

APPENDIX I.

Management Plan for Gaura neomexicana ssp. coloradensis on  
Francis E. Warren Air Force Base, Cheyenne, Wyoming

MANAGEMENT PLAN  
FOR  
Gaura neomexicana ssp. coloradensis  
ON  
FRANCIS E. WARREN AIR FORCE BASE  
CHEYENNE, WYOMING

As indicated in the meeting on April 14, 1982, between personnel from Warren Air Force Base, the U.S. Fish and Wildlife Service, The Nature Conservancy, and the Wyoming Heritage Program, the following management practices will be instituted on Warren Air Force Base to conserve Gaura neomexicana ssp. coloradensis (Colorado butterfly plant):

1. Warren Air Force Base will not mow or spray chemicals noxious to Gaura neomexicana ssp. coloradensis nor allow grazing of cattle or such activities in the essential habitat outlined on the attached map. Mowing, herbicide spraying, and grazing of cattle are recognized as the primary threats to the Colorado butterfly plant.
2. The Wyoming Heritage Program will monitor the status of this rare plant on Warren Air Force Base annually and inform the appropriate Air Force representative of any changes in the plant's status.
3. The Wyoming Heritage Program will cooperate with Warren Air Force Base in noxious weed control as the need is mutually determined. The Wyoming Heritage Program will monitor noxious weed control on the areas indicated on the attached maps to ensure that the Colorado butterfly plant is not affected, and noxious weed dispersal to adjacent private land is

prevented. The Heritage Program's access to the plant's habitat will be arranged through Warren Air Force Base, Office of the Environmental Engineer, DEEV.

- 4. Warren Air Force Base will provide 30 days' written notice to the U.S. Fish and Wildlife Service and the Wyoming Heritage Program of any ownership or management changes of the area outlined on the attached map.
- 5. If a recreational area is developed within the area designated on the attached map, the picking of flowers will not be allowed.
- 6. This management plan will be reviewed by Warren Air Force Base, the U.S. Fish and Wildlife Service, The Wyoming Heritage Program, and other interested parties in April 1987.

For the U.S. Fish and Wildlife Service

ACTING

/s/ John L. Spinks Jr.

\_\_\_\_\_  
Regional Director, Region 6

OCT 7 1986

\_\_\_\_\_  
Date

For the U.S. Air Force

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90 CSG Commander  
Francis E. Warren Air Force Base

\_\_\_\_\_  
Date

For the Wyoming Heritage Program

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Date

MEMORANDUM OF UNDERSTANDING  
BETWEEN  
FRANCIS E. WARREN AIR FORCE BASE  
DEPARTMENT OF THE AIR FORCE  
AND  
THE U.S. FISH AND WILDLIFE SERVICE  
DEPARTMENT OF THE INTERIOR

- I. SPECIES INVOLVED: Gaura neomexicana ssp. coloradensis (Colorado butterfly plant)
  
- II. INVOLVED PARTIES: U.S. Fish and Wildlife Service (USFWS), P.O. Box 25486, Denver Federal Center, Denver, Colorado 80225; and Francis E. Warren Air Force Base, Wyoming 82001.
  
- III. STATUS AND DISTRIBUTION OF THE SPECIES: Under the definitions of the Endangered Species Act, the species should be regarded as endangered. Originally discovered and described from Colorado, this member of the evening-primrose family is now restricted to two populations in southeastern Wyoming. Recent efforts by Federal, State, and local botanists have failed to locate the butterfly plant throughout much of its historical range.

Warren Air Force Base contains the habitat for the plant's largest population center. In 1981, approximately 3,500 plants were located growing along Diamond Creek and adjacent Crow Creek on the western half of the Base. This area serves as a refuge for the taxon, since no cattle grazing has occurred there since the turn of the century.

IV. PROBLEMS FACING THE SPECIES: Protection of the population occurring on Warren Air Force Base is vital to survival of the butterfly plant, since the largest known population is found on the Base. However, its safety is jeopardized by the spraying of herbicides to control weeds. Outside the Base, the plant is threatened by mowing of wild hay on private lands during its flowering season and intense cattle grazing pressures. In addition, any expansion of housing developments or construction of irrigation reservoirs along these greenbelts could further jeopardize its existence. Such direct destruction and habitat disturbances, combined with the biennial nature of its life cycle, have placed this evening-primrose in a precarious position.

V. CONSERVATION ACTIONS WHICH WILL BE CARRIED OUT: Warren Air Force Base will agree to not adversely affect the butterfly plant population through the spraying of herbicides along Diamond and Crow Creeks. The U.S. Fish and Wildlife Service and Warren Air Force Base shall develop a mutually acceptable weed management plan that will provide continuous protection to the butterfly plant. Plant ecologists from the Nature Conservancy in Cheyenne have agreed to assist in monitoring the species.

The U.S. Fish and Wildlife Service agrees to provide guidance in conducting inventories for the plant in similar habitats in the area.

A detailed management plan will be developed for the Colorado butterfly plant. The purpose of the management plan is to provide data needed to develop management guidelines and to implement protective measures that will avoid the necessity of federally listing this species.

The U.S. Fish and Wildlife Service agrees to consider this program of active species management in its review of status at the end of 1987 and make a determination as to whether or not the program has provided sufficient protection to ensure survival of the species.

VI. DURATION OF AGREEMENT: This Memorandum of Understanding shall be for a period of 2 years. The Air Force reserves the right to terminate this agreement in whole or part, in writing, at any time that installation mission or national security agreements necessitate such actions.

Annual monitoring of the species will be done in order to evaluate the success of the management and protection of the species. This agreement is in effect on the date signed by both parties. This agreement can be terminated at any time by mutual consent.

VII. PROJECT OFFICERS:

U.S. Fish and Wildlife Service  
Ms. Carol Taylor, Staff Biologist  
Fish and Wildlife Enhancement  
Federal Building and U.S. Courthouse  
301 South Park, Room 494  
P.O. Box 10023  
Helena, Montana 59626

Warren Air Force Base  
Mr. William Metz, Environmental Engineer  
90th Civil Engineering Squadron (SAC)  
F.E. Warren Air Force Base, Wyoming 82001

VIII. SIGNATURES

For Warren Air Force Base:

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90 CSG Commander, WAFB

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Date

For U.S. Fish and Wildlife Service:

/s/ John L. Spinks Jr.

OCT 7 1986

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Regional Director, Region 6  
USFWS

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Date

ACTING

A. Goals and Objectives of the Plan:

1. Protect the major existing populations of Gaura neomexicana ssp. coloradensis, located at Warren Air Force Base. This will be accomplished by developing interim and long-term management guidelines for the protection of the habitat essential to this species--in particular, the prevention of any surface-disturbing activities that will adversely affect the species. Such activities include, but are not limited to, the spraying of herbicides in the butterfly plant's habitat.
2. Determine the present range, distribution, abundance, and population status of Gaura neomexicana ssp. coloradensis. A study is expected to be completed in February 1987.
3. Determine the present uses, conditions, and trend of the primary habitat for this species.
4. Using data from field surveys and site inventories, determine what is essential habitat for this species and how much is needed to support a viable, stable population.
5. From inventory data collected, develop recommendations as to whether this species should be officially listed, maintained as a candidate with a need for further study, or removed from consideration for legal Federal protection.