



## **PHASE I PROPOSAL: Department of Defense Strategy to Support a Multi-Agency Bat Conservation Initiative within the State of Utah**

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### **Abstract:**

In recognition of the importance of DoD lands to the conservation of bats throughout the nation, a memorandum of understanding (MOU) was signed in October of 2006 to “develop a policy of cooperation and coordination between the DoD and Bat Conservation International (BCI)”. Within the spirit and intent of this MOU we have developed this 2007 Legacy Program funding proposal which brings together five DoD Command Groups- Dugway Proving Ground (DPG), Hill Air Force Base (HAFB), Utah National Guard (UNG) - Camp Williams and Washington County, Deseret Chemical Depot (DCD), and Tooele Army Depot (TEAD). This group of Defense Department land managers has coordinated with the U.S. Bureau of Land Management, U.S. Forest Service, U.S. Fish and Wildlife Service, National Park Service, U.S.D.A. Natural Resources Conservation Service, UT Division of Wildlife Resources (UDWR), UT Division of Oil, Gas, and Mining, UT Division of Parks and Recreation, Utah State University, The Nature Conservancy (TNC), Southern Utah State University, Rocky Mountain Power, and Kennecott Utah Copper. This regionally comprehensive State of Utah group is proposing to coordinate deliverables from the funding of this grant with the Great Basin Bat Cooperative (GBBC) and the Utah Bat Working Group (UBWG).

The teaming of these entities as presented in this proposal will develop a set of contract deliverables which 100% supports military test and training ranges and sound stewardship initiatives throughout Utah. Through this initiative we will collect, compile and analyze existing data on Utah bats as a critical element of a state-wide Bat Conservation Strategy.

Specifically we are proposing to-

- 1) identify distribution, quantity, and quality of existing data on suitable bat habitat in Utah within the AOR of the GBBC and UBWG (e.g. federal, state, and private land),
- 2) create a geodatabase that will track suitability of landscape characteristics that promote or limit potential use by bats (this database will identify what data exists and what data is lacking thereby allowing federal, state, and private land managers to collaboratively work together to target data gaps),
- 3) serve as a foundation for future cooperative bat research and management efforts in the state, and
- 4) collect bat species occurrence data within DoD managed lands supported by the GBBC and UBWG (this approach will be directed by high priority areas identified in the critical bat habitat model).

Once information is compiled and analyzed in conjunction with the GBBC and UBWG, DoD land managers will assist with the generation of conservation and management initiatives covering much of the State, but specifically emphasizing DPG, HAFB, TEAD, DCD, and UNG testing and training ranges. This forward-looking approach will enhance DoD’s ability to access, evaluate, and utilize existing inventory data to manage bat species on military lands. Currently, Endangered Species Act (ESA) listed bat species do not occur in Utah, however 30 percent of Utah bat species are listed on the State and BLM sensitive species list (designated species of concern). Wildlife species of concern are those species for which there is credible scientific evidence to substantiate a threat to continued population viability. It is anticipated that wildlife species of concern designations will identify species for which conservation actions are needed, and that timely and appropriate conservation actions implemented on their behalf will preclude the need to list these species under the provisions of the federal ESA (UDWR 2004 Utah Sensitive Species Publication). This project is instrumental in assisting the ability of DoD land managers to support and approve DoD testing and training activities and will allow local decision authority to analyze and implement sound environmental decisions as we strive daily to meet readiness needs on the west desert.

### **Background:**

This proposal brings together five Defense Department facilities within the State of Utah to form a collaborative partnership supporting the initiatives of the state’s bat working groups, which in turn, are comprised of 14 other federal, state and private stakeholders. The results of this extensive collaborative effort will benefit the military test and training ranges and will support sound stewardship initiatives within the state of Utah on Defense Department lands.

The DoD military lands in Utah comprise several different specific missions but all depend on the availability and sustainability of testing and training lands. DPG (798,214 acres) is a major range and testing facility and the primary chemical and biological defense testing center under the Reliance Program. TEAD (23,610 acres) provides America’s joint fighting forces with munitions and ammunition equipment in support of military missions before, during and after any contingency. DCD’s main mission is

to destroy 45% of the US stockpile of chemical weapons and the Utah National Guard at CW (28,000 acres) provides quality training lands for the Utah National Guard and others. Finally, HAFB (968,774 acres) is home to many operational and support missions with Ogden Air Logistics Center, who provides worldwide engineering and logistics management. These five DoD partners control a substantial amount of land in Utah. Together they comprise 1,818,958 acres that contain significant bat habitat where little research has been carried out to determine the extent of use by bats or the ecology and biology patterns within the Great Basin. As a result, DoD land managers do not have a good idea of what bat species exist on their training and testing lands.

To further the problem, not only do DoD land managers lack an understanding of Utah bats, but state, federal, and private land holders do as well. A recent exhaustive review of bat research indicates that little information is available regarding the basic ecology of Utah's bat species, including data on population dynamics and trends, roost site selection, foraging behavior, reproduction, and migration (Oliver 2000). Existing data on habitat selection and resource use are poorly consolidated and scattered among federal, state, private and university information holdings making it difficult to identify and address statewide management issues related to the conservation of bats (Fenton 1997). In addition to the management and conservation problems created by sparse data is the potential for significant amounts of habitat loss resulting from human population growth and land development. The census, conducted by the U.S. Census Bureau in 2000, identified Utah as having the fourth fastest growing population in the nation, increasing by almost 30 percent between the years 1990 and 2000. Utah's rapid development combined with the high species diversity of bats has created a situation where six of the eighteen bat species, or 30 percent, are listed as state of Utah sensitive species of special concern.

### **Approach:**

The lack of research on bat habitat and ecology in Utah and the degree of difficulty in accessing existing information on Utah bats is at a stage right now that will only contribute further to the bat's population decline and possible listing. Currently the UDWR is writing a Utah specific Bat Conservation Strategy and creating, with TNC, a Critical Bat Habitat Suitability Model. A critical element needed to support and validate these projects, is a DoD proposal that will complete a state-wide effort to manage Utah bats at a sufficient level to ensure a stable Utah population. This DoD proposal, if funded by the Legacy Program, will accomplish the four objectives outlined in the Abstract.

Identifying existing data will entail an exhaustive search for information held by federal and state agencies, universities, local contractors, private researchers, and non-profit groups located in Utah. All data sets obtained through this process will be entered into a geospatial database designed specifically for this effort. The database will be characterized by data masks and filters to ensure data quality, customizable user queries to facilitate data sorting and extraction, and the capability of becoming web enabled. The completed database will reside within and be maintained in perpetuity by the UDWR's Natural Heritage Program (NHP). In addition to providing a central location for partners to access and update Utah's bat inventory data beyond the life of this initiative, housing the database within the NHP will provide it with formidable data protection measures to prevent sensitive aspects of the data set from being released inadvertently.

Without this geospatial database, future research will suffer from a lack of understanding and knowledge of Utah habitat distribution and will only aggravate the problem of data scatter among federal, state, and university research groups. The proposed database will both be used as a foundation for future bat conservation efforts in Utah and provide context for historical datasets collected across a diversity of temporal and spatial scales. Although the geodatabase is a completely functional product on its own, through this project it will be nested within a much farther reaching conservation effort encompassing DoD installations as well as other public and private lands in Utah

### **Benefits to Military:**

The DoD is a major user of west desert test and evaluation lands within the state of Utah. DoD requires continued access to those lands to maintain mission readiness. These lands support biological and chemical test and evaluation operations, munitions testing, deployment of weapon systems, and combat training exercises. The Utah Test and Training Range supports the evaluation of missile weapon systems and utilizes the largest joint contiguous CONUS airspace block to train pilots on air-based weapons systems. National Guard units conduct live fire exercises on Camp Williams and DPG ranges. In addition, these desert climates are utilized by large, mechanized, mobile training units to simulate real-time battle conditions. Throughout these lands, specific landscape characteristics and the intrinsic natural features are crucial to military readiness.

Conservation efforts ensure that these training environments are not degraded over time and that DoD has continued access to west desert testing ranges, impact areas, and testing grids. This legacy proposal directly supports this end through a sound set of biologically based initiatives designed to enhance the sustainability and usability of training and testing lands within the state of Utah. The effectiveness of this proposal is highlighted by the inclusion of every single military command in Utah with over 1.8 million acres of test and training lands (98% of DoD Utah land holdings). Extensive efforts have occurred to secure this support. We believe this regional approach to managing bats within the State of Utah and specifically understanding regional trends and patterns on DoD land 100% supports stewardship objectives and goals fundamental to sound land management policies within the Defense Department. More importantly, this proposal has a tangible benefit. It will benefit the military through the identification and description of state-wide data

currently existent within dozens of separate locations. This data, individually, is thought to be of marginal quantity and consistency, but collectively, within a state-wide database, will yield invaluable trends and patterns throughout DoD training ranges and state and private recreation lands. Funding this project will organize the existing data through the key project supported contract deliverables. Specifically this Legacy Program proposal will-

1. Create a geodatabase with federal, state, and private land managers that will track suitability of landscape characteristics that promote or limit potential use by bats;
2. Identify what data exists and what data is lacking thereby allowing land managers to collaboratively work together to target data gaps;
3. Serve as a foundation for future cooperative bat research and management efforts in the state of Utah;
4. Collect bat species occurrence data within the 1.8 million acres of DoD managed lands supported by the GBBC. This approach will be directed by high priority areas identified in the critical bat habitat model which is controlled by the UDWR (the main DoD partner for this proposal);
5. Increase understanding of Utah bat issues that may pose encroachment problems within DoD training lands and limit ability to meet mission requirements. Threats may arise if a petition to list State of concern status species was started (currently 6 of 18 bat species are state of concern); and
6. Substantially benefit the military through better understanding of the biological needs of bats which directly promotes sound stewardship initiatives developed cooperatively between State wildlife and DoD land managers.

As Utah DoD land managers strive to deal with the challenges of balancing land and air resources within a very high operational tempo, an understanding of the biological status on 18 species of bat is critical . Further, the overall collaborative efforts we have facilitated with 14 key stakeholders (within over 50 separate state, private, and government offices) will enhance military readiness and overall training needs to prepare the finest war fighters anywhere to meet mission needs and objectives.