

Section 3: Reporting Progress on the Identification, Protection, and Use of Federal Historic Properties

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Table of Contents

	<u>Description</u>	
		<u>Page</u>
I.	Preface	3
II.	Introduction	3
III.	Historic Property Identification.	4
IV.	Promoting Awareness.	9
V.	Successes, Opportunities, & Challenges.	10
VI.	Hitting One's Stride.	12

About the Cover: Several watersheds in the Baltimore region have elevated PCB loads in tidal waters. Local jurisdictions are responsible for reducing PCB loading from their watersheds. The USGS is embarking on a pilot study in the Patapsco watershed that will help determine sources of PCBs and will demonstrate innovative monitoring and analysis techniques for more efficient use of mitigation resources.

I. Preface

The U.S. Geological Survey (USGS) 2020 update of the Section 3: Reporting Progress on the Identification, Protection, and Use of Federal Historic Properties in accordance with Executive Order 13287 (E.O. 13287).

Beginning September 30, 2005, E.O. 13287 requires Federal agencies with real property management responsibilities to triennially report on their progress identifying, protecting, and using historic properties in their inventories. In the preparation of this report, the USGS followed guidance authored by the Advisory Council on Historic Preservation (ACHP) entitled "Advisory Guidelines Implementing Executive Order 13287, "Preserve America" of April 2017.



II. Introduction

The U.S. Geological Survey (USGS) was established by an Act of Congress on March 3, 1879, to provide a permanent Federal agency to conduct the systematic and scientific "classification of the public lands, and examination of the geological structure, mineral resources, and products of the national domain." An integral part of that mission includes publishing and disseminating the earth-science information needed to understand, to plan the use of, and to manage the Nation's energy, land, mineral and water resources.

The research and fact-finding role of the USGS has evolved and been modified to meet the changing needs of the Nation it serves in mineral exploration, energy, water resources, ecosystems and geospatial mapping.

The U.S. Geological Survey is headquartered in Reston, Virginia approximately 22 miles northwest from Washington D.C. Outside of its National Center the USGS has a physical presence in each state through various ways. Examples include Hydrologists that lease small field offices in service areas surrounding their streamgages and 31 Science Centers that house science, administrative, and logistical functions. For scale, the Centers are fenced compounds that a visitor can take-in from one vantage point. They serve as regional hubs in the states and U.S. territories where science collection and research development interfaces with the

environments they were purposed to study. The USGS is not a land managing agency, but its research travels to lands owned by other Federal agencies. The USGS collects science data autonomously every 14 to 60 minutes through the National Water Information System that collects water level and flow volume information from 10,509 stream gages dotting the nation and



its territories. Similarly, there are 150 earthquake monitoring stations of the Advanced National Seismic System prepared to alert authorities for the start of seismic activity. Whether in person or robotically, science data is collected in every state and areas of the United States by USGS science staff all done to benefit the lives and livelihood of every citizen in the country.

III. Historic Property Identification

The U.S. Geological Survey has increased its number of historically evaluated real property assets by 110 percent, from the 217 (assets counted in the 2017 triennial reporting) to 457 for year 2020. The ongoing process was buoyed by USGS historical evaluation policy that augments the number of properties being evaluated through the Condition Assessment (CA) process. The USGS was able to aggressively add to the count of historically evaluated properties in this manner.



There are standard building types found at most USGS Science Centers. The predominant building type at Science Centers is usually a multi-use, two story main office/laboratory. Building facades are constructed of many types of materials; glass and steel curtain wall, brick, or concrete masonry units. The office/lab buildings overall have no specific connection to regional or period architecture. They are usually surrounded by an ad hoc collection of storage and support buildings. The

USGS also has many “Butler Building” types of enclosures. They are roofed and sided with folded sheet steel and surface-coated with a layer of paint. The metal buildings are valued for their quick installation and adaptability to store an assortment of mission equipment that support the Bureau’s work in diverse environments. The contemporary USGS Science Center building is generally not historic barring the possibility the science conducted at the site contributed to the understanding of a prevailing trend or threat to wildlife resources. The USGS also occupies some “gem” sites comprised of aged buildings that have been around for generations. The sites made possible early discoveries in conservation, geomagnetism, and biology to name a few disciplines that made significant contributions to the development of the United States. The USGS has implemented an internal process developed by its Federal Preservation Officer (FPO) to achieve efficiency in the historic evaluations of the diverse building inventory it owns, most of which is not historic. To improve efficiency and reduce the cost of historical evaluations, the USGS will perform in-house evaluations of the buildings that have a low probability to be historic, such as Butler Buildings, modular units and pole barns (unless contributing to the historic significance of the site). Additionally, these in-house evaluations provide the bureau with schedule flexibility as they can be performed independent of the CA schedule. This approach allows the USGS to aggressively evaluate its real property inventory. Conversely, some of the older buildings with a longer existence have greater potential to be associated with founding science development and may have witnessed overlapping periods of history. When these complex conditions exist the USGS will contract the work to a professional evaluator as part of the regular comprehensive CAs performed on all assets. While reassessing the identification and evaluation effort at USGS, the FPO holistically considered the composition of the real property inventory and identified the outlier properties that bracket the opposite extremes of property inventory requiring evaluation. The Leetown Science Center in Kearneysville, WV has the oldest USGS buildings with three built in 1931. The Western Fisheries Research Center in Seattle represents the opposite end of the spectrum as the youngest science center site. The main building on the site was constructed in 1994, which is considered young by USGS standards.

In 2019 as a result of the new evaluation policy, USGS received its most comprehensive historic evaluation of the Leetown Science Center. The written account details the beginnings of the region and the site that was known for its concentration of natural springs. The abundance of water rising to the surface attracted Indian Tribes and Anglo settlers



followed by government scouting parties of the U.S. Bureau of Fisheries. This agency was established by the U.S. Congress to protect America's fisheries, fish culture, and industry. The Bureau of Fisheries was interested in establishing a fish experimentation station in the area that was part of a broader effort to establish additional stations at many locations across the United States. In 1930-'31 a U.S Fisheries Experimentation Station was established at Kearneysville and later became the Leetown Science Center. This location was ideal as it had enough water source to make fish study possible. The government outpost was soon the epicenter of critical science research arriving at cures for distinct waves of illnesses that degraded the vitality of the fish populations in America. The history of Leetown in the evaluation identifies a lineage of doctors, directors, and scientists that led the agency towards surmounting the significant fish disease challenges tackled by the Center. The recurring success of science discoveries emerging from the Science Center earned it a new name as the National Fisheries Center – Leetown, which had by then become the mecca of fish science. As the Center rose in prominence and science accomplishments mounted it added classroom space for teaching fish husbandry. The Center was deemed to be a historic district comprised of 73 buildings with most of the buildings added to the site between 1931 and the early 2000s. Consistently, construction of new buildings on the site was acquired to keep pace with changing technologies that supported the greater need of the facility to remain effective in its battle against fish-borne illnesses.

The 2019 historical evaluation determined that most of the buildings on the property were determined to be eligible for listing on the National Register of Historic Places (NRHP). This evaluation included a listing of each building in a report table showing pertinent information including the Criteria of Eligibility the building satisfies. Each of the four Criteria of eligibility is visited in detail and describes how they relate to the historic significance of Leetown Science Center. When Criteria C (architecture and engineering) is deliberated it is noted that the buildings built with local Blue Stone facades have the most historic significance at the site. Those buildings were erected by the Works Progress Administration and formed the core of the Science Center site where fish science was developed. Also, of note, is the log cabin building named Mount Misery (the oldest building on the site, (ca 1853) which possesses *potential* historic integrity. Later in its life, it was clad with wood siding to become an example of an early 19th Century residential vernacular building. This structure has "outlived its usefulness" on the site, and the historical evaluator recommends that the USGS consult the local historic society to ascertain if there is enough interest in the community to move the cabin off site to a more accessible location where it can be restored by the local community to serve as a museum. Bibliographies are included in the historic evaluation near the end of the account citing sources of

information to satisfy a deeper understanding of the history of that transpired at Leetown. Eventually the Leetown Science Center assumed program supervision of six other established United States Fish and Wildlife Service (USFWS) research and development sites scattered across the nation. They were inherited by the USGS in the mid 1990's when it assumed control of those facilities as part of the U.S. Biological Survey transfer from the USFWS to USGS. The historic



account of the Leetown Science Center culminates with its research having influence "out to international waters." Foreign scientists visited the Leetown Science Center to achieve new insights in fish science. The work completed there was recognized as "the foundation of fish culture in the world." The distinction was enabled by prominent doctors and scientists. With the site possessing associations to significant persons and events associated with our past, this responds to the qualifying hallmarks of Criteria A and B of the National Register Criteria of Evaluation and soundly makes the site eligible for listing on the Register. The comprehensive historic evaluation revealed unexpected complexity and volumes of significant achievements. This greater understanding of the site history will help inform future projects planned at the site.

The Leetown Science Center continues to host two annual events on its grounds. The Earth Day celebration usually occurs in the Spring. The event is open to the general public and features self-guided tours of exhibits and demonstrations about fish. Due to the Coronavirus pandemic this year's Earth Day has been postponed to the Fall of 2020. The Leetown Science Center CA also opens its fishpond annually to the local



Charlestown Kiwanis club that sponsors their Fishing Derby for Special Needs Children who attend schools in surrounding Jefferson County. Both events are wheelchair accessible.

During this reporting interval another USGS CA uncovered a unique property at the Newport Geomagnetic Observatory regarding the way the site was used by the USGS. The USGS site is in the Coleville National Forest near the eastern border of

Washington State, and by land lease agreement with the United States Forest Service (USFS), the USGS has operated a small Science Center there for over 50 years. The ground on which the facility sits is geomagnetically neutral. This means the geology below the surface of the site does not interfere with the observation of geomagnetic fields reaching the site. Scientists who observe disruptions of normal geomagnetic wave propagation at the site can deduce a nuclear event had caused the interruption and are able to determine its point of origin. The unique geologic structure beneath the site and its proximity to the Pacific Rim had earned it a place as one of the six ground stations to provide reliable verification of nuclear detonations happening elsewhere in the world while the Nuclear Test Ban Treaty was being observed between United States and the Soviet Union. The height of this activity occurred during the waning years of the Cold War. Like the other detection sites established by Treaty, the Newport Observatory provided living quarters where scientists from both countries resided. Completing the historic view-shed, the Russian barracks on the site was over flown with a masted Russian flag. Today, the site is over-grown by pine trees that stand above a cluster of nondescript buildings that are reminiscent of a summer camp. The site is encircled by cattle fence in places crushed down to the ground where trees have fallen. The structures deceptively hide the grave nature of historic activity that once happened there. One country not trusting the other but forced to cohabit common space on the compound. Long ago, the Russian party vacated the premises and returned home. The USGS continues to actively monitor geomagnetic waves arriving at the site. Suspicious events detected by sensors are transmitted to the North American Aerospace Defense Command located at Colorado Springs, Colorado. The site is eligible for listing on the NRHP for making significant contributions to the broad patterns of history. The USFS has requested the USGS write an Historic American Building Survey (HABS) if it decides to abandon the site. The HABS will document the site and confirm its eligibility to be listed on the NRHP for the significant events that happened there.

Additionally, during this reporting interval members of the USGS Water Resources Mission Area wanted to ascertain if the first USGS streamgage was eligible for listing on the NRHP. The streamgage located in Embudo, New Mexico was built in 1889 as America's first foray in systematic streamgaging. The site surrounding the streamgage, next to the Rio Grande River, served as an outdoor classroom for USGS student hydrographers to test and design the process of systematic streamgaging. As a proof of concept, the gage was built by the class from cobble stone. The students graduated that year to be hydrographers and took with them the lessons they learned to streams in the west to measure water flows. The pioneering project was designed by John Wesley Powell who was the second Director of the

USGS at the time. He wanted scientific proof to verify if the West had enough water resources to support agriculture.

The 130-year-old streamgage at Embudo continues to report data to the National Water Information System. Its internal measuring instruments have been replaced long ago by digital technology that is

compatible with the current reporting system. The streamgage is now listed on the NRHP as a contributing resource to the Embudo Historic District. The USGS is the primary source of historic materials on the gage.



IV. Promoting Awareness.

Operational experience has identified a lack of awareness of Section 106 responsibilities among USGS employees especially in field locations. To address this knowledge gap, the USGS developed an online course covering the basic concepts of the Section 106 review process. Through reviewing bureau staff roles and responsibilities, the USGS FPO determined that up to 75 percent of USGS employees would benefit by having a greater awareness and understanding of Section 106 requirements. The course describes the relationship between an undertaking and its effect to help employees make a quick determination if the Section 106 review process is required. The course identifies the Section 106 consultation parties and how to involve them, defines the integration of the Section 106 and National Environmental Policy Act review processes, and includes a set of real-life examples to help students determine if a Section 106 review is required for the common undertakings the bureau performs in the field. The course was tailored specifically for USGS employees to make a personal connection to the requirement based on the type of work they perform. The overarching goal



is for employees to obtain a better understanding of the law to improve the USGS relationships with Federal cooperators and the public. The course is scheduled to debut in Fall 2020.

V. Successes Challenges and Opportunities,

The USGS has lists several successes, challenges, and opportunities during the reporting period.

Success: Our organization can identify an operational relationship that benefits historic preservation. At USGS, the FPO also oversees the Condition Assessment (CA) program. These assessments, which are conducted every five years, to report the condition of assets owned or maintained by the USGS per the Department of Interior Asset Management Plan, are completed by architectural and engineering firms that record the condition of the buildings and recommend repairs. Some suggested repairs are not sensitive to the building's eligibility to be listed on the NRHP, due largely to the contractors performing the assessment not being familiar with Federal obligations to the NHPA. For example, steel pipe stanchions were recommended to replace decaying 4 x 4 wood posts that once supported a porch railing of a house. However, the FPO will know the building eligibility status and can recommend a compatible repair that preserves the existing vernacular of the building. The bureau recommendations for the repair are returned to the contractor for incorporation into the finalized CA report before the CA is complete. In this example, the CA review process is leveraged for the benefit of historic preservation.

Opportunity: The USGS maintains and operates nine geomagnetic observatories to study the effects of the earth's magnetic field. The presence of iron at these sites interferes with the detection of the geomagnetic waves that blanket the Earth. Therefore, the USGS buildings that house geomagnetic detection equipment are constructed of non-ferrous materials like wood, asphalt shingles, cementitious board, plastic aluminum brass, plastic, copper, and plastic. Furthermore, these buildings are repaired with non-ferrous materials to preserve their geomagnetic detection efficiency. Because this science activity requires the use of non-ferrous materials, one can say the science helps the USGS preserve properties that are eligible for listing on the NRHP.

Success: USGS CAs bind together the observed condition of the building with the historic evaluation. When a review is conducted by the USGS to determine if the building is eligible for listing on the NRHP, the CA becomes the single source of information for determining the worthiness of eligibility by its condition. The Facility Condition Index (FCI), which represents a numeric ratio of the complete cost of repairs specified in the CA divided by the replacement cost of the building, serves as the precursory metric that quantifies the condition of the asset when considering if the property is eligible for listing on the NRHP. Sometimes the architect's asset deficiency report identifies original construction and its condition. Architectural notes also point out where hazards may be found that need to be mitigated before the property can be excessed. Each CA is prefaced with an executive summary that describes in general detail the building system (e.g., structural, electrical, envelop, mechanical, life safety) used in the construction of building - valuable detail when assessing the historic eligibility of the property.

Success: The USGS completed an Historical American Building Survey (HABS) of Building #2 at the Flagstaff Science Center. The HABS was performed per a Memorandum of Agreement (MOA) with General Services Administration (GSA) as the lessor of the buildings USGS occupies at the site. Building #2 was found to be eligible for listing on the NRHP for its significant contributions to the Apollo Space Program. Completion of the HABS satisfies the conditions of the MOA and documents the history of the building and its significance to the space program for generations to come. Building #2 contributed significantly to the history of the Flagstaff Science Center, that was built to support Eugene Shoemaker's Astrogeology Program. The program was established in Flagstaff primarily due to its geographical proximity to cratered environments where rock identification and soil sampling techniques were taught to Apollo astronauts before they visited the Moon's surface. The HABS created the permanent record which is on file at the National Archives.

Success: The USGS Research Vessel *Polaris*, excessed in 2018, recently started a new chapter in its life. The ship is waiting to be sold to a second post-Federal owner from the berths of the Wilmington Boat Works (same company that originally built *Polaris*). The first post-Federal owner restored the exterior of the ship, expanded the dining area,



replaced sections of hull along the waterline that were infested with shipworm and began to renovate the smoking parlor. The advertised sale price is \$900K (at the time of this writing) as a project in progress. The ship left Federal ownership through GSA auction for approximately \$63,000. The historical significance and new chapter in the ship's life was made possible by the USGS observing its obligations to conduct the Section 106 review process before the ship was excessed as surplus property. Hopefully under its new ownership the Polaris will continue to sail for many years to come.

VI. Hitting One's Stride

During this reporting period the number of properties in the bureau inventory that remain to be identified and historically evaluated has decreased to 93 out of a total of 457. Awareness of the requirement for historically evaluating assets is renewed with each completed CA. Lessons learned along the way are incorporated into new policy. More often the Section 106 review of a new undertaking is happening earlier as prescribed during project planning, reflecting the increased awareness of this requirement. The Section 106 review has moved from being an afterthought to a project milestone. In August of 2020 the U.S. Geological Survey National Center in Reston, Virginia was listed on the NRHP. Senior scientists working at its headquarters since opening day knew without doubt it was a credit justly deserved by the quality work performed there. The USGS has a long history of contributing to broad patterns of history as evidenced by its contributions to the Apollo Space Program that culminated with a USGS employee walking on the moon. Of note is the fact that the current USGS Director is also a veteran of space travel. The professionalism of its employees has helped forged the attribute of "world-class science" and made it synonymous with the USGS. The opening of the USGS National Center in Reston, VA also helped sustain the "New Town" concept of community planning as recognized by its recent historical designation. A plaque from the NRHP affixed to a column of the J.W. Powell Building will daily remind USGS employees of their significant contributions in service to the Country.