

*Helianthus eggertii*, Eggert's sunflower, was listed as threatened by the U.S. Fish and Wildlife Service (FWS) in May 1997. Only 34 sites were originally found, in Alabama, Kentucky, and Tennessee. Twenty sites were observed in Tennessee; half of these sites supported less than 20 stems each. At that time, it was believed that the plant was restricted to a few remaining natural Barrens areas, and that it was opportunistically inhabiting low-quality sites. Little was known about the plant's population ecology, and what genetic relationship each observed site had to other sites.

Arnold Air Force Base (AAFB) was home to the vast preponderance of Eggert's sunflower in the state of Tennessee at that date. In 2009, the continued persistence of these populations can be attributed, in part, to the sense of professional cooperation established early by Base and FWS staff. This working relationship laid the foundation for species protection measures that were acceptable to both parties.

Initially, potential operational impacts to *H. eggertii* were documented, incorporating FWS recommendations, to satisfy consultation requirements of The Endangered Species Act's Section 7. The eventual publication of the FWS Recovery Plan called for the documentation and protection of at least twenty self-sustaining populations. The technical expertise of natural resources staff employed at AAFB was of primary importance in ascertaining and implementing detailed objectives to support the Recovery Plan. Baseline status of the species, sustainable population targets, management actions, and monitoring protocols were based largely on the input of those local Air Force conservation representatives, at the request of the regional USFWS office. Concomitant academic research, funded by AAFB, also helped define population and management targets:

Cruzan, M.B. 2002. Population and ecological genetics of *Helianthus eggertii*. Report prepared for Arnold Engineering Development Center at Arnold Air Force Base.

Starnes, J.H. 2004. Effects of management and population size on genetic diversity of Eggert's sunflower (*Helianthus eggertii*, Asteraceae). Master Thesis. Western Kentucky University. 62pp.

Subsequent consultations in 2000 and 2003 led way to a Cooperative Management Agreement (CMA) signed by AAFB and FWS in 2004. This CMA was a keystone in protecting 11 of the 20 populations required by the FWS Recovery Plan for delisting. Agreements and plans for other important sites were developed through the efforts of FWS and partnering organizations, including The Nature Conservancy, Kentucky Transportation Cabinet, Kentucky State Nature Preserves Commission, City of Nashville, Mammoth Cave National Park, and Tennessee Wildlife Resources Agency.

As the 2004 CMA expired, the 2006 signing of AAFB's Integrated Natural Resource Management Plan (INRMP) officially extended the provisions for sunflower protection. In response to consultation with FWS, the INRMP incorporates the specific needs of Eggert's sunflower into larger conservation management targets, through a formalized and widely accepted planning process.