



UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

ECOLOGICAL SERVICES
3616 W. Thomas, Suite 6
Phoenix, Arizona 85019

90
2-21-90-F-085

February 26, 1990

Chief, Regulatory Branch
Los Angeles District
Army Corps of Engineers
P.O. Box 2711
Los Angeles, California 90053

Dear Mr. Holt:

This biological opinion is our response to your January 29, 1990 request to initiate formal consultation pursuant to Section 7 of the Endangered Species Act (Act) or 1973, as amended. The action under consultation is the application (Number 90-106-RD) for a Section 404 permit under the Clean Water Act. The applicant, Tortolita Mountain Properties (TMP), seeks a permit from the Army Corps of Engineers (Corps) to place fill into waterways of the United States as part of their housing development located near Tucson, Pima County, Arizona. This consultation was initiated on February 3, 1990, the day we received your request.

The species of concern in this consultation is Tumamoc globeberry (Tumamoc macedougalii).

BIOLOGICAL OPINION

It is my biological opinion that conducting this project as described in the biological assessment provided by the Corps is not likely to jeopardize the continued existence of Tumamoc globeberry (globeberry).

BACKGROUND INFORMATION

Tumamoc globeberry was added to the list of endangered species on April 29, 1986 (51 FR 15906). This desert vine is found under trees and shrubs, which act as nurse plants and provide physical support for the vine. The vines, which arise from a large underground tuber, begin annual growth during the late summer and continue growing until the onset of cool weather and short days in November. Plants are dormant (no living aboveground growth) during the winter and spring. The habitat requirements of Tumamoc globeberry are poorly understood.

Recent surveys by F.W. Reichenbacher and Associates (pers. comm. 1990) indicate that Tumamoc globeberry occurs from the Rio Yaqui in southern Sonora, Mexico, north nearly to the Gila River in southern Arizona below 3,000 feet elevation. In Pima County, Arizona, Tumamoc globeberry occurs in isolated, discrete populations that are separated by large areas of apparently suitable but unoccupied habitat. In Arizona, the species grows in a variety of plant communities, including paloverde-saguaro, creosotebush-bursage, and saltbush. In Sonora, populations are more frequent within suitable habitat.

The species is threatened by loss of habitat due to agricultural and urban development and road building, recreation, degradation of habitat due to livestock grazing, off-road vehicle traffic, and predation by javelina. Populations occur within and around the perimeter of the city of Tucson, leading the Fish and Wildlife Service (Service) to believe that an unknown number of populations of Tumamoc globeberry have been lost to urban expansion.

IMPACTS OF THE ACTION

TMP is proposing to build a housing development on a 1,867-acre tract in the southwestern corner of the Tortolita Mountains. TMP is proposing to leave 581 acres in the northwestern part of the tract as undisturbed open space. In addition, drainages under the jurisdiction of the Corps will be left undisturbed, except in areas where proposed access roads will cross them. As currently planned, TMP is proposing to disturb 3.45 acres within these washes. Seven Tumamoc globeberry plants were located in the project area by F.W. Reichenbacher and Associates using methods described in the biological assessment.

No Tumamoc globeberries were found in the areas near the washes that will be disturbed by road construction. Therefore, the Service believes that the placement of fill and construction of drainage crossings will have no direct effect on Tumamoc globeberry.

As currently proposed, completion of the proposed housing development depends on the issuance of a Section 404 permit. Because Tumamoc globeberry is found on the area to be affected by the permit, the proposed federal action will have interdependent effects on the species. The globeberries and their habitat are likely to be lost during development because the currently proposed development plan allocates no significant open space in the area where the globeberries are found.

In addition to causing the loss of globeberry plants, the housing development is likely to cause changes in the flood frequency in Ruellas Wash and other drainages. The new flood frequency is unlikely to directly affect the globeberries where they are currently located. However, changing the flood frequency may change the patterns of soil loss and deposition thus affecting the health, size, or movement of globeberry populations.

Indirect effects of the permit will be those effects occurring as a result of the actions carried out under the permit. The new roads will increase access to the area and the housing development will increase the use of open space in the vicinity. Therefore, recreational uses of open space such as hiking and off-road vehicle traffic could increase, causing loss and potential degradation of the habitat.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. The term "conservation recommendations" has been defined as suggestions of the Service regarding discretionary measures to minimize or avoid adverse effects of a proposed action on listed species or critical habitat or regarding the development of information. The following are the Service's Conservation Recommendations:

The Service recommends that the globeberry plants be removed from their current location and be planted in alluvium near Ruellas Wash, an area to be left undisturbed under the currently proposed plan. The plants should be moved during the dormant season by a professional biologist with experience in transplanting Tumamoc globeberry. The soil surrounding the tuber should be "boxed" and moved along with the tuber. The procedure should be documented with photographs.

Soon after the transplant, a report should be provided to the Service regarding the methods used during the boxing and transplanting. Detailed notes should be kept regarding the techniques used, approximate amount of soil moved, exact locations of transplants, estimated age/size class of the individuals, and any other information that would be useful in understanding the reasons for survivorship or death of transplanted plants.

The transplants should be checked every three months for a period of 24 months. Supplemental watering may be necessary, particularly if rainfall is below normal. The plants should be photographed once per season and incorporated into the final report.

A second report will be due two growing seasons after the plants have been transplanted. The report will contain information about transplantation methods, survival rate, and suggestions for future method improvements. One report should be submitted to the Fish and Wildlife Service and another should be submitted to the Arizona Game and Fish Department.

The Service recommends that the site be fenced to protect transplanted plants from off-road vehicle traffic that could be a consequence of nearby development. We believe an unobtrusive fence that would merely channel traffic away from the site should be sufficient; a complete enclosure is probably unnecessary.

This biological opinion concludes formal consultation on this action. Reinitiation of formal consultation is required if new information reveals effects of the action that may affect listed species or critical habitat in a manner or extent not considered in this opinion, and/or if new species are listed or critical habitat is designated that may be affected by the action.

If we may be of further assistance, please contact Sue Rutman or Sam F. Spiller (Telephone: 602/379-4720 or FTS 261-4720).

Sincerely,

A handwritten signature in cursive script, appearing to read "Gilbert D. Metz".

Gilbert D. Metz
Acting Field Supervisor

cc: Regional Director, Fish and Wildlife Service, Albuquerque,
New Mexico (FWE/HC)
Director, Arizona Game and Fish Department, Phoenix, Arizona