility with 10 of those facilities determined eligible. This success came from DSW's ability to fully staff its cultural resources team over the past 10 years and develop programmatic agreements and a historic context study, which enabled the region to meet its Section 106 needs in an efficient manner. The path to a fully successful cultural resources program for WAPA is clearly marked but there are still formidable, but not insurmountable challenges and obstacles to be removed.