



2024 Secretary of Defense

# Environmental Awards

Cultural Resources Management, Large Installation  
Hill Air Force Base

## Introduction

Nestled in Utah's scenic landscape, Hill Air Force Base (AFB) combines military prowess with environmental and cultural splendor. Settled in the Rocky Mountains on the front of the Wasatch Range, the base enjoys a geographical advantage, offering strategic elevation and varied terrains for training. Utah's unique charm, marked by vast plains and towering mountains, shapes the character of Hill AFB and the properties it manages. Population is comprised of approximately 30,587 military and civilians, and the installation oversees approximately 1 million acres, including an active bombing range and multiple geographically separated units (GSUs). The community thrives in a cultural mosaic, embracing local traditions and fostering unity, while actively supporting the

Air Force Mission and simultaneously promoting environmental sustainability. Hill AFB reflects military strength and a rich tapestry woven with the threads of local culture and community resilience.

The Hill AFB Cultural Resources Management (CRM) Program is pivotal in preserving and managing the installation's rich cultural heritage, including 280 historic buildings and 822 archaeological sites, as well as cultural landscapes and five historic districts. The program actively protects cultural resources by carefully documenting and protecting them, while actively involving the community and federally recognized Native American tribes. This helps maintain a sense of identity and history and ensures responsible and sustainable management. As part of this effort, they established the Site

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Stewardship Program, which monitors archaeological sites on the Utah Test and Training Range (UTTR) - a vast area spanning over 958,000 acres of the approximate 1 million acres they oversee. Furthermore, the Hill AFB CRM Program achieved significant milestones, including active promotion of tribal and community history, establishment of proactive and groundbreaking CRM efforts and techniques, and increasing efficiencies by participating in a pilot program focused on the impacts of climate change. The CRM Program and Installation Tribal Liaison Officer (ITLO) collaborated with the local communities and tribes as well as the Hill Aerospace Museum to foster cultural awareness and connectivity to the land and resources.

## Background

The Hill AFB CRM Program partnered with the ITLO to pioneer cutting-edge technology, champion ethnobotanical studies with Native American tribes, and partner with the Hill Aerospace Museum to increase awareness and access to unique archaeological sites to over one million visitors annually. Since the inception of the Hill AFB Integrated Cultural Resources Management Plan (ICRMP), it has remained the road map for effective management and protection of cultural resources. Additionally, the installation actively collaborates with key partners on the management of cultural resources, including the national Advisory Council on Historic Preservation, the Utah State Historic Preservation Office (SHPO), 22 consulting tribes, as well as local stakeholders.

The CRM Program collaborates with the Natural Resources Management Program and other groups on the installation such as the Science, Technology, Engineering, and Mathematics Program for promoting awareness and opportunities to installation youth. This collaboration focuses on enhancing nation-to-nation relationships, promote cultural awareness, and enrich cultural resources by embracing diverse

perspectives and leveraging collective expertise. It offers the community, stakeholders, and tribes' opportunities to participate in cultural resources educational opportunities that enhance tribal relationships and the importance of equality despite perceived cultural variations.

The ICRMP is regularly updated, reflecting changes as they occur. Notably, the latest update involved coordinating with the ITLO to create the Hill AFB/UTTR Tribal Relations Plan, and gain approval and endorsement by the Installation Commander in 2023. This accomplishment places Hill AFB among the select few bases that have customized and successfully implemented a Department of the Air Force (DAF) Installation Tribal Relations Plan. Having the signed plan is monumental as it provides a way to strengthen relationships with tribal nations and demonstrates Hill AFB's dedication and determination to go above and beyond compliance and conformance of the standard legal requirements described in Executive Order 13175, dated 6 November 2000.

Hill AFB has 10 memorandums of agreement, 2 memorandums of understanding, and two programmatic agreements (PA) in place. One recently developed PA of notable significance was developed in conjunction with the SHPO. It allows certain routine and maintenance activities to be reviewed at the CRM level and summarized within an annual report each calendar year, rather than going through the full 30-day Section 106 (of the National Historic Preservation Act) consultation with the SHPO. It details out protocols for unusual activities (i.e., actions associated with National Aeronautics and Space Administration [NASA], property returning from space such as Osiris REX and the Mars Sample Return). The PA streamlines the process, drastically reducing timelines and increasing efficiencies by streamlining efforts and establishing protocols, thereby conserving manpower.

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Hill AFB shoulders a substantial responsibility beyond the main base that encompasses overseeing the primary installation and managing 75 distinct parcels known as GSUs, Little Mountain Test Annex, and the UTTR, which are 11.98 percent of DAF-managed lands. This multifaceted role highlights the complex and vital nature of CRM responsibility, emphasizing the diverse geographical and operational areas it oversees.



#### **Trackway Site Visit**

Tribal leaders, Hill AFB personnel, and Air Force Civil Engineer Center personnel during visit to the Trackway Site on the UTTR.

## **Accomplishments**

### **Creating Meaningful Consultation**

The installation faces a unique challenge in managing Hill AFB-managed lands, which span approximately one million acres and is of cultural significance to Native American tribes. The CRM Program and ITLO work to promote and maintain a positive relationship, help preserve traditions, and actively foster teamwork with 22 tribes that have aboriginal

ties and current cultural connections to this land. Management goes above and beyond the minimum requirements by providing tribes with ongoing access to information and data as well as direct involvement in resource management. Consultation is continually conducted on anything that may impact or interest the tribal nations – including, but not limited to cultural and natural resources, aircraft flyovers, and other mission-generated noise pollution. Consultation goes beyond the cultural resources that Hill AFB manages and is performed in an all-inclusive manner, thereby allowing the tribes unhindered opportunities to identify interests and provide feedback. Additional tribes are always welcome to consult, with the Montana Little Shell Chippewa Tribe being the most recent participant.

The cultural connection that Native American tribes have to Hill AFB-managed lands is distinctly significant, and by working together, the installation ensures prompt consideration of anything that is of religious or cultural significance to tribal nations. Through this collaboration, Hill AFB demonstrates respect and helps preserve tribal heritage – it is a reminder of the importance of working together. The goal of developing meaningful consultation at Hill AFB begins before there is a problem, not because there is a problem.

To create and sustain meaningful consultation, a Department of Defense partnership was established between Hill AFB, Dugway Proving Ground, Utah Army National Guard, and Tooele Army Depot to provide a collaborative and unified approach to promote successful consultation. Annual and quarterly meetings are jointly hosted to provide information on mission activities, the opportunity to exchange information on cultural significance for the tribes, and to incorporate tribal guidance into management techniques. These meetings and all other collaborative efforts with the tribes foster



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meaningful consultation by offering equal participation and an opportunity for all participants to be part of a multi-directional dialogue.

### **Traditional Ethnobotanical Study Brings Cultural and Natural Landscapes Together**

Hill AFB is partnering with 22 consulting Native American Tribes and the United States Fish and Wildlife Service to complete an ethnobotanical study on the UTTR. This study was completed in accordance with tribal requests to identify critical plants and habitats of cultural significance to them. It incorporated essential tribal ecological knowledge and informs proactive management of native species and habitats on the UTTR. The study also provides an opportunity for co-management through native techniques, allows native gathering by tribal members to meet fundamental federal tribal obligations, and helps maintain key relationships with the tribes. Three site visits with tribal representatives were completed over the last year and a half, and more site visits are anticipated in the future. The first draft of the report is in progress and will include one-on-one coordination with each tribal nation to ensure the study meets mission needs and addresses tribal concerns. This project supports subsequent development of an ethnobotanical management plan and ensures that Hill AFB remains a step ahead in meeting the requirements of the *Presidential Indigenous Traditional Ecological Knowledge and Federal Decision-Making Memo* (2021).

### **Stepping through Time – An Emerging Paleoindian Landscape**

In 2022, Hill AFB pioneered a pilot program for utilizing cutting-edge Ground Penetrating Radar (GPR) technology to identify over 100 human and associated animal footprints that are over 12,000 years old on the UTTR. Additional research continues at this archaeological site, named the Trackway Site, which has gained international attention as it

is one of only two precontact human footprint sites in the United States. In 2023, half of the footprints that GPR identified were excavated to better understand their nature, including further refining footprint age and physical characteristic data. The area was scanned with GPR to identify additional footprints and over 30 subsequent footprints were located for a grand total of approximately 130 footprints. The data found from this site, and recent excavations at two other significant archaeological sites (Wishbone and Hello Sites), will be included in the updated predictive model for prehistoric archaeological sites.



**Prehistoric Footprints at the Trackway Site**  
Human footprints over 12,000 years old at the Trackway Site on the UTTR.

This predictive model – another innovative and proactive approach – was recently updated with information from over 400 new archaeological sites. It is a valuable tool to identify areas of low to high probability for archaeological sites, which aids in the planning of future projects and missions on the UTTR while meeting stewardship goals. Hill AFB intends to use leading-edge technology in a pre-emptive approach by continuing the utilization of GPR and drone light detection and ranging, or lidar, imagery to support

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archaeological survey and inventory methods. The use of advanced techniques aids Hill AFB in taking the initiative to achieve compliance and conformance with legal requirements, maximize resources, and optimize time and manpower. Information generated by the Hill AFB CRM program contributes data for predictive modeling and ensures greater mission planning accuracy. It also minimizes impacts on valuable archaeological resources while actively supporting preservation and sustainability efforts.

### **Promoting Tribal History**

Hill AFB hosted a tribal leadership visit to the Trackway Site on the UTTR in July 2023. Leadership from Hill AFB, Dugway Proving Ground, and the Utah National Guard joined the tribal leaders. This site visit offered an opportunity for them to visit the site, which contains over 130 footprints that are over 12,000 years old. It afforded a unique opportunity to connect the tribes with their ancestors and hear their perspectives on managing, protecting, and sharing this singular archaeological site.

Hill AFB hosted youth from the Confederated Tribes of the Goshute Reservation at the Trackway Site so that they could explore their heritage. This site visit also accommodated a film crew from the Northwestern Band of the Shoshone to support development of a documentary film on the tribe's history. The tribes requested these visits and demonstrated their continued connection to the land and its resources. All involved groups shared their appreciation for the opportunity to educate, maintain, and solidify tribal history from an indigenous perspective and connect to their ancestors. These visits will continue to build Hill AFB's relationships with tribal partners and neighbors and add a richness and depth to its understanding of the unique cultural landscape that the installation manages.

The Northwestern Band of the Shoshone requested that the Hill AFB CRM Program Manager participate in an interview for their tribal history documentary. The interview focused on the significance of the Trackway Site and plans for management and tribal access to it. The interview highlighted Hill AFB's commitment to continued engagement with tribal stakeholders on outreach efforts and ensuring that tribal voices and perspectives are incorporated into installation actions and management practices. Additionally, the interview offered an opportunity to contribute dialogue for the upcoming Trackway Site Virtual Reality exhibit, an endeavor partnered with the installation, Northwestern Band of the Shoshone, and Hill Aerospace Museum. Partnering on projects such as these continues to build strong relationships with Hill AFB's consulting tribes and promotes future cooperative efforts while meeting the *White House Traditional Ecological Knowledge Executive Order* (2021) goals.



**F-35 at Hill AFB**

Hill AFB F-35 parked on the runway in front of historic buildings with the Wasatch Mountains in the background.

### **Maximizing Efficiencies with the Site Stewardship Program**

In August 2023, the CRM Program officially established a Site Steward Program to regularly monitor archaeological sites on the UTTR. This program is in partnership with the Utah SHPO Site Stewardship Program. It increases the capability of Hill AFB to meet

statutory preservation requirements to monitor and record archaeological sites under its management that are eligible for listing on the National Register of Historic Places. Utah SHPO provided training allows existing Air Force employees, that are not part of the Hill AFB CRM Program, to serve as volunteers who visit, monitor, and record a site's status each year. This aims to specifically identify natural or man-made impacts, such as erosion or vandalism, and any required subsequent management actions. Archaeological site monitoring capability is subsequently increased, and Hill AFB went from monitoring six sites each year to monitoring 50 sites each year, resulting in a productivity increase of over 800 percent. These site monitoring efforts demonstrate to Native American tribal members and state stakeholders that Air Force missions are not impacting significant archaeological sites, further demonstrating Hill AFB's commitment to its preservation responsibilities and active maintenance of critical relationships. The program actively supports mission readiness through effective and efficient management methods.



#### **Hill AFB Cultural Resources Management**

The Hill AFB Cultural Resources Management logo integrates the concept of preserving cultural resources, while actively supporting the Air Force Mission.

#### **Climate Change Study: Transformation of the Cultural Environment**

The Hill AFB CRM Program engaged in an Air Force pilot program to model potential climate change risks and impacts on prehistoric and historic cultural resources. It is primarily based on moderate and high levels of greenhouse gas emissions, includes near-term (to 2030) and mid-term (to 2050) timeframes. The model will inform on the climate conditions most likely to impact cultural and other resources on Hill AFB, the UTTR, and its GSUs. It will detail which site and property types are at risk from which climate conditions and provide leadership recommendations for adapting to and mitigating those risks.

The study has completed its first draft, and the cooperative project team members will visit Hill AFB to review critical locations and further improve the report. The results of this study will include stand-alone research and be incorporated throughout the Hill AFB ICRMP. This proactive approach is aiding the installation in meeting the requirements of the *White House Executive Order on Tackling the Climate Crisis at Home and Abroad* (2021), as well as providing valuable management practices to ensure resources are protected well into the future while sustaining military testing and mission activities.

#### **A Journey Through Virtual Dimensions**

Hill AFB manages hundreds of prehistoric and historical archaeological sites within its fence line. As its members embark on captivating expeditions through time and space, the CRM Program is partnering with the Hill Aerospace Museum and Native American Tribes on three virtual reality (VR) exhibits to increase access to unique sites to over one million people and more than the 22 consulting Native American Tribes. The three archaeological sites targeted for VR include Beacon Village Rock Rings Site, the Snoopy Rockshelter Site, and



Trackways Site where this groundbreaking technology tells the stories of times gone by.



#### **Snoopy Rockshelter**

Snoopy Rockshelter is one of the sites that will be available for virtual reality exploration. It is a site with anthropomorphs (human-like figures) on the Utah Test and Training Range that is still not fully understood.

The Beacon Village Rock Rings site consists of approximately 15 documented rock rings. The virtual dimension is a portal connecting Hill AFB with tribal partners to explore and understand these rich prehistoric sites. Snoopy Rockshelter is a site with anthropomorphs – or human-like figures – with horns that are thought to symbolize power and extended arms that are meant as a warning to observers; rock-writings like this was commonly placed

where people passed through or where they would have been seen. Both virtual reality websites are in development, with exhibit language incorporated from tribal partners. They will be available online and in the Hill Aerospace Museum. Both are considered living exhibits and will be updated and enhanced as additional research is conducted and information becomes available.

The Trackways site is comprised of over 130 human and animal footprints that are over 12,000 years old. Each archaeological site becomes a chapter in a living, digital chronicle. VR online exhibits and static displays of this site are in the developmental phase. Hill AFB is actively seeking further input from tribes to enhance the immersive VR experience. From precontact dwellings to military fortifications, every site holds a tale waiting to be discovered. This virtual journey is not merely a passive experience but an interactive exploration that invites visitors to engage with the past like never before. The archaeological wonders managed by Hill AFB await discovery as this partnership embarks on a digital expedition through the ages.



#### **F-35s on Runway at Hill AFB**

Hill AFB F-35s Parked on the Runway Along the Wasatch Front.