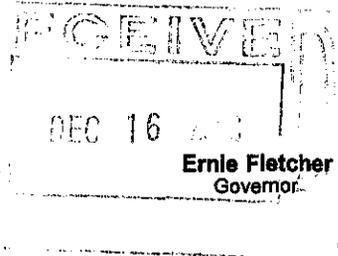




Commonwealth of Kentucky  
**Transportation Cabinet**  
Frankfort, Kentucky 40622

**Maxwell C. Bailey**  
Secretary of Transportation



December 12, 2003

Mr. Lee A. Barclay, Supervisor  
U. S. Fish and Wildlife Service  
446 Neal Street  
Cookeville, Tennessee 38501

Dear Mr. Barclay,

Enclosed is the final Eggert's Sunflower Management Plan which has been approved by signature by the Kentucky Transportation Cabinet. Please execute this document and return a copy with all signatures to this office. We will make a copy available to the new Secretary Maxwell C. Bailey.

We greatly appreciate the opportunity to partner with you in this endeavor. If you have an questions or comments please contact Bree K. McMurray in this office.

Cordially,

David M. Waldner, P.E, Director  
Division of Environmental Analysis

BKM/ DMW

Enclosure

c: Bree McMurray with enclosure  
USFWS file with enclosure  
Timothy Merritt, USFWS, Cookeville, TN  
Lee Andrews, USFWS, Frankfort, KY



# Protection and Enhancement Management Plan

October 2003

Eggert's sunflower (*Helianthus eggertii*)

**Kentucky Transportation Cabinet**

**Hart County, Kentucky Protection Area**



---

Authored by Bree K. McMurray  
Division of Environmental Analysis

## I. ENVIRONMENTAL COMMITMENT

Eggert's sunflower, *Helianthus eggertii*, was listed as federally threatened by the United States Fish and Wildlife Service on May 22, 1997. It is currently known from the Highland Rim and Shawnee Hills sections of the Interior Low Plateaus physiographic province in Alabama, Kentucky, and Tennessee. It is usually associated with barren ecosystems, with habitat types that range from grassy openings to oak and mixed mesophytic forest woodlands (and in Kentucky, to Appalachian subxeric forest). It is a perennial plant with a clonal habit, through which numerous "plants" or stems arise from clumped rhizomatous extensions. Within Kentucky, there are records from ten counties which include federal, state, and private property and conservation land (Deborah White and Martina Hines, Kentucky State Nature Preserves Commission, Frankfort, Kentucky, pers. comm, August 2003). Many of these occurrences have been recorded in prairie or barrens remnant habitat; barrens-like habitats along interstate, state, county, and private roadways; and powerline rights-of-way.

The Kentucky Transportation Cabinet (KYTC or Cabinet) owns a 41-acre parcel of land adjacent to the northbound transportation right-of-way for Interstate 65 in Hart County which currently supports numerous occurrences of Eggert's sunflower. The Cabinet wishes to enter into a management agreement (Agreement) for the protection and enhancement of Eggert's sunflower and suitable habitat at this site. This management agreement will take into consideration the goals outlined in the Recovery Plan for *Helianthus eggertii* (the Plan). By entering into this Agreement, the Cabinet is assisting in meeting the recovery objectives for *H. eggertii*. The recovery of this species, and eventual removal from federal listing status, benefits local, state, and national public interest and meets the goals of the USFWS in accordance with the Endangered Species Act.

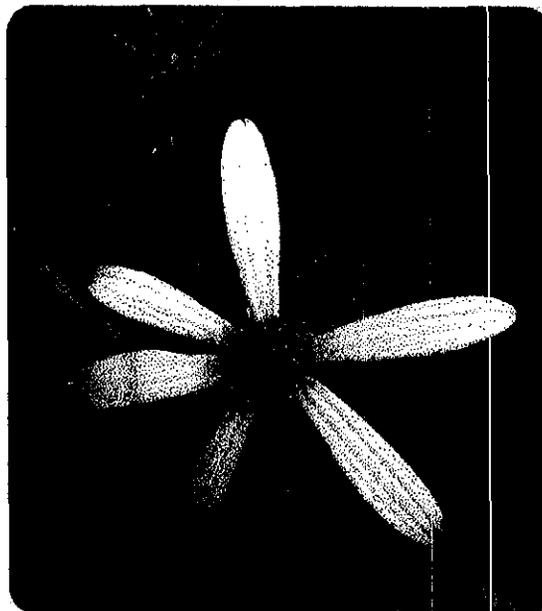
An additional component of this management plan is to relocate two or three populations of Eggert's sunflower from the highway Right of Way for Interstate 65 that will be directly impacted by a widening project. The Cabinet is currently designing a project to widen the interstate to three lanes in both the north and south directions from the Cumberland Parkway in Barren County to Elizabethtown in Hardin County. The populations that will be affected are currently located in Barren and Hart Counties. The Cabinet is proposing to transplant these populations to the Hart County protection site and monitor the success of the transplant efforts.



## II. LIFE HISTORY AND HABITAT

*Helianthus eggertii*, is a perennial herb with a colonial tendency. Numerous related plants can arise from an individual parent plant through extensive rhizomes. Individual stems can reach heights of over two meters and are smooth and waxy with a distinct blue cast. Leaves are opposite (in 7-15 pairs), entire, sessile, taper at the base, and they are scabrous (rough) above and white-glaucous and smooth below. Flowering is primarily in August and September, and there are typically few flower heads composed of both yellow ray and disk flowers. Flower heads are 2-2.5 cm across the disk and up to 8 cm across the rays. Seeds generally mature during September and October. Since individuals can be established via seed germination or vegetative growth through rhizomatous extensions, genetic composition of clusters of plants is difficult to determine.

The necessary conditions for flowering are as yet undetermined. However, nonflowering vegetative colonies appear to occur more often in areas of greater canopy cover whereas colonies in full sun situations appear to flower quite prolifically. The role of seed production in population viability is largely unknown, as are the optimal natural conditions for establishment. Reports of seedlings are infrequent, and seedling establishment may be uncommon. It is also unknown what effect prolonged flower suppression may have on the viability of the population.



Historically, barrens communities were probably maintained by periodic fires, drought, soil conditions, and grazing resulting in a semi-open canopy and herbaceous understory. Most documented occurrences of *H. eggertii* are along barrens-like woodland edges and roadsides, with flat to rolling topography, and a range of light and moisture regimes. It seems able to persist and could possibly invade roadsides, power line rights-of-way, and fields that exhibit suitable open habitat conditions.

Soils typical of *H. eggertii* sites include well-drained, upland silt loams and chert loams, underlain with sandstone, limestone, siltstone, or shale. These are commonly acidic and highly erodible soils. Jones (1994) gave an analysis of soil and geological associations for Shawnee Hills sites in Kentucky. The barrens communities, typical of preferred Eggert's sunflower habitat, include openings supporting perennial grasses and herbs as the dominant vegetation. Dominant tree species include oaks (white, black-jack, post, black, southern red; *Quercus alba*, *Q. marilandica*, *Q. stellata*, *Q. velutina*, *Q. falcata*), eastern redcedar (*Juniperus virginianus*), and often include hickories (*Carya* spp.) and pines (*Pinus* spp.).

### III. MANAGEMENT OBJECTIVES

The 41-acre tract of land in Hart County referenced in this Agreement is currently experiencing minimal management activities, limited to power line and fiber optic line corridor maintenance. This property is on the east side of and adjacent to the right-of-way boundary for northbound Interstate 65, and west of and disjunct from the Hatcher Valley Road right-of-way. Hatcher Valley Road is under the county road jurisdiction (CR 1258), and is currently maintained by seasonal mowing.

The objectives of this management plan are to protect, enhance, and monitor the Eggert's sunflower population(s) on site. The protection of the site shall be accomplished by retaining ownership, restricting access by maintaining controlled access fencing and posted boundaries, and solidifying management agreements with Kentucky Utilities and AT&T who currently maintain powerline and fiber optic line corridors through the 41-acre parcel. In the majority, the maintenance practices for enhancing the current habitat will be: 1) to thin the overstory near current *H. eggertii* occurrences, to allow the plants to spread into surrounding habitat; and 2) to conduct periodic prescribed burns if possible to enhance habitat by removing competitive herbaceous species and setting back the natural succession of woody species. Monitoring activities will consist of baseline survey to identify and quantify the existing Eggert's sunflower occurrences, followed by annual surveys to assess the success of management practices. Modification in management practices shall be made if the monitored occurrences experience decline. This monitoring is described in more detail below.

An additional goal of this Agreement is to transplant two or three populations of *H. eggertii* from the proposed disturbance area on the Interstate 65 widening project to this protection site. This transplanting will be accomplished through informal partnerships with KYTC, USFWS, and the Kentucky Native Plant Society. Details of the actual procedure will be finalized with all parties prior to the transplanting events. The timeline for this activity will depend on the progress of the design work for the widening project. However, the transplanting will take place prior to any disturbance for drainage work for the widening project, and a suitable location within the protection area will be agreed upon by KYTC and USFWS. These populations will also be monitored in the same manner as described below. Results of enhancement and transplant activities shall be reported to KYTC and USFWS annually during the tenure of this Agreement.

### IV. MONITORING PLAN

Monitoring the occurrences of Eggert's sunflower on the protection area will take the form of annual surveys. See timeline below for goals for Year Zero, which will be the first flowering season prior to initiating management practices. The baseline survey will be accomplished late summer 2003 (calendar year). The Cabinet will survey the entire area of suitable habitat on the property for Eggert's sunflower populations and permanently mark and record those occurrences both in the field and on supporting maps. Surveys will consist of stem counts, assessment of flowering and nonflowering status, and utilization of photo-documentation of habitat and maintenance practices at permanent monitoring stations annually. Coordinates and boundaries will be established in Year Zero and monitored in successive years to assess the increase or decline of Eggert's sunflower occurrences on the site. Additional occurrences found in successive years will also be monitored. Results of monitoring activities shall be reported to KYTC and USFWS annually during the tenure of this Agreement.

## **V. PARTNERSHIPS**

KYTC Division of Environmental Analysis (DEA) shall be the lead agency for directing all maintenance practices and monitoring activities. The USFWS shall be consulted on all initial management practices, modifications in treatment or use of the site, and transplanting activities during the tenure of this Agreement. Within KYTC, close coordination shall also be necessary with Highway District Number 4 in Elizabethtown, KY, whose jurisdiction covers Hart County Maintenance activities on state and federal roads and transportation rights-of-way. KYTC Division of Operations Roadside Environment Unit shall also be in consultation with the Hart County highway maintenance department and assisting with the thinning management objectives. The Nature Conservancy, and possibly Kentucky State Nature Preserves Commission (KSNPC), shall assist with the prescribed burning management objectives. Monitoring shall be performed by KYTC annually, with informal assistance from the KSNPC. Any research opportunities shall be coordinated through KYTC and the USFWS, in consultation with KSNPC. The transplant activities shall be coordinated through DEA and the USFWS, and the Kentucky Native Plant Society will assist with the actual moving of the plants. Any and all partners may assist in any aspect of executing this Agreement, but there shall always be a responsible lead agency. Other potential partners, not expressly identified above, may include Hart County Fiscal Court, Bernheim Forest, Kentucky Tourism Cabinet, Kentucky Utilities Company/Louisville Gas and Electric Energy and AT&T. Copies of reports and results of surveys shall be made available to any interested partners.

## **VI. TIME LINE**

### **YEAR ZERO (before maintenance, calendar year 2003)**

Baseline survey of site, establish permanent monitoring/photo stations, map/record occurrences  
Site visit for participating partners, general plant identification and discussion of management objectives  
Set maintenance and monitoring schedule for calendar year 2004 and finalize partner participation  
Develop any necessary Memoranda of Agreement for management practices with appropriate partners  
Annual report of activities/survey and schedule for 2004

### **YEAR ONE (of maintenance, calendar year 2004)**

Annual meeting of partners (minimum DEA and USFWS participation)  
Continue coordination with all partners  
Perform maintenance activities, monitor activities via photo stations, map/record activities  
Conduct annual survey, monitor occurrences/habitats via photo stations, map/record occurrences  
Set maintenance and monitoring schedule for calendar year 2005 and finalize partner participation  
Start addressing transplant options and schedule this year  
Develop/revise/renew any Memoranda of Agreement for management practices with appropriate partners  
Annual report of activities/survey results and schedule for 2005

### **YEAR TWO (2005)**

Annual meeting of ALL PARTNERS (all MOAs and standard/informal agency agreement participants)  
Continue coordination with all partners  
Perform maintenance activities, monitor, map/record  
Conduct annual survey, monitor occurrences/habitats, map/record  
Set maintenance and monitoring schedule for calendar year 2006 and finalize partner participation  
Address transplant options and schedule this year  
Develop/revise/renew any Memoranda of Agreement for management practices with appropriate partners  
Annual report of activities/survey results and schedule for 2006

### YEAR THREE (2006)

Annual meeting of partners (minimum DEA and USFWS participation)

Continue coordination with all partners

Perform maintenance activities, monitor, map/record

Conduct annual survey, monitor occurrences/habitats, map/record

Set maintenance and monitoring schedule for calendar year 2007 and finalize partner participation

Address transplant options and schedule this year

Develop/revise/renew any Memoranda of Agreement for management practices with appropriate partners

Annual report of activities/survey results and schedule for 2007

### YEAR FOUR (2007)

Annual meeting of ALL PARTNERS (all MOAs and standard/informal agency agreement participants)

Continue coordination with all partners

Perform maintenance activities, monitor, map/record

Conduct annual survey, monitor occurrences/habitats, map/record

Set maintenance and monitoring schedule for calendar year 2008 and finalize partner participation

Develop/revise/renew any Memoranda of Agreement for management practices with appropriate partners

Annual report of activities/survey results and schedule for 2008

### YEAR FIVE (2008)

Annual meeting of partners (minimum DEA and USFWS participation)

Continue coordination with all partners

Perform maintenance activities, monitor, map/record

Conduct annual survey, monitor occurrences/habitats, map/record

Set maintenance and monitoring schedule for calendar year 2009 and finalize partner participation

Develop/revise/renew any Memoranda of Agreement for management practices with appropriate partners

Annual report of activities/survey results and schedule for 2009

### YEAR SIX (2009)

Annual meeting of ALL PARTNERS (all MOAs and standard/informal agency agreement participants)

Continue coordination with all partners

Perform maintenance activities, monitor activities, map/record

Conduct annual survey, monitor occurrences/habitats, map/record

Set maintenance and monitoring schedule for calendar year 2010 and finalize partner participation

Develop/revise/renew any Memoranda of Agreement for management practices with appropriate partners

Annual report of activities/survey results and schedule for 2010

### YEAR SEVEN (2010)

Annual meeting of partners (minimum DEA and USFWS participation)

Continue coordination with all partners

Perform maintenance activities, monitor activities, map/record

Conduct annual survey, monitor occurrences/habitats, map/record

Annual and Final comprehensive report of activities/survey results

Annual and Final comprehensive reports shall be written by KYTC Division of Environmental Analysis and submitted to the USFWS by December 31 each year. Results and findings in the annual reports shall be discussed at the annual meetings. In general, the annual meetings will be held between February and May, in order to discuss modifications to maintenance practices prior to or early in the growing season.

## VII. REFERENCES

- Jones, R.L. 1994. The Status of *Helianthus eggertii* Small in the Southeastern United States. *Castanea* 59(4), 319-330.
- United States Fish and Wildlife Service. 1999. Recovery Plan for *Helianthus eggertii* Small (Eggert's Sunflower). Atlanta, GA. 40pp.

## VIII. APPENDED MATERIAL

From Kentucky Transportation Cabinet:

### **Kentucky Transportation Cabinet Environmental Policy**

The Kentucky Transportation Cabinet will use practical means and measures to provide an environmentally sound, fiscally responsible, safe and efficient transportation system which promotes conditions under which people and nature can exist in productive harmony while providing for economic growth and enhancing the quality of life for present and future generations of Kentuckians.

*The principles and responsibilities of the above policy statement which we are incorporating into the culture and fabric of our organization and daily activities are as follows:*

#### **Stewardship**

*We will strive to protect, conserve, restore, and enhance the natural and human environment, while we plan, design, construct, and maintain facilities that meet transportation needs.*

#### **Leadership**

*We will promote development, sharing and the integration of sensitive and innovative environmental practices and technologies into planning, design, construction, and maintenance activities to encourage personnel to value and take pride in their environmental leadership roles.*

#### **Partnership**

*We will seek stewardship opportunities to cooperatively partner with the public, federal and state resource agencies to identify shared visions, missions, and goals which will result in new consensus building processes, new methods and protocols, and new design and environmental technologies to be applied on mutually beneficial undertakings.*

#### **Practice**

*We will employ Context Sensitive Solutions to ensure that our planning, design, construction, and maintenance activities reflect community and environmental values as determined through proactive involvement with the public, resource agencies, and other stakeholders.*

#### **Commitment**

*Our Cabinet is committed to a culture that embraces environmental leadership with an unwavering focus on protecting the environment through stewardship and our devotion to satisfy the public, resource agencies, and other stakeholders as the primary measure of success in carrying out our mission.*

By working with the public, resource agencies and other stakeholders to integrate environmental stewardship into our daily activities, the Cabinet is responding to the wishes and needs of its customers, the values it holds foremost as public servants while acting in the spirit of environmental law. It is the right thing to do for transportation and the human and natural environment.



The parties have executed this Agreement on the date as noted.

**MANAGEMENT AGREEMENT BETWEEN THE KENTUCKY TRANSPORTATION  
CABINET AND THE UNITED STATES FISH AND WILDLIFE SERVICE**

**UNITED STATES FISH AND WILDLIFE SERVICE**

**Cookeville, Tennessee Ecological Services Field Office**

BY: *Lee A. Barclay*  
LEE A. BARCLAY, Field Supervisor

12/17/03  
DATE

**KENTUCKY TRANSPORTATION CABINET**

BY: *James C. Codell, III*  
JAMES C. CODELL, III, Secretary

12.5.03  
DATE

**APPROVED AS TO FORM AND LEGALITY:**

BY: *Susan Pugh Chaplin*  
*for* PATRICIA K. FOLBY, Executive Director  
Office of General Counsel  
and Legislative Affairs

12/04/2003  
DATE

