# NPS

**PROJECT SUMMARY**

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| **Cooperative Ecosystem Studies Unit****Cooperative Agreement Modification** |
| FUNDING AGENCY: National Park Service |
| MODIFICATION NO.: **[CESU info only]** | COOPERATIVE AGREEMENT NO.: **CA1200-99-009** | FUNDING AMOUNT: $ **30,000** |
| INVESTIGATORS Contact Information: Dr. Louis C. BenderPrincipal Investigator U.S. Geological Survey‑‑Biological Resources, New Mexico Cooperative Fish and Wildlife Research UnitPO Box 30003 MSC 4901, Las Cruces, NM 88003, USAGraduate Research Assistant (TBD), Department of Fishery and Wildlife Sciences, New Mexico State University, Las Cruces, NM 88003 |
| PROJECT TITLE:Distribution, population dynamics, and herbivory impacts of a pioneering elk herd on Chaco Culture National Historic Park  |
| EFFECTIVE DATES**:** May 30, 2003 to December 31, 2007 |
| PROJECT ABSTRACT:Chaco Culture National Historic Park represents the largest natural reference area in the Colorado Plateau for ungrazed desert grassland and arroyo riparian habitats. Ungrazed since the 1940's, CCNHP provides scientists with both baseline and longterm data on ecological restoration of these vegetation communities. Recently, elk have colonized the Park, and concern exists that elk grazing will significantly alter the structure, composition, and function of the desert grassland and arroyo riparian communities. The presence of a large number of elk in the Park could result in effects similar to livestock grazing and negate decades of vegetative community recovery. Thus, the Park needs baseline information on elk population numbers and habitat use to monitor elk impacts on Park resources, determine the potential for significant impacts, and develop management plans to minimize potential adverse impacts. Without this, CCNHP may cease to exist as a ecological reference for desert grassland and arroyo riparian communities.The design of this project emphasizes capturing and radio-collaring elk, monitoring their behaviors and movements, using repeated recaptures to determine condition and productivity of elk as a collation of habitat capability, and relating condition (including the factors driven by condition, such as productivity and mortality) to elk distribution, habitat use, and resource capture. These factors are in turn influenced by land management activities, interactions with other large herbivores, and the spatial distribution of key resources (Short 1981, Johnson et al. 2000). All of the above factors are potentially influenced by elk numbers relative to habitat availability, and so must be determined on a density-explicit basis (White and Bartmann 1998, Cook and Bender, *In press*). Further, they determine area of elk utilization, which in turn identifies analysis sites for assessing elk impacts. |
| **Agency Representative:**Ron Hiebert, NPSResearch CoordinatorCPCESUNorthern Arizona UniversityP.O. Box 5765Flagstaff, AZ 86011-5765Tel: (928) 523-0877Fax: (928) 520-8223Ron.Hiebert@nau.edu | Agency Administration RepresentativeMary EstepBudget AssistantIntermountain Support OfficeDenver, CO 80225-0287Tel: (303) 969-2750Mary\_Estep@nps.gov | **Investigator:**Dr. Louis C. BenderPrincipal Investigator U.S. Geological Survey‑‑Biological Resources, New Mexico Cooperative Fish and Wildlife Research UnitPO Box 30003 MSC 4901, Las Cruces, NM 88003, USATel: 505-646-3382Fax: 505-646-1281lbender@nmsu.edu | **Partner Admin. Contact:** Patty HartellContract Administrator, AGHENew Mexico Agricultural Experiment StationNew Mexico State UniversityPO Box 30003 MSC 3BFLas Cruces, NM 88003-1999 (P) 505-646-1999Fax: 505-646-2301 |
| ***List of Key Words: [Insert key words]*** *Elk, Chaco, distribution, population dynamics, NMSU, USGS-BRD* |
| ***Agency Manager/Technical Representative from National Park –*** Brad Shattuck, NPSNatural Resources Program ManagerChaco Culture National Historical ParkPO Box 220Nageezi, NM 87037Tel (505) – 786- 7014 x223Fax (505) -786-7061Brad\_shattuck@nps.gov |
| *Annual Report Received:**Final Report Received:**Publications on File:* |
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*Attach any supporting material as necessary*