



**Invitation for Public Involvement in Developing
an Environmental Assessment on Raven Management to Protect
the Federally and State-listed Threatened Desert Tortoise in California
July 16, 2004**

You are invited to participate in the planning process and provide comments for the development of an Environmental Assessment to protect the Federally and State-listed threatened desert tortoise (*Gopherus agassizii*) from predation. Common ravens (*Corvus corax*) prey upon hatchling and juvenile tortoises. This predation has resulted in reduced survival rates of young tortoises (Boarman 1993) and may be lowering recruitment into the breeding population (Fish and Wildlife Service 1994).

Why start now?

The U.S. Fish and Wildlife Service (FWS) listed the desert tortoise as “threatened” under the Endangered Species Act on April 2, 1990. The threatened status means that further decline could place the population in danger of extinction.

Desert tortoise populations have declined over most of the distribution in California and precipitously in many areas (Berry 1990, Fish and Wildlife Service 1994, Corn 1994). Conflicting human activities have been reduced in many areas to enhance habitat quality and reduce mortality to first stabilize and secondly increase tortoise populations. Despite these efforts, populations cannot stabilize or increase unless there is a steady stream of young tortoises recruited into the breeding population at levels sufficient to replace or surpass the natural mortality of adults (Congdon *et al.* 1993, U.S. Fish and Wildlife Service 1994). Numerous researchers have documented common ravens preying on hatchling and juvenile desert tortoises (Campbell 1983, Berry 1985, Woodman and Juarez 1988, Boarman 1993). Populations of common ravens have increased by more than 1000 percent during the last few decades due in large part to human subsidies of food, water, and nesting sites (Knight *et al.* 1993, Boarman and Berry 1995). At these elevated population levels, ravens can prey on a substantial proportion of young desert tortoises in some areas and adversely affect recruitment. This predation can also include other small animals such as lizards and small mammals. Thus, there is a need to reduce raven predation on hatchling and juvenile tortoises so that survivorship is sufficient to replenish natural and human-induced losses of adults. There is also a need to return to a balanced predator-prey relationship in the California desert between ravens and other prey species.

What do we want to accomplish?

The objective of this proposal is to reduce raven predation on the desert tortoise and increase tortoise recruitment.

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What is the Proposed Action?

The proposed action is to implement an integrated raven management program using the most effective, selective, and humane tools available to deter or remove ravens responsible for predation on juvenile tortoise. The following tools would be available as possible options:

Non-lethal tools would be used to reduce human factors that have contributed to raven populations increasing to abnormally high levels. Methods used could include any or all of the following depending upon the circumstances: reduce or eliminate human food subsidies, reduce the availability of carcasses of road-killed animals along highways in tortoise habitat, reduce available water, remove raven nests outside the nesting season in and within 2 miles of tortoise management areas, and reduce nesting locations in desert tortoise habitat.

Lethal tools would be used to remove ravens known to have preyed upon the desert tortoise. Methods used could include any or all of the following depending upon field circumstances: shooting, live capture and euthanasia, and use of toxicants. Young ravens and eggs found in nests of removed adults would be euthanized humanely if they can be captured safely.

What is the decision to be made?

The Endangered Species Act Requires all Federal Agencies to use their authorities to enhance the recovery of Federally listed species, such as the desert tortoise. The U.S. Fish and Wildlife Service is the lead agency in this proposal. The lead agency will make the following decision based on the interdisciplinary analysis that will be contained in the Environmental Assessment:

- How can the lead agency and its cooperating agencies best respond to the need for action to protect the desert tortoise from further decline by raven predation?
- What might be the environmental effects of implementing various alternative strategies?

Who are the cooperating agencies and where would the project occur?

Several agencies are cooperating with the U.S. Fish and Wildlife Service in the preparation of the Environmental Assessment and/or implementation of the program including the Bureau of Land Management, National Park Service, U.S. Marine Corps, U.S. Air Force, U.S. Army, and the U.S. Navy. The overall effort is being coordinated by the Desert Manager's Group (DMG). The DMG is an interagency group that is promoting the development of cooperative land and resource management practices in the California Desert. The U.S. Department of Agriculture's Animal and Plant Health Inspection Service, Wildlife Services program, is authorized by federal law to provide leadership and assistance in wildlife damage management and is involved in the preparation of this proposal.

The selected actions could occur at or around any or all of the "tortoise management areas" including designated Desert Wildlife Management Areas (DWMAs), critical habitat, and NPS Units (please see attached map).

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What are the areas of concern?

The lead and cooperating agencies have determined that these issues may be important for the analysis and may need to be considered by the decision maker. Issues drive the analysis and are used to compare the environmental impacts of the various management strategies. These questions and/or others may be answered in the Environmental Assessment.

- How effective might the various alternative strategies be on protecting the desert tortoise from raven predation? How does the effectiveness of each strategy compare in meeting the objectives of the proposal? How is the effectiveness of the implemented action going to be verified?
- What would be the impacts on raven populations? How would management strategies affect local or regional raven populations?
- What potential non-target impacts could occur by implementing the various alternatives? Would any of the strategies adversely affect human safety or pets?
- How do the public and technical experts perceive the humaneness of the various non-lethal and lethal methods?
- How might the alternative actions affect recreation and other land uses?
- What would be the cumulative and indirect effects of the proposal?

What other actions are being considered?

No Action. This alternative would maintain the status quo, and not involve additional action. This can be thought of as the current “program” alternative. It consists entirely of efforts that are being made now: reducing trash availability at landfills and illegal dumps, limited fencing along highways to reduce road-kills, limited educational outreach to local desert communities.

Non-lethal Methods only. This alternative would allow for implementation of only non-lethal methods to prevent or deter ravens from tortoise management areas. Any or all of the non-lethal efforts listed under the proposed action could be used.

Remove Additional Ravens. This alternative would implement the proposed action and would include the removal of any ravens found within a tortoise management area whether or not it they are known to have preyed upon tortoise. Any or all of the lethal efforts listed under the proposed action could be used.

Target Raven Concentrations. This alternative would implement the proposed action with the addition of targeting ravens at known concentration centers (e.g. landfills) whether these concentration points are in tortoise management areas or not and without knowing if the specific ravens had preyed upon tortoise.

Based upon comments obtained through this public involvement process, other alternatives and issues may be included in this analysis, or the alternatives listed above may be modified.

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How to get involved

We encourage you to help by answering the following questions. All of the information we receive will be considered in the analysis process:

- What is your relationship (recreationist, concerned citizen, etc.) to the proposed project or to the potential environmental impacts of raven management to protect desert tortoise?
- What issues do you think are important to consider in this analysis? What are your concerns with raven management and protecting desert tortoise?
- How do you desire and expect desert tortoise predation to be managed? Which alternatives (management strategies) should be considered for resolving desert tortoise management?

Where to send comments

We invite you to send written comments on the proposal to the address below. Because time is of the essence, comments should be received by August 16, 2004 to ensure full consideration. Faxed comments should also be mailed. We will send you a notice when the Environmental Assessment is available. Electronic copies of Environmental Assessment will be available on the web (www.dmg.gov) or can be emailed to you. A printed copy will be sent, only upon request. Please be sure to include your return mailing address or email in your correspondence.

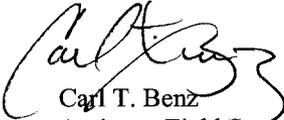
Address comments to:
USFWS Raven Management Environmental Assessment
c/o Amy L. Fesnock
Joshua Tree National Park
74485 National Park Drive
Twentynine Palms, CA 92277

Phone: 760-367-5578

Fax: 760-367-5588

Email: amy_fesnock@nps.gov, with subject indicating Raven Management

Thank you for taking the time to read this notice. We look forward to receiving you comments. Your contribution will help us make the best possible decision on protecting the threatened desert tortoise from further decline due to raven predation.


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