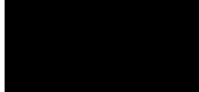


Donald W. Parrish



01 May 07

FISH AND WILDLIFE
SERVICE

MAY 03 2007

RECEIVED
VENTURA, CA

Field Supervisor
Attn: Raven EA
U.S. Fish & Wildlife Service
2493 Portola Road, Suite B
Ventura, CA 9300

Dear Sir,

Please note the enclosed note from the F&WS, so you will know what I am commenting about. It got lost in the pile of mail and just surfaced, so I hope this comment arrives in time to be included in the thinking.

I was born in 1929 in Needles and spent a lot of time in the New York Mountain area, and think that my observations over that many years might be pertinent to your project. In my youth, it seemed that we saw tortoises along the road practically every trip, and the only place we ever saw any ravens was around Muroc, west of Barstow. I don't recall when ravens arrived in the area now included in the East Mojave National Preserve, but I do recall connecting it with the lessening of the tortoise population when, on one particular trip between Goffs and Lanfair, just after I had noted to my travel companions that I had not had to steer around any tortoises along the road, I saw three separate ravens flying along with what looked like ping-pong balls in their beaks. My "ping-pong balls" were obviously enough tortoise eggs.

My input into the current problem is that travelers through that area should be allowed, and encouraged, to carry a rifle and shoot on sight any raven that comes within range. Open season. Year around. Maybe even with a \$1.00 bounty for every raven dispatched, just to help keep track of how effective the ploy might be.

Keep my name on your list to hear any developments in this problem.

Serenely Yours,

DW Parrish

Response to D. Parrish, Private Citizen Comments

Thank you for your observations and your suggestion. We considered the public's suggestion received during the public scoping period to establish a hunting season or bounty for the common raven. Establishing a hunting season or bounty on the common raven in California would require Congress and the state legislature to change existing Federal and State laws. This process is lengthy and there is no guarantee of success in the near term.



KERN COUNTY WASTE MANAGEMENT DEPARTMENT

Daphne B. Harley, Director
2700 "M" Street, Suite 500
Bakersfield, CA 93301-2372
(661) 862-8900
(800) 552-KERN (option 6)
Fax: (661) 862-8905
<http://www.co.kern.ca.us/wmdl>

May 7, 2007

"Via Facsimile and U.S. Mail"

Field Supervisor
Attn: Raven EA
U.S. Fish and Wildlife Service
2493 Portola Road, Suite B
Ventura, CA 93003

FISH AND WILDLIFE
SERVICE

MAY 09 2007

RECEIVED
VENTURA, CA

RE: Draft Environmental Assessment to Implement a Desert Tortoise Recovery Plan task: Reduce Common Raven Predation on the Desert Tortoise (Draft EA)

Dear FWS Field Supervisor:

Thank you for the opportunity to review the Draft EA for the above-referenced plan. The plan consists of four alternatives to reduce common raven predation on the desert tortoise in the Mojave and Colorado portions of the California desert. The Kern County Waste Management Department (KCWMD) has reviewed the draft EA and has submitted comments within this letter.

KCWMD operates, or is responsible for the following solid waste facilities within or near the plan area.

Kern County Waste Management Department facilities and sites within the Draft EA Area:

- Mojave-Rosamond Sanitary Landfill
- Mojave Burn Dump No. 1
- Mojave Burn Dump No. 2
- Ridgecrest Sanitary Landfill
- Ridgecrest Burn Dump No. 1
- Ridgecrest Burn Dump No. 2
- Boron Sanitary Landfill
- Boron Burn Dump
- Randsburg Transfer Station
- Randsburg Burn Dump
- Inyokern/Indian Wells Burn Dump No. 1
- Inyokern/Indian Wells Burn Dump No. 2
- College Heights Burn Dump
- Rosamond-Edwards Burn Dump
- Tropico Burn Dump

Response to Kern County Waste Management Comments

We provided information and analysis in the EA on the definition of significant under the National Environmental Policy Act (NEPA) and the Council on Environmental Quality's regulations. Implementation of any of the alternatives is not considered a significant impact under NEPA. Any potential analysis of or changes to current operations at any of the waster management facilities operated by Kern County or other counties would occur through coordination with Kern County Waste Management. If issues are identified at specific facilities, we would work with Kern County Waste Management to develop and implement practical solutions, monitor results, and implement adaptive management.

The Kern County Waste Facilities Habitat Conservation Plan (KCWF-HCP) was adopted on October 14, 1997 by the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Game (CDFG), and the KCWMD. The purpose of the KCWF-HCP is to ensure that take of listed species is avoided and minimized to the maximum extent practicable and to compensate for any habitat loss as a result of facility operations. The KCWF-HCP covers the Mojave-Rosamond Sanitary Landfill, Ridgecrest Sanitary Landfill, and the Boron Sanitary Landfill. KCWMD is currently working with USFWS and CDFG to develop an amendment to the KCWF-HCP that will include the other listed KCWMD facility sites.

Eleven historic burn dumps are located within the EA plan area. A burn dump is a site where in the past, solid waste was burned at low temperature and the residual burn ash and debris have been landfilled or stockpiled. Burn dumps typically contain little biodegradable organic material because of the combustion of waste materials and the age of the sites. Burn dumps were phased out in the early 1970's in response to federal and state air quality legislation. Most burn dumps are considered closed sites as their operations ceased prior to the development of regulations addressing the closure of disposal sites, provided that these sites were operated under applicable permits at the time.

Desert Tortoise Recovery Plan: 3.3 Objectives of the Proposed Action

3.3.1. b. Reduce or eliminate human-subsidized food and water for the common raven—*We would coordinate with local waste management companies, and local, state, and federal agencies to reduce raven access to organic wastes and standing water at locations such as landfills and transfer stations. We would work with local, state, and federal agencies to clean up unauthorized dumps and develop incentives for the public to report unauthorized dumping, trash containment, or watering.*

Working with local, state, and federal agencies, we would encourage an enhanced level of enforcement of existing regulations on trash management and water use. If needed, we would work with local agencies to develop and implement additional regulations to reduce human-provided subsidies of food and water to the common raven.

Comments

The Kern County Waste Management Department (KCWMD) owns and operates three landfills within the Draft EA Plan area. These landfills are designed and operated in compliance with applicable rules and regulations of the governing agencies, including but not limited to: United States Environmental Protection Agency (USEPA), California Department of Health Services (LEA), Kern County Air Pollution Control District, Lahontan Regional Water Quality Control Board, and the California Integrated Waste Management Board (CIWMB). Verification of compliance is demonstrated at the point of Solid Waste Facility Permit application submittal.

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Response to Kern County Waste Management Comments

These landfills are operated under permits issued to KCWMD. Actual day-to-day operation of these sites is conducted by private contractors under agreement with the County. These facilities are located on land owned by the County of Kern. All three facilities are Class III Landfills as defined in Title 27 California Code of Regulations (CCR) Section 20260(a).

These landfills are approved to receive non-hazardous solid wastes, inert solid wastes, treated medical wastes, dead animals, and demolition waste. Liquid waste, sludge, waste requiring special handling, universal waste, hazardous waste, burn waste, and auto shredder waste are not accepted for disposal. Many items may be collected for recycling and waste diversion such as green waste, white goods, tires, cathode ray tubes (CRTs), and universal wastes per Title 22 CCR, etc.

KCWMD sanitary landfills are operated by contractors whose day-to-day operational activities are set out in an Operational Agreement, a contractual agreement negotiated between the KCWMD and the operations contractor. An integral part of that agreement is the application of daily cover at the site. Cover of waste is determined by best management practices developed by waste management professionals and authorized by CIWMB and the LEA. Deviation from LEA approved cover operations is a violation of the solid waste facility permit. Current federal regulations, 40 Code of Federal Regulations (CFR), Subtitle D, only require cover at the end of the operating day. Daily cover consists of a minimum of six inches of clean soil or an LEA approved alternate daily cover (ADC), such as a geosynthetic tarp. In general, the operator maintains a small, compacted working face that is covered on a daily basis. This type of design and operation minimizes the propagation or harborage of flies, rodents or other vectors and the creation of nuisances. These practices help maintain air and water quality, noise control, odor control, public safety and other pertinent matters related to the protection of public health.

Blank Page - See Above Comment

The active reduction of raven populations over a large area could be considered a significant impact under CEQA/NEPA as these animals are covered under the federal Migratory Bird Treaty Act. No baseline has been established for endemic ravens in the Mojave. No threshold has been established as to what constitutes "too many ravens" at a site. Raven reduction is the proposed goal, but reduction to what number is not defined. Bird population minimization at landfill sites is a required operational activity, but should be at the judgment of site operators and inspectors. Covering the working face of a landfill multiple times a day, without regard to the number of birds present, and with no guidance as to what constitutes excessive bird numbers would not be a viable operation standard. Title 27 California Code of Regulations (CCR), Section 20810, **Vector and Bird Control**, states:

The operator shall take adequate steps to control or prevent the propagation, harborage and attraction of flies, rodents or other vectors, and animals and to minimize bird attraction.

Response to Kern County Waste Management Comments

KCWMD facilities (by permit) do not accept liquid waste. Standing water is not acceptable on a sanitary landfill by operational standards. Storm water collection sumps occur on all landfills. Storm water is managed in accordance with appropriate federal and state regulations including National Pollution Discharge Elimination System (NPDES) requirements in response to federal regulations promulgated in 1972 by the Water Pollution Control Act and codified as final regulations in 1990 in Title 40 of the Code of Federal Regulations, Part 122 (40 CFR 122).

There is no gate fee for Kern County residents disposing of residential solid waste at KCWMD facilities. The absence of a gate fee for residential solid waste disposal displaces the incentive for illegal dumping.

Transfer Stations (TS) and bin sites contain bins with closable tops. Signage at bin sites reminds the general public to close lid after depositing their waste into the containers. KCWMD staff all TS and bin sites during days and hours these sites are open to the general public. The staffs coordinate and direct the public in the proper disposal of waste into the containers. It is staff responsibility to make sure the public place their waste into the containers and the tops are closed. Transfer stations and bin sites are cleaned by manual and/or mechanical means on a daily basis to remove loose material and litter. Receptacles are available at TSs and Bin sites. Landfills accept waste only at the working face.

Existing Kern County ordinances prohibit illegal dumping. Matters of illegal dumping are handled by County's Code Compliance Division.

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KCWMD is supportive of the establishment of a Desert Tortoise Recovery Plan. KCWMD is determined to continue its mission of providing the citizens of Kern County with safe, environmental sound waste disposal. KCWMD's concerns center on how the Desert Tortoise Recovery Plan EA will influence two major issues:

- 1) Cost of doing business,
- 2) Regulation of disposal practices.

Issues of increased costs are always a major concern. Increases in mandated mitigation, be it additional days and hours of operation, increased frequency of cover, additional fencing, or early closure of a facility, can represent substantial operational costs. Mandated changes in operations will require renegotiation of the Operational Agreement with the contracted operator. Mandated changes should be based on sound science and defined with objective action thresholds.

Issues of regulated practices which could result in denial or delay of facility repermit will have major impacts on quality of service to constituents, costs of operation and the remediation and maintenance of historic burn dumps. KCWMD has no current plan to site a new solid waste disposal facility in the EA plan area. However, KCWMD needs to maintain its ability to expand permitted facilities as need arises.

Response to Kern County Waste Management Comments

Any change in operational practices requires the approval of the LEA, CIWMB and possibly the Regional Water Quality Control Board for that specific operational area and may require CEQA analysis. If the EA results in proposed operational changes to Kern County's Waste Management facilities these should be treated as "reasonably foreseeable effects" and analyzed as part of the environmental review process of the EA.

KCWMD appreciates the opportunity to comment on the Draft EA. Please add the KCWMD to the mailing list for all activities related to the proposed plan. If you have any questions, please contact Franklin Bedard, Waste Management Specialist, at (661) 862-8992.

Sincerely,
DAPHNE B HARLEY, DIRECTOR



By: Nancy L. Ewert, P.E.
Engineering Manager
Technical Resources Division

Blank Page - See Above Comment



IN REPLY REFER TO:
N1621(MOJA)

May 7, 2007

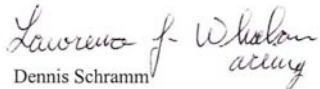
Memorandum

To: Field Supervisor, US Fish and Wildlife Service, Ventura Field Office
From: Superintendent, Mojave National Preserve
Subject: Draft Environmental Assessment for Proposed Raven Management

Thank you for the opportunity to review and comment on the draft Environmental Assessment for Proposed Raven Management (March 2007). Mojave National Preserve previously submitted comments to the US Fish and Wildlife Service regarding the proposal to control raven populations within the range of the Mojave population of desert tortoise (*Gopherus agassizii*) (multiple working group meetings 2005-2007, plus correspondence dated July 6, 2005). Our opinions remain unchanged from these previous discussions.

Although the National Park Service is a member of the Desert Managers Group and has participated in discussions leading to the development of this environmental assessment, it, on behalf of Mojave National Preserve, is not a lead for this National Environmental Policy Act (NEPA) process and will not be a signatory on the decision document. The US Fish and Wildlife Service will need to apply for a special use permit to carry out any wildlife management practices within Mojave National Preserve. The NPS permitting process includes NEPA compliance and requires a decision separate from the current EA process.

If you have any questions or concerns, please feel free to contact Mr. Larry Whalon, *Acting* Deputy Superintendent, at (760) 252-6140.


Dennis Schramm

FNP: DWoo:760-252-6107:dw:05/07/07:07may07_EA_comments-memo_to_fws.doc

Response to Mojave National Preserve Comments

We will comply with all applicable Federal, State, and local laws and regulations in implementation of the proposed action. This includes obtaining any permit needed prior to implementation of an action that requires a permit.

**DEPARTMENT OF AGRICULTURE/
WEIGHTS AND MEASURES**

777 East Rialto Ave., San Bernardino, CA 92415-0720
(909) 387-2105 • Fax (909) 387-2449
1-800-734-9459 <http://www.sbcounty.gov/awm/>



COUNTY OF SAN BERNARDINO
PUBLIC AND SUPPORT
SERVICES GROUP

JOHN G. GARDNER
Agricultural Commissioner/Sealer
ROBERTA Y. WILLHITE
Assistant Agricultural
Commissioner/Sealer

April 24, 2007

U.S. Fish and Wildlife Service
Raven Management Environmental Assessment
c/o Judy Hohman
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003

FISH AND WILDLIFE
SERVICE

APR 27 2007

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VENTURA, CA

Re: Environmental Assessment for Proposed Raven Management

The population of the desert tortoise, *Gopherus agassizii*, in the California desert has been adversely impacted by a number of factors. The common raven, *Corvus corax*, a known predator of the desert tortoise, conversely has thrived as human-provided food, water and nest sites have proliferated throughout many parts of the desert. As a result, depredation pressure has increased substantially and is a significant factor in the decline of the desert tortoise.

The alternatives proposed to alleviate raven depredation are appropriately multi-faceted and address the conditions which have favored the raven population increase. However, the proposals do not provide the level of relief necessary to significantly assist the desert tortoise recovery.

The common raven population has increased 700% in the western Mojave Desert and 70% in the eastern Mojave Desert between 1968 and 2004 according to the breeding bird survey cited in your proposal. While only approximately 5% of the common raven nest sites showed clear evidence of desert tortoise depredation (McIntyre, 2006), ravens do not bring everything they eat back to their nest site. Depredation by a higher percentage of the population is likely to be occurring.

The common raven has a typical annual reproduction rate of 2.4% (Sauer, et. al. 2003) while the desert tortoise has a much lower reproduction rate. Given the current imbalance in population between the common raven and the desert tortoise, a more aggressive removal plan for ravens than detailed in the proposals would afford the desert tortoise a greater opportunity to recover. Alternative B would remove 2.4% of the raven population. At this level, removals would be in balance with reproduction and would not alleviate the depredation pressure caused by the current abundance of ravens in the region. The additional effort to remove human-provided food, water and nest sites will reduce the raven population over time but may be negated by increases in the number of people living in the region. According to your report, the common raven was not common prior to 1940. Perhaps it would be appropriate to consider removal efforts that would return the raven population to its historic levels rather than efforts which would merely maintain an undesirable status quo between the population of ravens and tortoises.

MARK H. UFFER
County Administrative Officer

NORMAN A. KANOLD
Assistant County Administrator
Public and Support
Services Group

Board of Supervisors

PAUL BIANE, Chair Second District GARY C. OVITT, Vice-Chair Fourth District
BRAD MITZELFELT First District DENNIS HANSBERGER Third District
JOSIE GONZALES Fifth District

**Response to San Bernardino County Department of
Agriculture/Weights and Measures Comments**

We have selected the phased implementation of Alternative D as the preferred alternative.

We have added your information about annual reproduction rates in the EA.

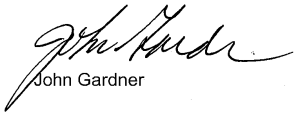
**Response to San Bernardino County Department of
Agriculture/Weights and Measures Comments**

A reduction in the availability of human-provided food will eventually result in a decline of the raven population, but the short-term effect will most likely be an increase in depredation of desert tortoises as the raven seeks out any available food sources. Reducing human-provided nest sites will have a marginal effect on the raven population as ravens also nest in rock outcroppings and trees.

Implementing Alternative B would have a negligible effect on raven depredation and would be difficult since this alternative focuses on the removal of pairs of ravens. This necessitates the locating of nesting sites, a time-consuming and thus, expensive process.

To achieve the goal of reducing raven depredation on the desert tortoise, Alternative D affords the most significant impact. While more expensive, it provides a level of reduction in the raven population that would not need to be sustained indefinitely as would be required by Alternative B. Further, by focusing on the removal of ravens from the desert tortoise management areas (DTMA), the birds most likely to be depredating are being removed. The reduction of ravens outside these areas at landfills and common roost sites would help prevent reintroduction of ravens into the DTMA. Some program costs for Alternative D could be reduced by using sites in the DTMA where garbage exists or is purposely placed temporarily as a lure to ravens in the area.

Even with the higher number of ravens removed under Alternative D, a significant level of ravens, well-above their historic pre-1940 level, would continue to exist. But, depredation levels after implementation of Alternative D would be significantly lower. All references cited are in your environmental assessment.



John Gardner

cc San Bernardino County Range Improvement Advisory Committee

Blank Page - See Above Comment

Response to K. Stratton, Private Citizen Comments

Thank you for your comments on the Draft EA. We have recorded your comments and noted your suggestion.

April 17, 07

U.S. Fish + Wildlife Service

Raven Management

2493 Portola Rd. St. B

Ventura, CA 93003

FISH AND WILDLIFE
SERVICE

APR 20 2007

RECEIVED
VENTURA, CA

Attn: Judy Hohman,

Yes, the raven is a scavenger. That means that everytime a ground squirrel, rabbit or whatever is hit crossing a road the raven cleans it up for us. IF the animal is left to rot and smell it will attract rats and mice. Then we will have many more rodents to come into your yard and homes.

Yes, the ravens will snatch a baby tortoise, they also hunt baby mice, rats, and snakes. IF we do not allow them to do their job we will be over run with rodents you don't want in your homes.

Yes, the ravens are scavengers, they are also smarter than most dogs,

(2)

they mate for life and they keep
our streets and deserts clean for us.

Tell the restaurants to close their
dumpsters or fine them, why should
we have to deal with all their trash?

Yes, the ravens are scavengers
and we should all be grateful.

Please reconsider your position and
help us all.

Kathleen Stratton
Kathleen Stratton



Copies sent to: Governor, Newspapers, WWF,
Natures Voice, Earth Justice, 29 News

Response to K. Stratton, Private Citizen Comments

Blank Page - See Above Comment

Response to L. Harper, Private Citizen Comments

Linda

From: "Linda" [REDACTED]
To: <fws8drafravenea@fws.gov>
Sent: Friday, May 04, 2007 12:22 PM
Subject: Raven/ Tortoise

You seem to ignore 2 problems in the Newberry Springs area that may be adding to the death of the beautiful tortoise.

1. Unrestricted, unmonitored use of quads and dirt bikes around dry Mojave River bed in the Newberry Springs area. This tears up normal desert flora and fauna, never to grow again. Weekenders visiting the area seem to be the main culprits.
2. Intentional growing of grain crop by Fish and Game for hunters on Harvard Rd and Mojave River bed. This attracts ravens to the area and encourages off road use.

Please follow up with me about my concerns.

Sincerely,
Linda Harper

[REDACTED]

Thank you for your comments on the Draft EA. We are not sure how unrestricted use of quads and dirt bikes around Mojave River in Newberry Springs contributes to common ravens preying on the desert tortoise. The CDFG grows the grain to benefit upland game birds. They use the water to maintain the vegetation in the area which minimizes blowing dust and sand in this dry portion of the Mojave River.



Response to D. Hubbard, Ecologic Partners Comments

Thank you for your comments on the Draft EA. We have selected the phased implementation of Alternative D as the preferred alternative.

May 7, 2007
By Fax and U.S. Mail

U.S. Fish and Wildlife Service
Raven Management Environmental Assessment
Ventury Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003
Fax: (805)644-3958
FW8drafravenca@fws.gov
San Diego, CA 92101

Attn: Judy Hohman

Re: Comments on Raven Management Environmental Assessment

Dear Ms. Hohman:

I represent EcoLogic Partners, Inc. ("EcoLogic"), which is a consortium of organizations dedicated to protecting family recreational opportunities throughout the United States. We commend the Bureau of Land Management ("BLM") and the Fish and Wildlife Service ("FWS") for researching raven predation of juvenile desert tortoises and for determining that such predation is a serious threat to tortoise recovery. We are likewise pleased that BLM and FWS have developed a rational plan for addressing this threat; it is long overdue.

In reviewing the Environmental Assessment ("EA") prepared by FWS for the proposed Raven Management Plan, we were struck by its high level of analytical rigor and by the number of alternatives that were evaluated. Although styled as an EA, the document, for all intents and purposes, functions as a full-blown Environmental Impact Statement ("EIS") and should be treated as such. It meets – and in most cases, exceeds – the NEPA standards for EISs. We applaud FWS for putting together such a strong document.

With respect to the alternatives presented in the EA, we support Alternative B (the preferred alternative) but have some concerns that it may not provide a comprehensive or long-lasting solution to the raven predation problem, which is itself a product of explosive raven population growth. For this reason, we would recommend that FWS opt for Alternative C or D,

EcoLogic Partners, Inc • 960 Canterbury Place, Suite 220 • Escondido, CA 92025
Tel: 760.432.9917 • Fax: 760.743.9926 • www.ecologicpartners.org

U.S. Fish and Wildlife Service
May 7, 2007
Page 2

Response to D. Hubbard, Ecologic Partners Comments

as these would more aggressively deal with both known and potential sources of raven predation, while still leaving adequate numbers of the birds in place.

Finally, while we accept the fact that lethal means of removing some ravens may be required to effectuate the plan, we at EcoLogic support a graduated approach to raven removal, one where lethal means are used only after non-lethal methods have proved insufficient.

Thank you for this opportunity to comment on this important federal action.

Very truly yours,



DAVID P. HUBBARD, ESQ.

Blank Page - See Above Comment



**ANIMAL
PROTECTION
INSTITUTE**

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API
PRIMATE
SANCTUARY
Dilley, TX
www.api4primates.org

FISH AND WILDLIFE
SERVICE

APR 25 2007

RECEIVED
VENTURA, CA

April 20, 2007

Field Supervisor
Attn: Raven EA
U.S. Fish and Wildlife Service
2494 Portola Road, Suite B
Ventura, CA 93003

RE: Draft Environmental Assessment to Implement a Desert Tortoise Recovery Plan Task to Reduce Common Raven Predation on the Desert Tortoise (Draft EA)

To Whom It May Concern:

On behalf of the Animal Protection Institute (API), a national animal advocacy organization with thousands of California members, I offer the following comments on the Draft Environmental Assessment to Implement a Desert Tortoise Recovery Plan Task to Reduce Common Raven Predation on the Desert Tortoise (Draft EA).

API raised several concerns about this proposal during the public scoping process. We were disappointed to see that the Draft EA fails to evaluate the humaneness of the proposed alternatives as we requested, despite claims made in the Draft EA that the FWS used input from environmental groups and initial public involvement in determining which issues would be considered in the decision-making process for this EA.

Examining animal welfare is a useful tool in determining the suitability of a proposed lethal control action. This is because welfare describes the state of an animal at a specific time and can be good or poor regardless of what people think about the morality of lethal control. However, this issue has been largely ignored by the Draft EA except where terms "humane," "euthanasia" and "euthanized" are used superficially.

The Draft EA states that, "Common ravens would be removed using the most appropriate *humane* and safe method. Removal methods could include shooting, using an avicide (DRC-1339), or live trapping and *euthanasia*... Young ravens and eggs found in nests of removed adults, would be *euthanized* after being removed from the nest" [emphasis added].

While API supports Alternative E, only non-lethal cultural and physical control, we ask that at the very least, the following changes be made to the preferred alternative (Alternative B):

- a) the removal of the use of toxicants as an approved method of lethal control
- b) clarification on the accepted methods of euthanasia.

Toxicants

Most Americans would oppose using taxpayer dollars to scatter toxicants in our environment especially when more humane and environmentally sensitive methods are available.

DRC-1339 simply cannot be considered "humane." As pointed out in our scoping comments, DRC-1339 was especially designed to be slow-acting in order to scare other birds away from roosting sites. It is a substance that causes birds to die slowly and exhibit behavior associated with excruciating pain. In blackbirds, for example, DRC-1339 takes up to three days following ingestion to cause mortality, by way of

**Response to Monica Engebretson, Animal Protection Institute
Comments**

The toxicant, DRC-1339, is registered with the Environmental Protection Agency for control of ravens. The use of all U.S. Department of Agriculture (USDA) Animal and Plant Health Inspection Service/DRC-1339 registrations is restricted to certified applicators and USDA Wildlife Service personnel trained in bird control. Thus, its use is carefully controlled. DRC-1339 is highly toxic to only certain bird species (e.g., ravens, crows, magpies, starlings) and one toxic dose can be placed on a single bait. A quiet and apparently painless death normally occurs within 1 to 3 days of ingestion (USDA APHIS 2001).

The American Veterinary Medical Association's Guidelines on Euthanasia (2007) state that the recommendations in the guidelines are intended to serve as guidance for veterinarians who must then use their professional judgment in applying them to various settings. The panel who prepared the guidelines recognized that for free-ranging wildlife species, when euthanasia is not possible, killing may be necessary. They note that for some species or situations, the practical means of animal collection may be limited to methods such as gunshot or kill trapping. Under situations such as remote conditions, the specific methods chosen should be as age-, species-, or taxonomic/class-specific as possible. Given the difficulty of capturing free-roaming common ravens, we believe we have selected methods that are as specific as possible when considering the biology and behavior of the common raven in the California desert. We have selected more than one method as we must consider various factors which include the effectiveness and humaneness (kindness, mercy or compassion) of the method, human health and safety, and existing local, State, and Federal laws and regulations. We believe that we have selected methods based on effectiveness, humaneness, biology and behavior of the target and non-target species, human health and safety, species- or taxonomic/class-specific effectiveness, and regulatory requirements. The wildlife professional will consider the conditions that are unique to each location and use their professional judgment to select the appropriate method.



Response to Monica Engebretson, Animal Protection Institute Comments

irreversible kidney and heart damage. API maintains that no animal should be subjected to a poison that causes a slow and lingering death. Indeed, if this same method were to be used to kill domestic cats and dogs it would be considered cruelty to animals under most state laws (a crime punishable as a felony offense in California).

Again, we ask that the FWS remove the use of toxicants from the approved methods of lethal control under the preferred alternative (Alternative B).

Euthanasia

We ask the FWS specifically define what methods of euthanasia will be deemed acceptable in the course of carrying out lethal control of trapped or otherwise collected ravens.

While the FWS seems to assert that appropriate and humane methods of euthanasia will be guaranteed because the task will be carried out by Wildlife Services (WS), no evidence is provided to support this assumption.

To the contrary, WS has historically used many inhumane methods such as suffocation, drowning, and bludgeoning, as means of killing animals targeted for damage control. As such, the methods "euthanasia" should be defined in the Draft EA.

Specifically, we recommend the following language be added:

"Common Ravens, including young collected from nests, shall not be euthanized in any way except through the most current, approved euthanasia methods established by the American Veterinary Medical Association panel on euthanasia."

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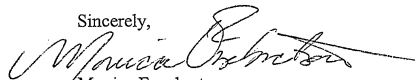
Conclusion

We believe that the FWS has a responsibility to manage wildlife in an ethical, humane, and biologically sound manner. In this Draft EA, the FWS has failed to even list "animal welfare" or "humaneness of methods" as an "Issue" or "Concern" in the development of this plan.

API acknowledges the need to protect threatened desert tortoises and to address the reportedly high predation rate of young tortoises by common ravens. API again encourages FWS to utilize only humane non-lethal methods of raven management and opposes the use of lethal controls. In lieu of accepting Alternative E, we ask that the FWS make the requested adjustments to the preferred alternative to ensure that the most egregious cruelties are disallowed.

Thank you for the opportunity to comment on this issue that is of great importance to API, our national membership, and to many Americans.

Sincerely,


Monica Engebretson
Project Director



QUADSTATE

County Government Coalition

State of Arizona
County of Mohave

State of California
County of Imperial
County of Kern
County of San Bernardino

State of Nevada
County of Lincoln
County of Nye

State of Utah
County of Washington

Associate Members
City of Ridgecrest, CA

April 30, 2007

Ms. Diane Noda, Field Supervisor
Attn: Raven EA
U.S. Fish & Wildlife Service
2493 Portola Road, Suite B
Ventura, CA 93003

RE: Raven Environmental Assessment

FISH AND WILDLIFE
SERVICE

MAY 02 2007

RECEIVED
VENTURA, CA

Dear Ms. Noda:

Thank you very much for providing this organization an opportunity to comment on the April 5th release of the Environmental Assessment (EA) for managing the raven populations in the Mojave Desert.

The document is extremely comprehensive, and we compliment the Service for its efforts to document the life histories of ravens and tortoises and provide a comprehensive description of what the issues are.

We also take note of the tremendous increase in the amount of ravens that currently reside within the Mojave Desert.

The array of alternatives seems to cover the range of alternatives that have been proposed at various times to deal with the raven issue. The proposed alternative, indicated as Alternative B, does not, we believe, go far enough to adequately deal with the situation as has evolved over the last 25 years. We believe that a proper decision should fall within the limits of Alternative B and Alternative C.

Where we concur with the integrated predator management program emphasizing reduction in subsidation and non-lethal removal, we do not believe that it will be adequate to deal with the population explosion that has occurred within the raven population over the last 25 years. Its integration with a direct control measure as put forth in Alternative B does appear adequate to deal with either current population levels or projected population increases. The integrated predator management program, we believe, would only serve to stabilize the population at its current high level and would not in the long run reduce populations, and it would be many years before a reduction in predation of Desert Tortoises might occur.

Buster Johnson, Chairman
c/o Mohave County Board of Supervisors
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Gerald Hillier
Executive Director
P.O. Box 55820
Riverside, CA 92517
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(951) 683-8544 FAX
gerryhillier@quadstate.org

Response to Gerald Hillier, Quadstate Comments

Thank you for your comments on the Draft EA. We have selected a phased approach of Alternative D as the preferred alternative to provide the flexibility in implementing only those actions that are needed to successfully reduce predation by the common raven on the desert tortoise.

Ms. Dianne Noda, Field Supervisor
U.S. Fish & Wildlife Service
April 30, 2007
Page 2

Response to Gerald Hillier, Quadstate Comments

Alternative B, however, limits the direct control to a hundred pairs of ravens and offspring each year. We do not believe that that, at least as an initial program, will go far enough to alleviate the predation on the newborn and juvenile tortoise populations. While Alternative C provides for taking 2,000 ravens annually.

We believe a more appropriate approach would be to take an aggressive initial approach of removal of 2,000 birds per year, plus eggs where found, for perhaps a three-year period. After that, an assessment could be made regarding whether raven populations, overall, have been reduced (a desirable goal) and if predation on juvenile tortoises has correspondingly declined to an "acceptable" level. If both are affirmative, then raven control could be lowered to take only an annual increment to achieve a stable, but lowered, raven population.

Alternative B, as written, creates three problems. First, by stating it as "pairs" the door opens to the additional problem of gender determination of ravens. And I am sure that some interest groups may very well want to assure that males and females are taken on a one-to-one basis since the Environmental Assessment talks in terms of pairs. Alternative C provides a more open-ended taking of ravens to reduce populations.

We are also concerned with the hundred pairs statement, if it moves into the record of decision, that at the point that 200 ravens were taken, and predation did not significantly reduce, that the Fish and Wildlife Service (FWS) would be forced to redo all the Environmental Assessment again to take an additional number of animals beyond the 200. We believe that the Service should protect itself and the program to continue taking ravens until such time as there is a noticeable decline both in the number of ravens and in the amount of predation occurring.

We are also concerned with the detail of Alternative B in that it will require the determination of specific ravens that are preying upon Desert Tortoises. We believe that, given budgetary constraints as well as practicality, this may well be impossible to determine except in those places where there is direct evidence such as shells beneath power transmission towers. While we do not advocate random killing of ravens, we do believe that, in areas where there are high tortoise populations or populations of known predation occurring, a concerted effort at raven control in general be undertaken, and that the Environmental Assessment so address that Alternative C does provide that option and also provides for an aggressive initial phase.

Our organization does not endorse either Alternative A or Alternative E. Alternative A is the no-action alternative in which some indirect action is being done, but it simply will not

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Ms. Dianne Noda, Field Supervisor
U.S. Fish & Wildlife Service
April 30, 2007
Page 3

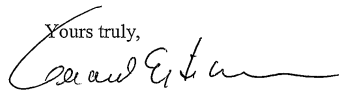
Response to Gerald Hillier, Quadstate Comments

address the population explosion within the raven population. Alternative E is inadequate since it would be limited to the non-lethal cultural program and the integrated predator management program which we do not believe will adequately reduce the raven population and its predation on tortoises within the foreseeable future.

Again, thank you for moving ahead with the Environmental Assessment. This organization has advocated a control program to deal with predators and predation for a number of years, and we are pleased that your agency is moving ahead to bring that program to fruition.

We look forward to a prompt record of decision and action occurring during FY 2008 budget year.

Yours truly,



Gerald Hillier
Executive Director

cc: Steven P. Quarles, Crowell & Mooring
John McQuiston, Kern County Supervisor
Don Maben, Kern County Supervisor
Brad Mitzelfelt, San Bernardino County Supervisor
Wally Leimgruber, Imperial County Supervisor
Buster Johnson, Mohave County Supervisor, Chairman of QuadState
Ted James, Kern County Planning Department
Lorelei Oviatt, Kern County Planning Department

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Response to Jean McLaughlin, Private Citizen Comments

Please refer to section 3.3.1.d which discusses removing common raven nests not occupied with eggs or nestlings. For Alternative E, nest removal would occur when the nests are not occupied with eggs or chicks. We have clarified section 3.4.5 which describes Alternative E. Regarding removal methods of shooting and poisoning, please see comments above to Monica Engebretson, Animal Protection Institute. We are unaware of any studies that have been conducted in the California desert that demonstrate that raven control does not work. The Bureau of Land Management initiated management efforts but they were halted after a few days by legal action. A process similar to your suggestion of captive breeding is already being implemented at three locations in the California desert. However, this is a slow, expensive effort (it takes about 20 years for a desert tortoise to become an adult) and we do not know if the released desert tortoises will be able to survive and reproduce when they are released at their new locations. The methodology is in the research or development phase. In addition, the head start or breeding program is an interim artificial measure to help the desert tortoise until the artificially high predation rate on hatchling and juvenile desert tortoises can be brought back into balance. The head start program does not meet the long term purpose and intent of the Endangered Species Act which is to manage the species and their ecosystems

✓5

Dear Field Supervisor, Raven EA,

After reviewing the Draft EA concerning reducing common raven predation on the desert tortoise, I would like to make some comments although I regret not having enough time to review it more thoroughly.

Thank you for sending me a copy on compact disk of the Draft EA along with your notification of the availability of this document. A paper document would have been better for me but there still wouldn't have been enough time. With assistance at the library I read through most of this 140+ page document on their computer and am trying to respond as best I can in short notice.

As something needs to be done, Alternative E Integrated Predator Management using only nonlethal Cultural + Physical Methods is what I choose for the most part and urge you to choose the nonlethal means as well. The part of Alt. E I question is the aggressive nest removal. If "E" uses nonlethal means, it isn't clear what is done with the eggs/young.

Also, the proposed alternatives aren't clear to me in respect of where the raven management will take place. C + D state removal of ravens from Desert Tortoise management areas (there was a chart), landfills, + areas of raven concentration. A, B, and E areas of raven management appear to be more widespread.

Alternative B states the principles of IPM would be used, nonlethal actions first, BUT if not sufficient then removal actions would be needed. It is the removal actions I disagree with.

Alternatives C + D call for even greater removal actions.

Then removal actions would be needed. It is the
removal actions I disagree with.
Alternatives C & D call for even greater removal actions
which I disagree with even more.

Response to Jean McLaughlin, Private Citizen Comments

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Draft EA

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Response to Jean McLaughlin, Private Citizen Comments

(2)

The methods of removal are objectionable.

Poisoning, introduction of disease, trapping, shooting, even some forms of euthanasia are NOT humane.

The worst possible scenario would be to introduce a disease, such as Newcastle (I don't recall what page of the Draft EA that was on, but it was there), or any other disease. This is irresponsible and unacceptable.

Poisoning by any means is not humane, not responsible & NOT acceptable. It is a painful death. No matter how the studies of this method look on paper, there will be non-target species affected. And who or what group will come out and be able to cover thousands of square miles over rugged terrain, rocks, brush, etc. to pick up the poisoned carcasses whenever and wherever they ~~sub~~ succumb? For that matter, who will pick up the roadkill, identified as a problem ^{to be reduced} which attracts ravens? There is so much in this area now from too many people driving too fast and many with no respect for wildlife. No one moves and buries roadkill here except those who care and are able to. I have, and I know others who have.

And shooting is inhumane as well and unacceptable. Even a marksman won't bring them down at 100%. They may be injured and suffer. They are intelligent birds and I believe they, as well as animals, do perceive danger beyond an instinctual level and do have communication between themselves and "feelings" at some level. Seeing their mate and young killed by gunshot is violent & inhumane even though the plan is to kill them all, breeding pairs and young.

As for trapping and euthanasia, the ravens and possibly other birds may suffer in the traps.

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Draft EA

Response to Jean McLaughlin, Private Citizen Comments

(3)

What assurances are there that the type of euthanasia would be quick and painless?

And why is all the blame placed on the ravens that now they must be controlled and/or destroyed?

Many studies have already been done over the years by many groups, the National Park Service and the military among them.

I believe they found raven control doesn't work. Captive breeding programs for the desert tortoises, keeping them until they are old enough/large enough to be safe from raven predation is more successful.

So really, isn't the whole Draft EA archaic research? Shouldn't you be looking at what has already been tried and how raven control by many of these means has been ineffective?

The real raven population problem is human-made. Our dumpsters, litter, landfills, high road-kill numbers are all raven attractants. Growing numbers of fast-food restaurants are a big draw. Even ORV's, ATVs, and motorcycles are a ~~big~~ problem, racing up & down washes and out in open desert, killing wildlife that ravens eat. But I have noticed greater concentrations of ravens in developed areas than out in the open desert. They are opportunists and more interested in quick, easy meals from our throw aways.

The tortoises are disappearing and ravens are not the main cause. Their ^{tortoise} habitat needs to be protected. Development that is disrespectful of the environment and unethical development must stop. Too much of this is occurring here in Joshua Tree, Yucca Valley, 29 Palms, as well as in other locations.

I live in Joshua Tree. A few months ago, a biologist

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Draft EA

Response to Jean McLaughlin, Private Citizen Comments

(4)

surveying for tortoises on a 6 acre parcel in back of where I live claimed there were none there but found evidence nearby at the wash which is less than 1/4 mile away. In the past, my neighbors have seen a tortoise both on and adjacent to the parcel. I thought since tortoises are federally threatened that they and their territory are protected, but was told that if the developers had enough money and are bent ~~on~~^{on} developing their property they would, no matter what. Furthermore there had been talk of subdividing the parcel to fill it with even more houses.

This is affecting other endangered species as well, the burrowing owls that use tortoise burrows, among them and the ~~fringe~~^{Mojave} Toed lizard as well as plants. As the lots for development are scraped bare, the food sources for many species are quickly disappearing. Plants that the desert tortoise feeds on are depleted.

The issuing of "incidental take" permits must stop. Just because developers apply for them and have the money doesn't make it right. How can agencies entrusted to the protection of species be issuing permits for their demise to developer after developer?

The desert tortoise's habitat loss is a bigger threat to their recovery than the ravens are.

As a better alternative, I propose "F", responsible, ethical, environmentally conscious growth that protects our desert, including the tortoises and their habitats. The Desert Tortoise Recovery Plan needs to address these issues rather than focusing only reducing predation by the common raven.

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Draft EA

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Response to Jean McLaughlin, Private Citizen Comments

5

Since all you are offering are those 5 alternatives you have developed and it appears you will implement one of them, that is why I chose Alt. E but I really don't agree with all of it either.

As I said before, I am opposed to lethal means for wildlife control, ravens included.

Much more can be said but not in the time given me so I will close with this article from the San Bernardino Sun dated Sunday, 4-22-07. How about trying some "Robops", modified for raven aversion?

Robotic falcons to battle pigeons

LONDON — You could say it's a bird of a different feather.

An airport, plagued by pigeons that pollute the city center with their droppings, is introducing a mechanical falcon which squawks and flaps its wings in hopes of scaring the pesky birds away. The fat pigeons, who feast on junk food, are an embarrassment to a city chosen to be next year's European Capital of Culture.

The city council is buying 10 Robops, short for robotic bird of prey, at a cost of about \$4,000 each. But cleaning teams spend many hours each day scraping droppings from streets and buildings, at a cost of about \$320,000 a year, the council said.

Only two of the Robops have been installed so far.

The key is that we move the Robops around, so the pigeons don't get used to them," council spokeswoman Sarah Langworthy said.

"It keeps (the pigeons) on their toes."

From News Services

Sincerely,
Jean McLaughlin

Jean McLaughlin



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PLANNING DEPARTMENT

TED JAMES, AICP, Director

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RESOURCE MANAGEMENT AGENCY

DAVID PRICE III, RMA DIRECTOR
Community & Economic Development Department
Engineering & Survey Services Department
Environmental Health Services Department
Planning Department
Roads Department

**Response to Ted James, Kern County Planning Department
Comments**

Thank you for your comments on the Draft EA. Please see
response to Gerald Hillier, Quadstate.

May 4, 2007

FISH AND WILDLIFE
SERVICE

File: USFW Raven

Ms. Diane Noda, Field Supervisor
Attn: Raven EA
U.S Fish and Wildlife Service
2493 Portola Road, Suite B
Ventura, California 93003

MAY 07 2007

RECEIVED
VENTURA, CA

**RE: Comments: Environmental Assessment to Implement a Desert Tortoise Recovery
Plan Task: Reduce Common Raven Predation on the Desert Tortoise.**

Dear Ms. Noda,

Kern County Planning appreciates the opportunity to provide comments on proposed alternatives for controlling the raven population in the Mojave Desert. The significant increase in the common raven population in the Mojave Desert continues to contribute to declines in Desert Tortoise populations. Kern County Planning has been an active participant in the formulation of the West Mojave Plan as a cooperating agency with the Bureau of Land Management and the West Mojave Habitat Conservation Plan for private and public projects. A proactive, aggressive program for raven management is essential to the success of both plans and Kern County is supportive of immediate implementation of the recommended alternative.

As noted in Table 1.1 the observations of common ravens in 2001-2006 have increased at a rate that is disproportionately greater than other predatory birds in the California desert. As urban development continues on adjacent private lands the problems of human subsidized food and water for the raven will only increase. As there has been no coordinated program since 1994 to address the reduction, Kern County is supportive of the most comprehensive of the alternatives: Alternative D and not the Preferred Alternative – Alternative B. Alternative D includes all the components to address both removal and prevention such as encouraging an enhanced level of enforcement of existing regulations, additional regulations, if necessary, by local governments, and raven removal of 3,000 to 8,000 ravens (8 to 18.7 percent of the population). This large-scale effort appears to be the only alternative that has potential to reduce the historically population to a manageable level. Such raven removal combined with the changes in human behavior the cultural and physical program would produce could provide a significant long-term solution.

The 200 raven limits could be a constraint on effective implementation of the program. This limit should be revised to allow for the program to continue taking ravens until there is a specific decline in the both the number of raven observations and predation.

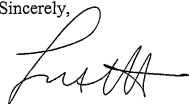
Kern County Planning does not endorse any of the other alternatives A, B, C, or E, as they do not provide the comprehensive, aggressive program necessary to address this serious problem.

Ms. Diane Noda, Field Supervisor
U.S.Fish and Wildlife Service
May 4, 2007
Page 2

**Response to Ted James, Kern County Planning Department
Comments**

Thank you for the opportunity to comment. Raven management in the Mojave Desert is vital to the recovery of the Desert Tortoise and the conservation planning process of local governments in the region. We look forward to a prompt record of decision and action for inclusion of the necessary funding for Alternative D during FY 2008 budget year.

Sincerely,



Lorelei H. Oviatt, AICP
Special Projects Division Chief

cc: Don Maben, Kern County Supervisor
Jon McQuiston, Kern County Supervisor
Brad Mitzelfelt, San Bernardino County Supervisor
Wally Leingruber, Imperial County Supervisor
Randy Scott, San Bernardino County Planning and Development Services
Steven P. Quarles, Crowell & Moring
Gerald Hillier, Quad State Local Governments Authorities

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Keith Axelson



May 7, 2007

Field Supervisor
Attn: Raven EA
U.S. Fish and Wildlife Service
2493 Portola Road, Suite B
Ventura, CA 93003

FISH AND WILDLIFE
SERVICE

MAY 07 2007

RECEIVED
VENTURA, CA

Response to: Draft Environmental Assessment to Implement a Desert Tortoise Recovery Plan Task: Reduce Raven Predation on the Desert Tortoise (Draft EA)

The following comments are similar to ones made by me to USFWS (2004) and to BLM (1989). Little has changed except that more data has been gathered to bolster the Dept. of Interior's drive for a quick fix against the desert raven.

Certainly the raven has a role in the demise of young tortoises. Still, I remain convinced (as are others) that the USFWS and BLM continue to amass studies, references and personal communications to slant the evidence against the desert raven, because it is simpler than to adjust human nature and behavior. Whatever the outcome, the raven will survive – (please see Scientific American – April 2007).

The USFWS DEA document raises many questions for me. Due to time restraints here are just two:

With regard to piles of tortoise remains beneath raven nest sites: How long have these remains been below the nests? Have your observers separated these shell fragments and dated them? Isn't it possible that a much used nest would have fragments that could be 10, 20 or 30 years old? Even possibly brought by another species? Your data implies that fragments are piled annually.

Nowhere can I find the numbers of tortoises (or ravens) which are in the percentage base for your many quoted studies. These studies can be based on 28, 52, 107 etc. Percentages skew wildly when those numbers are extrapolated to become your baseline for killing ravens. As an example (on page A-17) USFWS states that: "In 2005, 27 of approximately 600 nests in the desert portions of Kern, Los Angeles and San Bernardino counties were observed with evidence of desert tortoise predation beneath them." Note that this is only 4.5% of 600 nests. Note also that the percent was not listed. Note also that this percentage is for three (3) counties. The square miles for each county: Kern – 8,141; Los Angeles – 4,061; San Bernardino – 20,052. The total for all three counties: 32,254 square miles.

Response to Keith Axelson, Private Citizen Comments

The procedure that we would use to determine whether a pair of ravens had preyed on the desert tortoise is described in the EA in section 3.2 Effective Monitoring and Adaptive Management. Skeletal remains would be collected each year from under nests so there would not be an accumulation from previous years. Once remains and ravens were removed, if desert tortoise remains were found under the nest the following year, the predators would be the current users of the nest. Regarding the 2005 nest surveys, a percentage or sample of the California desert was surveyed for raven nests. The data presented do not represent a 100 percent survey of the counties of Kern, Los Angeles, and San Bernardino counties. Please refer to section 4.3.2.1 for more information and clarification.

Response to Keith Axelson, Private Citizen Comments

The Endangered Species Act should be imposed at times, but it must not be used for the "lawful" killing of an unlisted species of animal to ensure the doubtful recovery of a listed species. This method of manipulation should never be used especially when all other possible methods of raven population "reduction" have not been implemented fully.

Suffice to say, my only option is to approve Alternative E. It seems to be the only presented Alternative which gives both the tortoise and the raven a relatively unmolested chance to continue their evolution.

Sincerely,



Keith Axelson

cc: Hector Villalobos
Bureau of Land Management
Ridgecrest, CA 93555

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Response to Chris Sprofera, Private Citizen Comments

We have coordinated with the SAC and the DMG outreach group during the preparation of this EA. We will continue this coordination to ensure there is no duplication of effort. One of our objectives is to do more to promote effective trash disposal and containment. Please see our response to San Bernardino County Department of Agriculture/Weights and Measures above. We have clarified the statement about the status of the desert tortoise in the Introduction.

3.3.1

A. An outreach program specific to the Raven is not necessary, the Desert Mangers Group has an outreach program already specifically tailored to the Desert Tortoise. They have staffing already in place to highlight this issue, through there PSA program. The resources would be better spent on raven elimination. The Problem is that the Raven is eating the young tortoise keep the focus on that

B. The focus has been possibly adequately addressed in regards to the landfill issue, Very few documented deviations from the suggested procedures from the scientific community

- Watering of the land fill is to comply with PM 10, little could be done here unless we relax the PM 10 requirements

- Clean up of unauthorized dumps

This issue is a standard problem in each county of the CDCA they have programs working now perhaps the counties could do there own PSA program or make the dumps and landfill available more days a week and longer hours, more frequent HAZMAT days seems that a lot of the dumping is HAZMAT related like tires, oil And paint. Further more the DMG has a work group to deal with this

- Point of origin trash management is a concern some level of focus has been done like the BLM ISDRA (Imperial sand dune recreation area) yet Cal-Trans cant seem to install bird proof trash enclosures on there trash receptacles in this area, it is true more should be done in this area, however this will only reduce the raven population over a long time and the Desert Tortoise might not be best served by this approach in the sort term
- Water access is much the same as the point of origin concern above great idea wont help in the immediate needs of the Desert Tortoise

C. Reduction of animal carcass along roadways. Is not a bad idea and is done fairly well with the counties DOT and Cal-Trans

- Desert Tortoise Fencing is not a bad idea but cost-benefit is not balanced with recovery compared to the lack of raven management, Fencing could be saving Diseased Desert Tortoise eventually to die of the ailment. As where raven management will allow disease free tortoise to grow and possibly boost the population
- Culverts are a good idea if place frequently, or they could be equally bad idea when a sudden downpour occurs with monsoonal rains trapping the Tortoise. As where if they are on the ground the tortoise could escape up the embankment.

D. Removal of nests sounds like a good idea. However some nest are used by other birds of prey, and could be to labor prohibitive to determined what type of nest or

Response to Chris Sprofera, Private Citizen Comments

Dear Field Supervisor
Attn Raven EA
U.S. Fish and Wildlife Service
2493 Portola Road, Suite B
Ventura, California 93003;
fw8drafravenea@fws.gov.
Fax number at (805) 644-3958

Reply to the Raven EA 2007

The Raven Management actions should be no different than the Wiled horse and Burro plan being implemented now. The scientific community Involved with the Desert Tortoise recovery plan is only focused on the animals that contact the ground with their feet. Like Grazing Cattle and the wiled horses and Burros. The SAC for the Desert tortoise recovery needs to rethink The Raven predation problem and make its focus more appropriate toward this issue.

It is possible that a zero raven population should be concerted in some arrears to help recover the juvenile and sub-adult's populations and as the Tortoise mature the Raven could be allowed to populate the DWMAs again

The proposed actions to reduce ravens by a public outreach program is not going to change any population densities in the short term, it is a slippery slope though if the population in the towns and cities keep the resources from the raven than that might force the rave in to the DWMAs, so a larger more engineered approach is needed

Perhaps the SAC should have been more focused on the strategy in the first Desert Tortoise recovery plan, by now the new city's could have required new developments to be designed with the covered dumpsters and the measures stated would have been able to see if it decreased raven populations

Reducing human subsidies is a valid goal it should have been pushed to the head of the list made by the scientific community when the Desert Tortoise was listing was requested

The DMG Desert Managers Group commissioned the EA should work toward a non-replicating cultural public out reach program. Duplication of this info reduces the resources needed to inclement, if they're where to be any duplication the tortoise out reach person should handle this issue, After all it is the tortoise that is Listed threatened

Caution should be considered at making this plan to grand because of the lack of funding the DMG can allot to any of its plans to recover the Desert tortoise. Each agency within the DMG has people within their area of responsibility that should be competent enough to administer this plan no need for top-level administration

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Response to Chris Sprofera, Private Citizen Comments

is it being shared with another bird of prey. It could be supported if the nest was clearly abandoned

- E. This is not entirely a bad idea, however a panel should consider these sites requested to be removed because some are sites could be of historical interest to some that study early military use of the desert. Modifying some structure to keep the raven from nesting is supportive like non-lethal method of disturbing the raven form using these sites
 - F. Removal or not constructing new sites sounds like a grand idea, however most of the population is not ready to forgo the modern conveniences.
- 3.3.2 This is an idea that could be supported as long as it is done in small groups as not to send ravens for cover, A decision model is not necessary if the team finds predatory ravens, this would allow for the ravens not dependent on young tortoise to stay
- 3.3.3 Not necessary this process seems to cumbersome and could hamper progress in relieving the pressures caused by the Raven on Tortoise population
- 3.4.1 Alternative A: is not acceptable do to the fact that this method has resulted in the position the Desert Tortoise is in to day. And if this approach over the next few years could possibly what finishes the desert tortoise off
- 3.4.2 Alternative B: This is not bad, need no cultural effort DMG Has A program like it already for the Tortoise, it is lacking robust removal rate 200 birds will not equate to make a measurable effect. Leading to further population pressure for the Tortoise
- 3.4.3 Alternative C: Not Bad, Still need to lose the public outreach/ Cultural emphasis, it duplicates the DMG effort of the Tortoise Outreach program. and takes away from the resources needed to handle the raven issue
- 3.4.4 Alternative D: This effort seems good because it does a well rounded approach, the Raven Density's are appropriate per year
However it needs no cultural outreach because the DMG effort for the Desert Tortoise outreach covers that already. And the money that will be duplicated will be better served to manage the raven elimination
- 3.4.5 Alternative E: unfortunately non-lethal and cultural efforts are not enough the past years have proven this by the population growth of the raven, in the time that we have been working on this EA could have resulted in a tortoise population growth

In the introduction part of the EA

It is mentioned in the EA on page 15 second paragraph the Desert Tortoise is in a downward Population trend, and that its status is listed as endangered, it is still listed as threatened federally. CA listed as threatened as of Oct 2006 under the California DFG state web page. Mr. Tracy's theory of downward trends have not been established, by the recent fluctuations of past years population counts.
Please correct this statement

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Response to Chris Sprofera, Private Citizen Comments

In Summary I don't find Any Alternative Ideal because each include a Cultural provision That I think is a Duplication of the out reach plan the DMG has now

I can Support the Alternative D because it has the appropriate take the numbers listed would be reasonable to make a measurable decline in raven population in a reasonable time frame

Chris Sprofera

Director of land use



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Response to Robert Parker, Private Citizen Comments

We have clarified the information on locations that are used by common ravens for nesting in the California desert. We have added information on what happens when a raven territory is vacated. We disagree with the commentator's claim that most of the desert tortoises killed by ravens would have died from drought or disease. Desert tortoises are adapted to live in periodic drought conditions. When reviewing the rainfall data for the Mojave Desert from 1930 to 2000, these data do not indicate that the Mojave Desert is experiencing an unusual or prolonged period of drought. Upper Respiratory Tract Disease (URTD), the disease attributed to causing much of the mortality in the desert tortoise, is triggered by stressors in the environment of the desert tortoise. Without these stressors, the desert tortoise would not die from URTD. Thus, it appears that the ecosystem upon which the desert tortoise depends has been altered, resulting in increased mortality. Two of the purposes of the Endangered Species Act are to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, and to provide a program for the conservation of such endangered species and threatened species. The increased numbers of common ravens and predation on the desert tortoise indicate that the desert ecosystem in California is not functioning properly. Growing baby tortoises through headstarting does not address the issue of the function of the ecosystem; this approach is promising but it is expensive and has not yet proven successful in replacing or adding desert tortoises to the wild population. In addition, headstarting of hatchling sea turtles, a long-lived species with a survival strategy similar to the desert tortoise, has not proven effective because of high mortality rates of intermediate-sized individuals (Frazer, N.B. 1993 Sea turtle conservation and halfway technology. *Cons. Bio.* 6: 179-184).

In their 2004 report the DTRPC recommended that the West Mojave Recovery Unit of the desert tortoise be elevated from threatened to endangered. This information has been clarified in the EA.

Comments on Raven EA

1. Page 5 talks about ravens needing high locations to build nests. We found raven nests in abandoned cars next to the DTNA. Also in Joshua trees 8 to 10 feet off the ground. I would say that it's more of being predator-proof than solely elevation.
2. Also on Page 5, there is a statement that ravens actively defend their nest territory during the breeding season. Also on the following page there is more discussion on territories and how the ravens are the only birds hunting in that area. There is also discussion on non-breeding ravens, which form essentially large groups that feed outside the territories. There should be additional discussion of what happens to the newly vacant territories. With the mated pair gone, these territories would become open to other ravens. With no birds defending a territory, after a few seasons we could have dozens of ravens using an area previously only used by two birds. One outcome of this could be an increase in raven predation on small tortoises, not quite what we wanted.
3. There is a good deal of discussion on the numbers of hatchlings that have been killed by ravens. It should be pointed out that, with the 90+% mortality from drought/disease in the 90s and present, most of these tortoises would have died anyway. **The impact of ravens on the tortoise population, has in reality therefore been insignificant.**
4. For those areas still with good tortoise populations and raven predation, it's also apparent that raven predation is not a factor. The EA doesn't present a case that killing ravens will benefit the tortoise population.
5. I would favor alternative E which focuses on managing the raven population while not risking altering the current predator/prey interactions.
6. We have the technology to grow lots of baby tortoises, so we could estimate the mortality of the 100 raven nests and replace those potentially eaten with released babies (or older tortoises). I would add an alternative to consider this. The alternatives focused on ravens, not tortoises. Edwards AFB and Ft Irwin have already demonstrated the practicality of raising lots of tortoises. This alternative would generally have the public's good will while killing ravens will upset many people.

Robert Parker
Wildlife Biologist
Ridgecrest Field Office

Response to Shelly Ellis, Private Citizen Comments

Comments on Raven EA Shelley Ellis, BLM Wildlife Biologist

The document states:

“Therefore, if 100 pairs of common ravens that prey annually on hatchling and juvenile desert tortoises were removed, this action would eliminate most of the predation on juvenile and hatchling desert tortoises by breeding common ravens in the California desert.”

However, raven pairs would soon move in to fill the voids. The rationale presented above has not worked for other predator populations. The empty territories are soon taken over by other individuals that set up their own territories in the area that the former occupants defended. Removing 100 pairs of ravens is not going to recover the tortoise.

A better strategy would be to put our efforts into raising desert tortoises in captivity to the about 5 years of age when their shells are hard enough to resist normal predation. Tortoises are very easy to raise in captivity. People who have pet tortoises are always stuck with more babies than they can find homes for. 5 year old tortoises could be introduced back into the wild. Edwards AFB and Ft Irwin have already demonstrated that head starting is feasible.

For areas that have healthy tortoise populations, raven predation is not a major mortality factor. Ravens do not control the tortoise population. Killing ravens will not recover the tortoise.

Ravens take whatever prey is most abundant, whether it's baby birds, garbage, rodents, or baby tortoises. Ravens have been raiding bird nests (ie Mockingbirds, Sage Sparrows) forever and have not driven any bird species extinct. As the tortoise population decreases, the baby tortoises become harder to find, and the raven preys on more abundant species. We are mistaken if we think that killing some of ravens is going to make a difference in the recovery of the desert tortoise, especially since other ravens will move in to replace the ones we kill.

There are so many risks to the desert tortoise. Loss of habitat is far more detrimental than raven predation. In addition, drought and disease have been shown to cause far higher mortality rates than ravens could ever cause. In the 1990's, the tortoise population suffered about a 90% mortality rate from drought and disease. The impact of ravens on the tortoise population is insignificant.

I favor Alternative E-Integrated Predator Management Using only Cultural and Physical- because I don't believe that the other alternatives will work. It will be a waste of time and money.

Please see response to Robert Parker, Private Citizen. We acknowledge that removing 100 pairs of ravens will not recover the desert tortoise. Reducing raven predation by common ravens on the desert tortoise is one of numerous actions identified in the Desert Tortoise Recovery Plan as need to recover the desert tortoise. The Recovery Plan and the Desert Tortoise recovery Plan Advisory Committee (DTRPAC) Report emphasize that implementing one recovery action will not recover the desert tortoise.

Response to S.N. Luttich, Private Citizen Comments

Thank you for your comments on the Draft EA. The EA does not propose indiscriminant removal of potential red-tailed hawk nests and nest sites and does not propose the removal of occupied red-tailed hawk nests. The EA proposes to remove common raven nests and remove or modify common raven nest sites, where possible.

[REDACTED]
[REDACTED]
2007 April 30

Field Supervisor
Attn: RVEA
U.S. Fish and Wildlife Service
2493 Portola Road; Suite "B"
Ventura CA-USA 93003

Re: Environmental Assessment – Proposed Raven Control and Desert Tortoise Management

While not having any major aversive objection to the proposed action, reservations do exist for how the U.S. Fish and Wildlife Service intend to identify and remove raven nests and nest sites. That raven nests and nest sites need to be reduced is not the issue. The issue is that these are often inter-specific raptorial bird nests and nest sites, and, are being used not only by ravens but also red-tailed hawks and other raptorial birds. Therefore, if nests and nest sites are intending to be destroyed, how does the FWS intend to impact the ravens without impacting red-tailed hawks and other raptorial birds? In my analysis, this subject is not being provided with sufficient attention. In addition, neither is the inter-specific relationship between red-tailed hawks and ravens being addressed.

During summer 2006, the locations of nearly 100 raptor nests were identified on electrical power transmission lines and along the Union Pacific Rail Line across the Mojave National Preserve; and, while the vast majority of the still active nests were associated with red-tailed hawks, a couple were associated with ravens, including one nest in the Ivanpah Valley, and, the base of the tower for this one nest was littered with juvenile desert tortoise remains. Based upon the simple demographic proportions, these transmission lines appeared to be providing nesting site support for the red-tailed hawks to the disadvantage of the ravens. Furthermore, raven feathers and remains were found on the ground beneath a few of these nests. The next question was whether any scientific investigations have been conducted to demonstrate the inter-specific relationship between ravens and red-tailed hawks, and, to answer the probability for red-tailed hawks acting to suppress raven populations. If such is true, in my estimation, we should not be removing potential red-tailed hawk nests and nest sites. Am fully aware and familiar with how ravens can and will harass red-tailed hawks; but, harassment is not mortality and is only an attempt to discourage. Just like great horned owls ravage goshawk nests, do ravens finally exhaust the patience of the red-tailed hawks followed by the hawks ravaging raven nests and depredating nestlings? That animosity exists between red-tailed hawks and ravens is not without evolutionary just cause.

Response to S.N. Luttich, Private Citizen Comments

Repeated attempts to discuss these questions with Dr. William Boarman throughout the summer of 2006 went unanswered; and, the issue does not appear to be adequately addressed in the Environmental Assessment.

Sincerely,

S. N. Luttich
Wildlife Biologist

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Response to Shirley Hathaway, Private Citizen Comments

Thank you for your comments on the Draft EA. Your comment has been noted.

Ventura Fish & Wildlife Office
Judy Hohman

April 13th 07

Dear Ms

I was happy to see your proposed Raven management plan as presented in the Mojave Desert News, our local newspaper.

I have lived on this desert since 1956 and own my home here, raised five children three graduated highschool, one joined the Navy and one attended Beauty college in Lancaster. My husband of thirty-two years worked for the U.S Postal Service for over twenty one years and I worked a total of ten years for the U.S. Air Force at Edwards AFB.

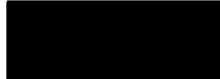
My concern is with the ravens who kept me busy picking up rabbit parts after the road kill, when they would sit on my chain link fence and devour their prey. This also causes the ant population to come out for the pieces that are dropped. Not a pretty picture, especially at my age of 79 years... they kept me busy all last summer.

This has been happening over the past few years as you well know I am sure because of their proliferation.

These ravens also perch in my highest trees and eat baby birds and bird eggs, keeping our bird population to almost nil. I know what they are capable of with their voracious appetites and I hope something will be accomplished through your survey.

Thank you sincerely;

Shirley M. Hathaway
Mrs Shirley M. Hathaway



*PS
These birds descend in clusters of 6-12 in number
which in my estimation is redundant.*

Response to Nancy Stringer, Private Citizen Comments

Thank you for your comments on the Draft EA. Your comment has been noted.

4/23/07

U.S. Dept. of the Interior

Gentlemen:

After receiving the Draft Road EA,
my preference would be a
non lethal - non toxic alternative
such as A or E. Of the other
alternatives, B sounds the best.

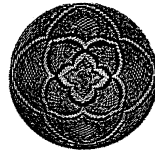
Since A isn't working, perhaps
E would in the long run.

Thank you for the
opportunity to comment.

Sincerely,
Nancy Stringer

AGUA CALIENTE BAND OF CAHUILLA INDIANS

TRIBAL PLANNING & DEVELOPMENT



April 25, 2007

FISH AND WILDLIFE
SERVICE

Carl Benz, Assistant Field Supervisor
Attn: Raven EA
U.S. Fish and Wildlife Service
2493 Portola Road, Suite B
Ventura, California 93003

APR 30 2007

RECEIVED
VENTURA, CA

**RE: Draft Environmental Assessment to Implement a Desert Tortoise Recovery
Plan Task: Reduce Common Raven Predation on the Desert Tortoise**

Dear Mr. Benz:

We appreciate the opportunity to review the above referenced project. At this time we have no comments, but request that you notify us of all documents related to this project.

Please contact me should you have any questions at 760.883.1326.

Very truly yours,

Margaret E. Park, AICP
Director of Planning
**AGUA CALIENTE BAND
OF CAHUILLA INDIANS**

MP/mg

**Response to Margaret Park, Agua Caliente Band of Cahuilla
Indians Comments**

Thank you for your comments on the Draft EA. Your comment has been noted and provided to the cooperating agencies.

May 7, 2007
page 1 of 2

Via Electronic Mail

Field Supervisor
Attn: Raven EA
U.S. Fish and Wildlife Service
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003

Re: Draft Environmental Assessment
Raven Management: Desert Tortoise Recovery Plan

Dear Sir or Madam:

I have reviewed the Draft Environmental Assessment (Draft EA) analyzing various measures proposed to control predation by Common Ravens on Desert Tortoise. The preferred measures focus primarily on removing Common Ravens known to prey on Desert Tortoise, and removing Common Raven nests from within and near established Desert Tortoise Management Areas (DTMAs). More aggressive, alternative measures target more Common Ravens for removal, but none of the measures in the Draft EA realistically or practically address the basic problems of human-provided subsidies for Ravens, which allow Ravens to live, reproduce and thrive in Desert Tortoise habitat where they should be mere transients. The Raven Control measures discussed in the Draft EA will not significantly reduce Common Raven predation on Desert Tortoise, and more aggressive measures must be considered and implemented.

Even the most aggressive Raven removal option discussed in the Draft EA would eliminate only 8 to 18 percent of the existing Raven population. This is insignificant at best. As explained in the Draft EA, the current Raven population has grown by over 700 percent since non-native people moved into the desert regions a little over 100 years ago. The Raven population has exploded, and most of those Ravens are permanent residents in the desert, rather than the migratory transients they once were. The change is due entirely to humans and the Raven subsidies they provide in terms of food, water, nesting, perching and roosting sites. If human activities that lead to such subsidies are not squarely addressed and controlled, all other measures are superfluous.

The Draft EA proposes a public education program and coordination with public and private land managers to encourage the voluntary removal of subsidies for Common Ravens throughout the desert regions of southern California. Specifically, the measures discuss merely sharing information with the public about the status and needs of the Desert Tortoise and the growing problem of predation by Common Ravens, and relying on *voluntary* efforts by the public and by public and private land managers to control Raven subsidies. Public education and voluntary efforts by land managers are important first steps, but they are not adequate in and of themselves. Relying on such measures amounts to a band-aid approach for a badly hemorrhaging wound.

As pointed out in the Draft EA, Common Ravens prey on nascent and juvenile Tortoises, and can eliminate nearly all hatchlings in a given area. By routinely harvesting nearly all Tortoises born in a given year in a given area, Common Ravens are eliminating the ability of the Desert Tortoise population to maintain itself:

Response to Celeste Doyle, Private Citizen Comments

Thank you for your comments on the Draft EA. Your comments have been noted. We propose to work with agencies and the public in desert communities to develop ways to reduce the human subsidies to the common raven in the California desert.

Response to Celeste Doyle, Private Citizen Comments

May 7, 2007
page 2 of 2

The viable, adult breeding population in Raven-affected areas is slowly but surely dying out, and adults are not being replaced because young Tortoise are eaten before they attain breeding age. Eliminating a handful of Common Ravens and cleaning up some trash dumps will not control the Common Raven population and will not aid in the recovery of the Desert Tortoise. Broader and more aggressive land management measures are necessary.

Simply offering educational material, regardless of the quality of it, is not enough. The Service should actively seek out public meetings and classrooms where it can present information on Desert Tortoise and Raven predation. Written material should be available and prominently displayed at all federal, state and local offices in the desert regions that are open to the public, and especially in all such offices that distribute permits for land use activities.

Additional measures should include active opposition by federal land managers in the desert regions against new utility corridors and roads that provide more human access and more Raven nesting sites than already exist. (Human access leads to road-kill, trash, water and dump sites, all used by Common Ravens to full advantage.) All Raven nests on all artificial structures, including utility poles, should be removed. Surface disturbing activities, especially livestock grazing and OHV use, which eliminate escape cover for Tortoises, should be more actively restricted and regulated in and around DTMA's. Artificial structures that Ravens use for nesting or perching in the desert regions should all be removed or altered so they no longer serve those functions. New structures near DTMA's should not be allowed unless necessary, and in such cases they must be designed and constructed so as not to offer nesting or perching sites for Common Ravens.

Thank you for this opportunity to comment and for reading and considering these concerns.

Sincerely,

Celeste J. Doyle
[REDACTED]
[REDACTED]

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**Response to G.J. Hickman, U.S. Bureau of Reclamation
Comments**

Thank you for your comments on the Draft EA. Your comment is noted.

TO: Field Supervisor
Attn: Raven EA
U. S. Fish and Wildlife Service
2493 Portola Road, Suite B
Ventura, CA 93003

From: G J Hickman
Natural Resource Specialist and
Director of Endangered Species Program for Lower Colorado
Box 61470
Boulder City, NV 89006

Subject: Draft EA to Implement a Desert Tortoise Recovery Plan Task:
Reduce Common Raven Predation on the Desert Tortoise

The U S Bureau of Reclamation (Reclamation) recognizes the extremely precarious position of the Desert Tortoise population in the Western Mojave Desert in California.

Reclamation supports the efforts of the U S Fish and Wildlife Service (Service) to take the necessary steps to accomplish the Recovery Plan Task identified in the title of this document.

Reclamation has the responsibility to manage lands in California and other states which have native populations of desert tortoise (*Gopherus agassizii*).

Per Reclamation Policy the preferred alternative would have no adverse effect on the Multiple Species Conservation Plan (MSCP) implementation on the Reclamation holdings along the Lower Colorado River.

To the ends implied by the EA, Reclamation supports the preferred alternative described in the document.

Thank you for the opportunity to comment.

G J Hickman
Director Endangered Species Program for Lower Colorado River
(702) 293-8346

FISH AND WILDLIFE
SERVICE

MAY 09 2007

RECEIVED
VENTURA, CA

April 15, 2007

Dear officers of Fish and Wildlife Service,

Ravens will find food and water whether it is at the transfer stations or in the desert. Removing a transfer station will only bring further damage to our sensitive desert. The ravens in my community hang out in the rabbit filled empty desert along hwy 136.

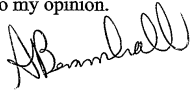
In my home town of Hamilton in Canada the starlings were taking over our city park. One day everyone in town was invited to shoot them. There was no further bird problem for the 10 years I remained in town.

I think shooting them is the best and cheapest deterrent. Trapping makes for more headaches with storage and disposal. Closing dumps and transfer stations will not get rid of them. Set a bounty on them if the numbers are that large.

I also think education about balanced ecology of the desert will deter visitors from feeding the birds, will get more people on board with the California integrated waste management program. I think friendlier park and BLM officers will also help.

Thanks for listening to my opinion.

Anne Bramhall



Response to Anne Bramhall, Private Citizen Comments

Thank you for your comments on the Draft EA. Your comments are noted. Please see our response to comments from D. Parrish.

Response to Mike Skuja, Defenders of Wildlife Comments

Field Supervisor
Attn: Raven EA
U.S. Fish and Wildlife Service
2493 Portola Road, Suite B
Ventura, CA 93003

April 12, 2007

RE: Comments on Environmental Assessment for Raven Management to Protect the Federally and State-listed Desert Tortoise in California

Defenders of Wildlife ("Defenders") is pleased to provide these comments in regards to the Environmental Assessment (EA) for raven management to protect the federally and state-listed desert tortoise in California. Defenders of Wildlife (Defenders) is a non-profit, conservation organization with 475,000 members nationwide, 100,000 of which reside in California. Defenders is dedicated to protecting all wild animals and plants in their natural communities. To this end, Defenders employs science, public education and participation, media, legislative advocacy, litigation, and proactive on-the-ground solutions in order to impede the accelerating rate of extinction of species, associated loss of biological diversity, and habitat alteration and destruction.

The Desert Tortoise Recovery Plan lists raven predation as one of several processes and actions that act synergistically to threaten the survival of desert tortoise populations. Overall, Defenders supports the raven management general proposal as it is a necessary element of the recovery plan. Moreover, we feel alternative B is the best alternative to select of the choices, as it represents a balance between preventative measures and controlled and selective lethal measures against ravens where there is clear evidence that the targeted raven is indeed the predator of a tortoise.

In order to effect conservation for this species, all of the threats facing the desert tortoise must be addressed to the maximum possible extent. Further, we favor implementation and exhaustion of non-lethal control methods to the greatest degree, and see prioritization in Alternative B as reflective of this. We acknowledge that lethal control may be necessary as a last resort in some cases to reduce the intensity of raven predation on desert tortoises. Such lethal control must be humane and used only when deemed essential and coupled with a strong focus on human-environment interactions. This means looking at the ultimate causes of the raven population increase (human driven factors) and not just the proximate cause of predation observed.

We seek assurance that the cumulative impact of the management actions taken will be capable of a long-term reduction in the threat to desert tortoise

We have determined that the proposed action and selected alternative would not result in a significant impact on the human environment. This decision is founded in CEQ's definition of significant and is explained in the EA. Please see sections 1.4 and 4.1 of the EA. We believe the EA contains many of the issues which you requested be provided in an EIS. For example, the EA contains defined biological goals and quantifiable criteria to determine if the actions authorized, funded, or carried out by a Federal agency are considered successful (section 3.2), management actions that decrease road kill of animals (section 3.3.1.c), the selection of lethal methods, and with respect to toxicants, the effect on target and non-target animals (sections 4.3.2.2, Appendix C, and Appendix D 1.1.c), historic and current raven population information, and most recent information on the impact of West Nile virus on the common raven in the California desert (section 3.5.h). Because this EA was developed with the cooperation and coordination of the Desert Managers Group, State agencies participated in its development and were give the opportunity to review it as a preliminary draft document. The EA does not specifically propose the removal of guzzlers. Rather it discusses reducing human-provided subsidies of food and water to common ravens. Each alternative includes a monitoring and adaptive management component (section 3.2).

Response to Mike Skuja, Defenders of Wildlife Comments

survival and recovery that is posed by raven activities. We understand that this will require the flexibility of adaptive management, but strongly urge that the biological goals of this project not be sacrificed to political pressure.

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Response to Mike Skuja, Defenders of Wildlife Comments

In order to design an effective, long-term strategy to reduce the threat of raven predation on desert tortoise populations, we appreciate the fact that this EA incorporates information compiled by the California Fish and Game entitled "A Summary of Predation by Corvids on Threatened and Endangered Species in California and Management Recommendations to Reduce Corvid Populations".

(http://www.dfg.ca.gov/hcpb/info/bm_research/bm_pdfrpts/2002_02.pdf)

Beyond this Defenders requests that the following information be provided and addressed in the draft environmental document.

1. The Raven Management Plan requires an Environmental Impact Statement

We support the analysis provided by the Desert Tortoise Preserve Committee, Desert Tortoise Council and the California Turtle and Tortoise club outlining the need for an Environmental Impact Statement (EIS) for the proposed raven management plan. The biological complexity *and political controversy* that this project presents necessitates an EIS. The ultimate goal of the project is to effect a significant environmental change by reducing the depredation of a listed species by a subsidized predator. Clearly if the goal is to implement a significant environmental change, this meets the NEPA threshold as a "significantly" impacting the environment, thus necessitating an EIS. The Executive Summary lists the rationale behind the EA designation being that the project shall accomplish its purpose without significant adverse effects and that the impact on the raven population is minimal. However, the reduction on predation on desert tortoise would hopefully be seen as significant and the political ramifications of the project are acute irrespective of percentage of raven population reduced.

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Further, the Bureau of Land Management prepared a similar Environmental Assessment in 1989 (For the Selected Control of the Common Raven to Reduce Desert Tortoise Predation in the Mojave Desert, California) that was subsequently followed by a 1990 Environmental Impact Statement (Management of the Common Raven in the California Desert Conservation Area) because of the recognized scope and level of controversy that the project entailed. The current proposed EA would cover a vastly larger area and the controversy surrounding lethal removal presumably has not disappeared. Given this, it is surprising that this management plan could be covered by an EA. The letter submitted by the desert tortoise interest groups clearly details that the current raven management proposal meets multiple NEPA criteria requiring the more complete and rigorous analysis of an EIS.

2. Clearly defined biological goals with quantifiable criteria.

The EIS should include clearly defined biological goals and quantifiable criteria to evaluate the ability of various alternatives to meet the program goals. The goal is to reduce raven predation to a level that the desert tortoise could sustain. The criteria needed to meet this goal will most likely need to be developed through basic population modeling. Several of the requests we list below will contribute to the development of these criteria. These criteria should be used to evaluate the ability of various alternatives to meet the program goals. Criteria including: the percentage of raven population reduced

Response to Mike Skuja, Defenders of Wildlife Comments

(both breeding and non-breeding), the percentage of raven predation on desert tortoise reduced (or some biologically defensible surrogate for this), the percentage increase in tortoise recruitment, the percentage (or number) of ravens nests reduced, the percentage of human food sources secured, the percentage of guzzlers removed, etc. These goals will be important in terms of evaluating which actions are necessary in order to achieve the highest potential for success, and to evaluate the success of future implementation of the plan. Defenders requests that any proposed alternative should be comprised of actions that are cumulatively capable of meeting the biological goals. Defenders recognizes the appearance of many of the methods mentioned above for quantifiable targets in section 3.2 on page 16, but also reiterates the need for quantifying elements of the human environment such as guzzlers removed, etc.

3. Clearly defined targets, goals and strategies for the human component of the program: education and outreach

Objective 1a. is to “Develop and implement and outreach program”. Presumably this appears up front due to the fact that reducing human provided subsidies of food and water is key to the long-term survival of the tortoise. Defenders appreciates the goals the EA mentions of developing an outreach program that includes collecting baseline data on public attitudes, perceptions, and values on the desert tortoise. However, we do not see a workable timeline and division of labor for how these goals will come about. There must be a clear plan of implementation for these projects as well as a more detailed mention of the geographic scope: i.e., over what scale will this take place and how will more targeted outreach efforts be realized after data suggests specific areas to focus in on? Placement of raven-proof bins and other preventative measures should be a logical result of these findings.

Also, with regards to specifics: how will FWS work with local, state, and federal agencies to encourage an enhanced level of enforcement of existing regulations on trash management and water use? Will there be monitoring of water use over time? If so, where? Will there be semi-regular field visits to monitor progress and answer waste management questions? How will dialogue be established?

4. Analysis of the relative contribution of raven attractants to increased raven populations.

In order to understand how each management action will contribute to reaching the biological goal of reducing raven predation on desert tortoises, it will be important to analyze the relative contribution of certain raven attractants (e.g. landfills, private trash, dumpsters, water for lawns, wildlife guzzlers, etc.) to overall raven population levels. This analysis is critical in order to address the necessary suite of attractants at the appropriate levels.

Defenders specifically requests that the impact of wildlife guzzlers (artificial water sources in the desert) on attracting and maintaining raven populations be analyzed in the EIS as evidence suggests that these water sources contribute a great degree to this

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Response to Mike Skuja, Defenders of Wildlife Comments

biological problem. In general ravens are known to move into an area or expand their populations in response to a habitat change and are likely to stay and thrive if surrounding conditions allow. Wildlife guzzlers appear to provide an initial habitat state that allows for colonization of an otherwise fairly inhospitable habitat.

The attractant presented by landfills also must be considered as these sources of food are known to attract ravens to areas where they do not naturally occur. Availability of other resources, such as localized human trash and water related to home irrigation, may provide the secondary support for the additional ravens to stay and thrive in the area. This analysis should also include a discussion of nesting habitat and the extent to which ravens are using anthropogenic resources for nesting structures and substrate.

The raven management actions should be targeted at the root cause of the population explosion to the maximum extent possible. This will decrease the need for lethal techniques and avoid the situation where ravens continue to be lured into the desert by favorable habitat conditions, only to be killed by lethal control. This decrease in need for lethal measure will also lesson the political turmoil behind killing of ravens to a certain degree.

5. Decrease potential for roadkill.

Among the non-lethal tools, we specifically request that the EIS include management actions that decrease the potential for animals to be killed on roads. Because ravens feed on roadkill, prevention of this problem is an important tool in decreasing raven populations. Priority crossing areas with undercrossings or overcrossing to which animals are funneled by directional fencing is an effective way to reduce mortality of wildlife on roads. While there is information available on this in the EA, we suggest using work of Caltrans and information from the Missing Linkages Report (<http://www.calwild.org/resources/pubs/linkages/>) as well as other local knowledge of roadkill hotspots to identify appropriate areas to restore landscape linkages for target species in order to reduce the roadkill attractant.

6. Detailed discussion of all non-lethal techniques considered

The discussion of non-lethal techniques should be detailed and include the rationale for any dismissal. Defenders specifically requests that an analysis is presented of the potential for exclusionary devices at desert tortoise burrows. Additionally, conditioned taste mechanisms should be considered. Defenders recognizes the assertion in the EA that it would be very expensive to institute taste aversion over a large scale. However, it may be appropriate in target areas of raven predation. The DFG report details work by M. Avery that used tainted eggs to successfully deter raven predation on least terns

7. Lethal control discussion must include full analysis of methods and associated potential for success.

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Response to Mike Skuja, Defenders of Wildlife Comments

The discussion of lethal control methods must include a full analysis of the methods proposed and their relative potential for success. We specifically request that the toxicants proposed and their effects on the animal be described. We also seek an analysis of the potential effects of proposed toxicants on other desert wildlife. This does occur in the EA to some degree. But page 49 of the EA reads as follows: "The use of the avian toxicant could accidentally cause illness in other avian egg-eating species such as golden eagles and roadrunners. The possibility of trapping or poisoning nontarget species would be unlikely. Traps and bait sites would be monitored and modified, if necessary, to ensure that nontarget species do not take the bait". While Defenders recognizes that ground or climbing mammals will not have access to the bait, we would like more specifics as to how to avoid negative consequences to eagles and roadrunners.

We request that an appropriate toxicant would only target ravens and that raven carcasses be removed so as to avoid secondary poisoning of other species. Additionally, we agree with the EA's conclusions stating that to the extent that lethal control is biologically necessary, the most effective humane lethal control methods must be chosen. Finally, we request that the EIS recognize that lethal control is only a short-term solution to reduce the risk of raven predation and must be accompanied by long-term reductions in the habitat attractants (such as guzzlers and landfills) in order to be biologically defensible.

8. Involvement of State Agencies

We request that the appropriate offices of the California state government be involved in the raven management planning. The Resources Agencies, especially the Department of Fish and Game and the Department of State Parks and Recreation clearly must be included. While the DFG has been consulted on state regulations and policies affecting the management of the common raven and the status of the common raven population in the California desert, Defenders does not see a plan which details how they will remain involved in the process and if they will have input on periodic reviews of monitoring data. The participation of Caltrans appears to be appropriate as well regarding issues of roadkill. While they are listed as a collaborative agency on page 113, means of engaging them are not evident.

9. Analysis of historic and current raven populations and impacts of proposed action and alternatives.

The EIS should include a presentation of historic and current raven populations and the impacts of the proposed alternatives on current populations. This provides the necessary context within which the public can analyze the extent of the crisis and the ability of the proposed actions and alternatives to address it. Defenders realizes this historical data is often scant and appreciates the EA's analysis of past studies available.

10. Analysis of raven response to proposed control measures.

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Response to Mike Skuja, Defenders of Wildlife Comments

The EIS must contain a thorough analysis of how ravens respond to the control measures proposed. For example, if their nests are taken in the off-season, do they renest in the same area anyway? Do they renest 10 miles away? If the nestlings are killed, will the adults increase their reproductive effort for the year or will they abandon further nesting? These and similar questions must be addressed according to the current status of the science. In instances of uncertainty, there must be a clear contingency plan should the actions fail to garner their intended result. Defenders is pleased to see questions like this appear in the EA, as well as a recognition of differences between breeding and non-breeding raven territories, as they are reflective of the heterogeneity within raven populations.

11. Literature review on the likelihood of success of the various techniques in reaching the biological goals and criteria.

The EIS should include an appropriate review of the scientific literature as it pertains to the likelihood of the proposed management techniques to succeed in reaching the biological goals and objectives. Additionally, the recommendations included in the DFG report mentioned in the introduction of this letter provide management actions that should be included in the EIS. Specifically, they discuss an example where dirt was dumped over the landfill after each load of trash, burying the resource and lowering the attraction for corvids. Such management actions must be included in the overall long-term strategy to decrease the threat of raven predation on the desert tortoise.

12. Include an analysis of potential impacts of West Nile virus on raven populations in the California desert, monitor these impacts, and incorporate the results into the adaptive management of the raven management plan.

The appearance of West Nile virus in California potentially will have an impact on raven populations in desert tortoise habitat. Wildlife guzzlers and other artificial water sources in the California desert most likely will contribute to an increased transmission of West Nile virus, to which corvid populations are especially susceptible. While the EA deems it unlikely that the West Nile virus will become a major factor in raven survival, the monitoring incorporated should detect and track the spread of West Nile virus in ravens and adaptive management should allow response including the ability to reduce any lethal control efforts commensurate with the raven reduction attributed to the virus.

13. Incorporate monitoring and adaptive management of chosen actions.

The preferred alternative must include sufficient monitoring of impacts of the actions on desert tortoise and raven populations. The monitoring must be frequent enough and specific enough to indicate when actions are not meeting their intended purpose. Adaptive management must be incorporated to allow for contingency and remedial actions in the face of outcomes that are not having the intended impact. Of special concern are actions with high levels of uncertainty. We recommend that the EIS include appropriate contingency plans for actions with a high probability of having an unknown effect in order to ensure that undesirable effects will be identified and addressed in a

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Response to Mike Skuja, Defenders of Wildlife Comments

timely manner. Defenders appreciates seeing these actions laid out in the EA as the responsibility of the existing Raven Management Interagency Task Group.

14. Analysis of benefits of raven management to other elements of the desert environment.

The EIS should include a presentation of the benefits of the proposed raven management to other elements of the desert. Ravens predate several other species, including the federally endangered snowy plover, and their elevated prevalence has an enormous impact on California desert ecosystems. This analysis will be useful in explaining the broader benefit of the management program.

Again, Defenders appreciates this opportunity to comment on the Environmental Assessment for raven management aimed at protecting the threatened desert tortoise. We were also pleased to see that many of the elements of our scoping comments were addressed to some degree. Should you have any questions, feel free to contact me at 916-313-5800, ext 110.

Sincerely,

Mike Skuja, M.S.
California Representative

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FISH AND WILDLIFE
SERVICE

APR 11 2007

RECEIVED
VENTURA, CA

DEAR SIRS
REGARDING THE RAVEN & TURTLE THING
I HAVE BEEN IN THE DESERT INCLUDING
THE BEST TURTLE HAT FOR 25 YEARS.
I TRAVEL OVER IT OFTEN. WHEN I WAS
A KID WE TRAVELED EVERY DAY TO
CHECK WATER FOR THE RAIL ROAD. WE
SAW FROM 10 TO 30 TURTLES A DAY
I HAD 200 IN A LARGE PEN AT
HOME. THEY WOULD ESCAPE ABOUT
AS FAST AS I REPLACED THEM
I TRIED TO FIND THE BIGGEST ONE
ABOUT 18" WAS THE BIGGEST I HAD.
IT WAS A VERY FEW RAVENS WE SAW
THEY FOLLOW THE RR. & I FOLLOWED IT
OFTEN STILL DO. IF I SAW 2 A MONTH
IT WAS A LOT. BUSTARDS WERE COMMON
& AN OCCASIONAL CROW.
IN THE LAST 25 YEARS THE RAVENS
HAVE BECOME AS THICK AS FLIES
1 OR 2 HUNDRED AT A TIME IS
COMMON OVER.

Response to Phillip Joe Golden, Private Citizen Comments

Thank you for your comments on the Draft EA. Your comments are noted. Please see our response to comments from D. Parrish.

Response to Phillip Joe Golden, Private Citizen Comments

JUST FOLLOW THE RR TRACK OR GO BY
A ROAD NOT FARM OR THE
SO CALLED MOJAVE PRESERVE &
YOU WILL SEE HUNDREDS, I FIND
TURTLES UP TO 5 INCHES WITH
THEIR BACKS PECKED OUT ALL THE
TIME. RAVENS ARE 100 TIMES MORE
LIKELY TO KILL TURTLES THAN ANY OTHER
CAUSE. WE SPEND MILLIONS ON SENCES
ALONG DESERT ROADS & PROTECT RAVENS
I PERSONALLY SHOT EVERY ONE I
CAN. THERE SHOULD BE A BOUNTY ON
ALL RAVENS. THERE IS NOT A THING
GOOD ABOUT THEM. BUSH & FOX LOVE
THEM SO THEY ARE PROTECTED LIKE
THE WET BACKS. THE SO CALLED
EXPERTS ON TURTLES DONT KNOW
MUCH ABOUT THEM THEY ARE
ECOLOGISTS THAT CANT MAKE A LIVING
ANY OTHER WAY SO THEY FEED
AT THE GOVT TROUGH. EXAMPLE
OUT ON THE DRY LAKE AT IVANPAH
THERE ARE SIGNS SAYING YOU
CANT DRIVE THERE BECAUSE
TURTLES GO THERE.

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Response to Phillip Joe Golden, Private Citizen Comments

3

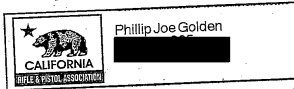
I LIVED ON THAT LAKE FOR 14 YEARS
DROVE ACROSS IT TO LAS VEGAS ALL
THE TIME & HAVE NEVER SEEN OR
HEARD OF A TURTLE ON IT.
TURTLES CAN NOT STAND FULL
SUN IN THE SUMMER FOR MORE THAN
A FEW MINUTES. THERE IS NO SHADE
ON THE LAKE NO FEED OUT THERE &
IT WOULD TAKE 3 DAYS TO GET TO
WATER WHEN IT IS THERE & 3 MORE
TO GET BACK TO SHADE. THERE ARE
NO TURTLES THERE & NEVER HAVE
BEEN BUT THIS SIGN IS SIGNED BY
THE HI POWERED TURTLE EXPERT
IA NEEDLES. IF I SEE 1 TURTLE A
YEAR NOW IT IS PURE LUCK. WHAT WE
NEED IS TOTAL WAR ON RAVENS
NO THING ELSE WILL HELP THE TURTLES.
THEY NEVER HAVE TIME TO GROW UP
IT TAKES 5 OR 6 YEARS TO GET
BIG ENOUGH TO RESIST RAVENS.
I CAN SHOW YOU ALL THE PLACES
TURTLES LIVE & YOU CANT FIND ONE
OVER.

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Response to Phillip Joe Golden, Private Citizen Comments

I TRAVEL OVER THE DESERT CONSTANTLY
AND KNOW ABOUT THE TURTLE
POPULATION. WHEN THE PARK SERVICE
DRE OUT ALL THE WATER HOLES THE
CATTLE MEN HAD THEY KILLED 1/2
OF THE REMAINING TURTLES.
I WOULD LIKE A COPY OF DRAFTED.
IN WRITING.

P. J. Golden



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Response to Jim Wilson, Private Citizen Comments

Ray
Bransfield/VFWO/R1/FWS/D
OI
05/02/2007 10:10 AM

To jiwil02@msn.com
cc Larry_LaPre@ca.blm.gov
bcc Judy Hohman/VFWO/R1/FWS/DOI
Subject Fw: Ravens

Jim,
As you can see, Larry forwarded your email to me.

You can submit comments on the environmental assessment to;

Judy Hohman
US Fish and Wildlife Service
2493 Portola Road, Suite B
Ventura, CA 93003

You can read the environmental assessment at <http://www.fws.gov/ventura/>

We will be accepting comments until May 7, 2007.

Thank you for your interest in our programs.
Ray

----- Forwarded by Ray Bransfield/VFWO/R1/FWS/DOI on 05/02/2007 10:07 AM -----

Larry
LaPre/CASO/CA/BLM/DOI@B
LM
05/02/2007 09:49 AM

To Ray Bransfield/VFWO/R1/FWS/DOI@FWS
cc Robert McMorran/VFWO/R1/FWS/DOI@FWS
Subject Fw: Ravens

----- Forwarded by Larry LaPre/CASO/CA/BLM/DOI on 05/02/2007 09:40 AM -----



"Jim Wilson"
[REDACTED]
05/01/2007 08:46 PM

To "Larry LaP" <Larry_LaPre@ca.blm.gov>
cc
Subject Ravens

Larry, I read in a paper that you where involved in how ravens effected the tortoise population . Is there an address that comments can be sent ? What do you think of a decoy baby tortoise with a small charge and shotguns pellets and when the raven peaked at it, it would explode. This way you get the culprit. Other ravens seeing this might have second thoughts about tortoises. Just a thought, but if you think it might fly, I could write it up in more detail. Jim (sp. 111)

Thank you for you suggestion. In developing alternatives, we considered the biology and behavior of the common raven, the biology and behavior of other wildlife species, human health and safety, and local, State, and Federal regulations. The placement of decoy desert tortoises with an explosive charge on the ground would make the decoys available to curious people, and other forms of wildlife such as non-target bird species, rodents, and rabbits. Our goal is to reduce common raven predation on the desert tortoise. Therefore, we have selected methods that would target common ravens, are unlikely to adversely affect other species, and consider human health and safety and local, State, and Federal regulations.



"Brendan Hughes"

[REDACTED]
I.com>

04/23/2007 09:32 PM

To: fw8drafravenea@fws.gov
cc:
Subject: Comments on Raven EA

Brendan Hughes
[REDACTED]

I would like to voice my support for Alternative B, FWS's Preferred Alternative, to reduce common raven predation on the desert tortoise. I would also like to emphasize the need for FWS and other management agencies to cooperate with all entities in the California Desert, such as cities, counties, corporations, and business owners, to reduce or eliminate the human contribution to the raven population explosion. While killing ravens is an adequate short-term remedy to desert tortoise predation, the root cause of the problem is the carelessness of humans, and this must be addressed as soon as possible.

Thank you.

Brendan Hughes
[REDACTED]

Response to Brendan Hughes, Private Citizen Comments

Thank you for your comments on the Draft EA. Your comments are noted.

Response to Ken Nagy, Private Citizen Comments

Thank you for your comments on the Draft EA. Your comments are noted.



Ken Nagy
[Redacted]
[Redacted]
04/17/2007 04:12 PM

To: <FW8drafravena@fws.gov>
cc:
Subject: Comments on raven control EA

TO: Dr. Judy Hohman
FROM: Dr. Ken Nagy
RE: EA on controlling raved predation on desert tortoises (ref. April 5, 2007 letter from Carl T. Benz)

Judy, I strongly favor whatever methods are necessary to reduce the raven predation that is currently contributing to the apparent nearly complete failure of recruitment of desert tortoise juveniles into wild populations of tortoises in the Western Mojave desert.

We are doing the research needed to help "head-start" desert tortoises at three sites in the Mojave. Results are encouraging so far (survivorship in predator-resistant natural enclosures is much higher than outside the enclosures, and some supplemental watering can increase growth rates tremendously). But it will be a useless effort if we end up releasing head-started juveniles into the habitat as it is now, where predation on young is so high. Hopefully, raven control will go a long way toward making things better for juvenile survivorship.

Sincerely,

Ken Nagy

Ken Nagy, Research Professor and Professor Emeritus
Department of Ecology and Evolutionary Biology
621 Young Drive South, UCLA, P. O. Box 951606
University of California office: (310) 825-8771
Los Angeles, CA, USA 90095-1606 fax: (310) 206-3987
kennagy@biology.ucla.edu
<http://www.eeb.ucla.edu/indivfaculty.php?FacultyKey=1587>

Response to Jim and Ellen Johnson, Private Citizens Comments

February 1, 2007

Jim, Ellen Johnson

Robert Smith
Sr. Field Representative

Re: Propane Cannons used for Bird control in the Newberry Springs area.

Dear Robert,

We are writing this letter to you as you requested at the Dec. CSD meeting in Newberry regarding the problem with using propane cannons in the Pistachio Orchards.

We were waiting until the new supervisor was appointed and we wanted to attend a conference on Pistachios in Visalia where there was going to be a class on this subject, hoping to get more information before writing this letter.

As you know Newberry Springs is a rural area with lake properties, pistachio orchards, alfalfa fields and residences intermixed. These orchards are on an extremely small scale compared to the San Joaquin Valley, as most are basically hobby farming. The problem is the miss-use of propane cannons, a devise that makes a loud blast which is supposed to scare the birds out of the orchard. These devices have been turned on at 4:30-5:00 in the morning and left on until late at night and at times never turned off at night. (Birds are not active when it is dark) They are turned on too early in the year (mid August) and ran into November (the window for harvesting is not this long). These devices can be set for the number of discharges in a certain amount of time, this is where a lot of abuse comes in, as some users feel if one bang is good more is better. For example: We are one orchard out of 5 within a mile square radius. We do not use these cannons and do not have a bird problem. Out of the other 4 one has 1 cannon, the others have multiple cannons. One orchard started in mid August and between his 2 cannons he had 6 discharges a minute going off. This after 11 hours of running equates to around 4,000 discharges a day just from one orchard. There are other residences in the area being bothered by this, one called the sheriff but there was nothing he could do as there was no noise ordinance dealing with this. This one individual finally cut back on the number of discharges after numerous calls. At about this time the other 3 orchards started theirs up.

Your comments are noted regarding the noise level and ineffectiveness of using cannons to haze or scare birds from an area.

Response to Jim and Ellen Johnson, Private Citizens Comments

Some of the orchard owners in Newberry that use cannons do not reside in the area, they count on someone to turn them on and off as this does not always work Grant Poole was our farm advisor and did some research and found that the cannons were causing problems in other areas, where agriculture and residential areas are merging resulting in law suits and violence. He suggested it may be time to put a noise ordinance into affect and contacted Jesse Flores, the area representative for Supervisor Bill Postmus. Along with Grant we contacted a number of people in the area of Agriculture. Every one said the birds are highly intelligent and adapt very quickly to the noise, here are a few examples.

Mark Freeman from the University of Cal. Ag& Natural Resources said these noise devices were not effective as the birds adapt very quickly unless incorporated with movement and also actually killing some.

Terrell Salmon from the University of Davis said the birds quickly adapt to the noise and the cannons become ineffective.

Kevin Olsen who manages 5,000 acres of Pistachios and Almonds for S&J Nursery said they use cannons, but they are constantly being moved and in his experience no matter how often you discharge them the birds get used to it.

Robert Seeley an individual that has an orchard here in Newberry wanted to purchase a cannon from Bird Busters, a manufacture, when he said he was buying it to scare Ravens out of the orchard he was told not to waste his money as it was like ringing a dinner bell.

Dana Merrill who grows 4,000 acres of wine grapes in San Luis Obispo said we have come to the conclusion that we were kidding ourselves that these noise makers worked. He goes on to say the neighbors absolutely hate those things and I don't really blame them because it does drive you absolutely crazy, you feel like you are in a war zone. We have attached a page form a catalog selling the cannons, the manufacture states it delivers a thunder clap similar to a 37mm cannon.

In the Pistachio Manual on Birds by Rex E. Marsh it says the major problem with all frightening techniques is that when used day in and day out, most birds get accustomed (habituate) to them, thus the effectiveness diminishes with time. Less recognized is that they also diminish as more growers use the same techniques in the same general area.

In the clear dry air of the desert the sound can travel quite a distance especially if you are down wind. The noise seems to affect people in different ways. Those who spend a lot of time inside may not be bothered as much. On the other hand we know of two veterans that spend a lot of time outside that are having a big problem with the constant discharge of these cannons.

This is could be a problem for selling property. The question has come up, under California Law would a Realtor or individual have to disclose this to a buyer as there is no noise ordinance regarding this issue. We are in the process of doing a minor

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Response to Jim and Ellen Johnson, Private Citizens Comments

subdivision on our property with the County of San Bernardino, this is not cheap, but we felt it would help to offset our income as we are getting older. We had a buyer on the completion of the subdivision, this individual came up and spent a day with us while we were harvesting. At this time the surrounding orchards cannons were going off, at the end of the day he said he was sorry but there was no way he would purchase property with this constant noise.

Sandy Wilt, with Dept of Ag. Weights and Measures in Barstow, was brought into this after a complaint from a nurse who works nights and had trouble getting sleep during the day with the cannons going off. She contacted the county who in turn asked Sandy to look into this. Sandy thought this would be more of a code enforcement issue but felt maybe education might help correct some of the miss use of the cannons. We along with some other individuals thought this would be a good start.

At this time we received a letter from Jesse Flores stating Supervisor Postmus does not feel that this falls within the jurisdiction of our county supervisor and forwarded our letter to Assemblyman Bill Maze as he would be our best contact for a state issue (see attached letter) We along with everyone we have talked to feel this is a local issue not a state issue. As our county does have a noise ordinance that deals with decibels, (ordinance #87.0905, see attached) it appears to us that these cannons are twice the allowable level.

As there are other scare tactics out there that aren't quite as obtrusive, maybe there is some common ground that could be found that works for everybody.

We appreciate any input or direction on this issue that you can give us, as the way it stand now you could have one of these devices for your garden.

Thank you

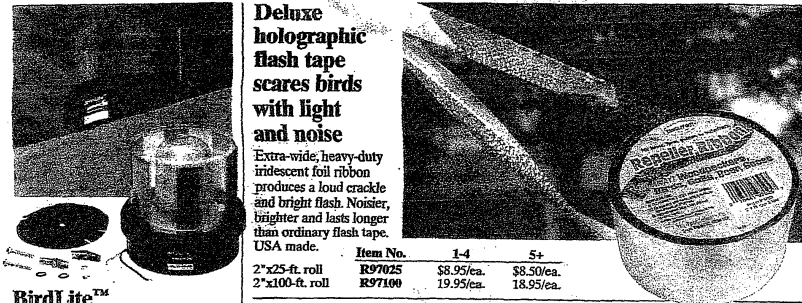

Jim, Ellen Johnson

cc
Supervisor Mitzelfelt
Sandra Wilt
N.C.S.D
N.H.R.P.A

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Deluxe holographic flash tape scares birds with light and noise

Extra-wide, heavy-duty iridescent foil ribbon produces a loud crackle and bright flash. Noisier, brighter and lasts longer than ordinary flash tape. USA made.



Item No.	1-4	5+
2" x 25-ft. roll	R97025 \$8.95/ea.	\$8.50/ea.
2" x 100-ft. roll	R97100 19.95/ea.	18.95/ea.

BirdLite™

Repel pigeons and other birds with this pulsing strobe

One-million-candlepower bulb sends out intense white, red and blue light at 75 flashes per minute. The unit creates light pulses and shadows that are intolerable and disorienting to birds. The light is barely noticeable by people on the ground when installed at heights where birds normally roost. For use in warehouses, airplane hangars, packing sheds or any large, dimly lit area where birds create a nuisance. Covers up to 10,000 sq. ft. USA made.

Item No. 125999

1-4	5+
\$225.00/ea.	\$202.50/ea.

Low-cost Flash Tape

Reflective Mylar® tape deters birds with flashy appearance and noisy crackle. Distribute throughout area to be protected. 1" x 290-ft. roll. Imported.

Red Front with Silver Backing
Item No. R40703

1-4	5+
\$10.95/ea.	\$9.95/ea.

Gold Front with Silver Backing
Item No. 125998

1-4	5+
\$10.95/ea.	\$9.95/ea.



Bird Control Cannons

LP Gas Cannons

Repel birds and wildlife with a loud "thunderclap"

These rugged systems deliver a harmless "thunderclap" equivalent to a 37mm cannon (130 decibels). Operates from your 5-gal. liquid propane (LP) cylinder (not included). Requires no electricity or battery. Optional accessory (sold below) allows cannon to rotate 360°. Imported.

M4 Single-detonation Cannon - Fires at a regular interval, user set from 30 seconds to 20 minutes. Operates 14 days at a 20-minute firing interval on 5-gal. LP (not included).

Item No. RABM4

1-2	3+
\$370.00/ea.	\$345.00/ea.

M8 Multiple-detonation Cannon - Fires at an irregular interval, approximately three times in 25 seconds, followed by four detonations in one minute. Operates 10 days on 5-gal. LP (not included).

Item No. RABM8

1-2	3+
\$395.00/ea.	\$375.00/ea.

Cannon Accessory

Rotomat Revolving Platform - Moves the M4 or M8 cannon's direction of fire in a complete 360° rotation, about 90° at each detonation. Does not require a power source and does not consume additional LP. Imported.

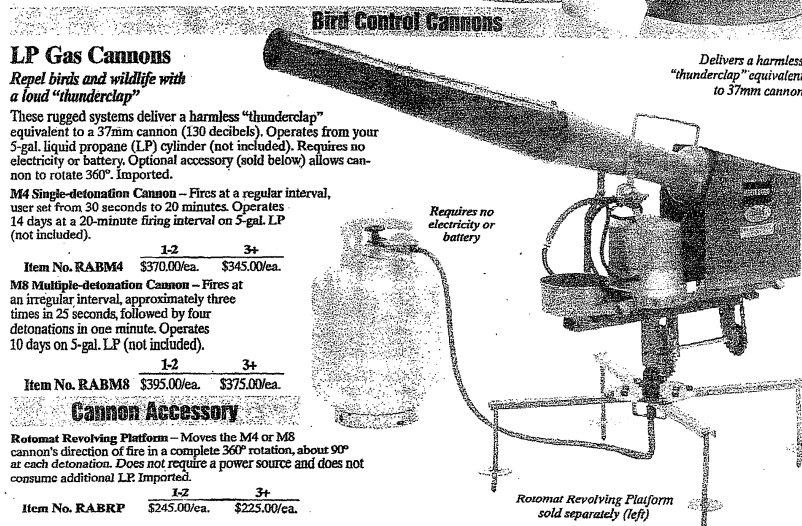
Item No. RABRP

1-2	3+
\$245.00/ea.	\$225.00/ea.

Requires no electricity or battery

Delivers a harmless "thunderclap" equivalent to 37mm cannon

Rotomat Revolving Platform sold separately (left)



Need more information about a product? Ask for Technical Services

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Board of Supervisors
County of San Bernardino



BILL POSTMUS
CHAIRMAN
SUPERVISOR, FIRST DISTRICT

Response to Jim and Ellen Johnson, Private Citizens Comments

October 24, 2006

Ms. Ellen Johnson
48084 Fairview Road
Newberry Springs, CA 92365

Dear Ms. Johnson:

Thank you for taking the time to contact the office of Supervisor Postmus regarding the noise from LP Cannon Devices. Although I would like to be of service to you, this matter does not fall within the jurisdiction of your county supervisor. I have taken the liberty of forwarding your letter to your state representative, Assemblyman Bill Maze. He would be your best point of contact for a state issue. You may reach him at:

Assemblyman Bill Maze
P.O. Box 3003
Visalia, CA 92378
(916) 319-2034

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Please do not hesitate to contact the Supervisor's office should you have a county related matter of concern.

Sincerely,

A handwritten signature in cursive script, appearing to read "Jessie Flores".

Jessie Flores
Field Representative to
BILL POSTMUS
Chairman, Board of Supervisors
San Bernardino County

Response to Jim and Ellen Johnson, Private Citizens Comments

**TITLE 8 DEVELOPMENT CODE
DIVISION 7: GENERAL DESIGN STANDARDS
CHAPTER 9: PERFORMANCE STANDARDS.**

Sections:

- 87.0901 Intent.
- 87.0905 Noise.
- 87.0910 Vibration.
- 87.0915 Air Quality.
- 87.0920 Glare and Outdoor Lighting – Valley Area.
- 87.0921 Glare and Outdoor Lighting – Mountain and Desert Areas.
- 87.0925 Heat.
- 87.0930 Electrical Disturbances.
- 87.0935 Fire Hazards.
- 87.0940 Waste Disposal.

87.0901 Intent.

(a) The provisions of this chapter shall apply to any land use within County jurisdiction.
 (b) Performance standards are designed to mitigate the environmental impacts of existing and proposed land uses within a community. Environmental impacts include noise, air quality, glare, heat, and waste disposal and runoff control. Performance standards protect the health and safety of workers, nearby residents and businesses, and prevent damaging effects to surrounding properties.

Readopted Ordinance 3341 (1989); Amended Ordinance 3966 (2006)

87.0905 Noise.

(a) NOISE MEASUREMENT. Noise will be measured with a sound level meter, which meets the standards of the American National Standards Institute (ANSI Section S14-1979, Type 1 or Type 2). Noise levels shall be measured using the "A" weighted sound pressure level scale in decibels (ref. pressure = 20 microwtons per meter squared). The unit of measure shall be designated as dB(A). The Director of the Department of Environmental Health Services shall be the noise control officer.

(b) NOISE STANDARDS.

(1) Areas within San Bernardino County shall be designated as "noise-impacted" if exposed to existing or projected future exterior noise levels from mobile or stationary sources exceeding the standards listed in subsections (2) and (3) below. New development of residential or other noise-sensitive land uses will not be permitted in noise-impacted areas unless effective mitigation measures are incorporated into the project design to reduce noise levels to these standards. Noise-sensitive land uses include residential uses, schools, hospitals, nursing homes, churches and libraries.

(2) The following table describes the noise standard for emanations from any stationary noise source, as it affects adjacent properties:

NOISE STANDARDS — Stationary Noise Sources

Affected Land Uses (Receiving Noise)	7 am-10 pm Leq*	10 pm-7 am Leq*
Residential	55 dB(A)	45 dB(A)
Professional Services	55 dB(A)	55 dB(A)
Other Commercial	60 dB(A)	60 dB(A)
Industrial	70 dB(A)	70 dB(A)

* Leq = (Equivalent Energy Level) - The sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period, typically 1, 8 or 24 hours.
 * dB(A) = (A-weighted Sound Pressure Level) - The sound pressure level, in decibels, as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound, placing greater emphasis on those frequencies within the sensitivity range of the human ear.
 * Ldn = (Day-Night Noise Level) - The average equivalent A-weighted sound level during a 24-hour day obtained by adding ten decibels to the hourly noise levels measured during the night (from 10 pm to 7 am). In this way Ldn takes into account the lower tolerance of people for noise during nighttime periods.

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Response to Jim and Ellen Johnson, Private Citizens Comments

No person shall operate or cause to be operated any source of sound at any location or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level, when measured on any other property, either incorporated or unincorporated, to exceed:

- (A) The noise standard for that receiving land use [as specified in Subsection (b)(1) of this section] for a cumulative period of more than thirty (30) minutes in any hour; or
- (B) The noise standard plus 5 dB(A) for a cumulative period of more than fifteen (15) minutes in any hour; or
- (C) The noise standard plus 10 dB(A) for a cumulative period of more than five (5) minutes in any hour; or
- (D) The noise standard plus 15 dB(A) for a cumulative period of more than one (1) minute in any hour; or
- (E) The noise standard plus 20 dB(A) for any period of time.

(3) Noise from mobile sources may affect adjacent properties adversely. When it does, such noise shall be mitigated for any new development to a level that will not exceed the standards described in the following table:

NOISE STANDARDS — Adjacent Mobile Noise Sources

Categories	Land Use Uses	Ldn (or CNEL) dB(A)	
		Interior*	Exterior**
Residential	Single and multi-family, duplex, mobile homes	45	60***
Commercial	Hotel, motel, transient housing	45	60***
	Commercial retail, bank, restaurant	50	N/A
	Office building, research and development, professional offices	45	65
Institutional/Public	Amphitheater, concert hall, auditorium, movie theater	45	N/A
	Hospital, nursing home, school classroom, church, library	45	65
Open Space	Park	N/A	65
* Indoor environment excluding: bathrooms, kitchens, toilets, closets and corridors.			
** Outdoor environment limited to:			
Private yard of single-family dwellings		Park picnic areas	
Multi-family private patios or balconies		School playgrounds	
Mobile home parks		Hotel and motel recreation areas	
Hospital/office building patios			
*** An exterior noise level of up to 65 dB(A) (or CNEL) will be allowed provided exterior noise levels have been substantially mitigated through a reasonable application of the best available noise reduction technology, and interior noise exposure does not exceed 45 dB(A) (or CNEL) with windows and doors closed. Requiring that windows and doors remain closed to achieve an acceptable interior noise level will necessitate the use of air conditioning or mechanical ventilation.			
CNEL = (Community Noise Equivalent Level) - The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7 pm to 10 am and ten decibels to sound levels in the night before 7 am and after 10 pm.			

(c) If the measured ambient level exceeds any of the first four (4) noise limit categories above, the allowable noise exposure standard shall be increased to reflect said ambient noise level. If the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level.

(d) If the alleged offense consists entirely of impact noise or simple tone noise, each of the noise levels in Subsection (b)(1) of this section shall be reduced by 5 dBA.

(e) Exempt Noises.

(1) The following sources of noise are exempt:

- (A) Motor vehicles not under the control of the industrial use.
- (B) Emergency equipment, vehicles, and devices.
- (C) Temporary construction, repair, or demolition activities between 7:00 a.m. and 7:00 p.m. except Sundays and Federal holidays.

Readopted Ordinance 3341 (1989); Amended Ordinance 3616 (1995)

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To:
Department of Fish & Wildlife
2493 Portola Road, Suite B
Ventura, Ca, 93003
Office: 805-644-1766
Fax: 805-644-3958

Thursday
May 3, 2007

FISH AND WILDLIFE
SERVICE

MAY 04 2007

RECEIVED
VENTURA, CA

From:
Ronald Pennington Satterfield

Re: Ravens & Tortoises

Dear Department of Fish & Wildlife,
Can you plan he worked out to relocate some of the ravens, as well as the tortoises? When danger of the flood lurked, Noah's ark was the refuge. Can't modern technology be used to preserve both the ravens & the tortoises? Both species being useful to the earth. Tortoises shouldn't be that hard to locate & relocate. Ravens could be trapped & relocated & their young ones being looked after by local wildlife shelters & volunteers.
As you say, educate the public so they can learn to dispose of their trash properly & in the right place. Also, cutting the ATVs out of the area would help immensely. Don't they have restrictions on what areas to drive them? Also, restrict hikers & bicyclists, just plain human or someone to look out for the environment in that area. They know how to handle it on wild fun! maybe we all should sit down & watch a few episodes, we work with the environment & it will work with us.
Can't certain food stations be set up with grain or such for the ravens to feed to their babies?
There are some Biblical references to ravens. Ravens are the first birds mentioned in the Bible (Genesis 8: 7-11) as the bird sent out from the ark. The ravens were used by our God to supply prophet Elijah with food (1 Kings 17: 1-7). Job 38: 41 states that our God listens to the cries of the baby ravens crying for their food & our God provides them their food. Psalms 147: 7-9, Luke 12: 24, Psalms 104: 27, 28, Matthew 6: 26.

Thank you for your time
Ronald Eugene Pennington Satterfield

Response to Ronald Satterfield, Private Citizen Comments

Relocating common ravens and providing another food source were alternatives suggested during the public scoping process. Because the common raven is protected by State and Federal laws, relocations would require that we obtain permits from California Department of Fish and Game (CDFG) and the Office of Migratory Birds of the U.S. Fish and Wildlife Service. The CDFG was unable to approve our request. Issues of disease transmission, moving rising numbers of ravens from one location to another with rising numbers, transferring the predation problem, and not knowing if the relocation would be successful and the ravens would stay at their new location were given as reasons for not approving the request. Providing another feeding source would likely increase the number of common ravens and exacerbate the predation problem on the desert tortoise.



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Migratory Birds and Habitat Programs
911 NE 11th Ave
Portland, OR 97232



Judy Hohman, Chief
Ecological Services
U.S. Fish and Wildlife Service
2493 Portola Road, Suite B
Ventura, California 93003

Dear Ms. Hohman:

Thank you for the opportunity to review the Draft Environmental Assessment (EA) to Implement a Desert Tortoise Recovery Plan Task: Reduce Common Raven Predation on the Desert Tortoise (Draft EA). We believe the Preferred Alternative will achieve the goals of the action, and makes the most sense biologically. As we read this Draft EA and reviewed the map, Figure A-2, we were struck by the lack of coordination with other Fish and Wildlife Service offices across the range of desert tortoise recovery zones. It is unclear why the Ventura Fish and Wildlife Office is not coordinating similar actions for the desert tortoise recovery task with the Las Vegas Field Office and with Region 2. This Draft EA might offer an opportunity to launch a larger discussion with other offices on management of ravens in respect to desert tortoise recovery. The issues and solutions are very likely similar across the range of the desert tortoise.

We suggest some text edits in the attached comments on the EA, and in particular, see revisions to section 3.5, Alternatives Considered and Dismissed. We also believe the initial description of the action, and its justification, could be discussed in greater detail up front. Finally, we recommend the addition of text on monitoring methods, both for the effectiveness of the proposed actions on ravens, and for achieving the results expected for tortoises.

In some places this document is repetitive and lengthy. National Environmental Policy Act documents always have redundancies, but there are opportunities for more efficient language

Response to Brad Bortner, Office of Migratory Birds, U.S. Fish and Wildlife Service Comments

The recovery effort to reduce common raven predation on the desert tortoise described in the EA is a cooperative effort of the Desert Managers Group. This group is comprised of Federal and State agencies and local governments in the desert portion of southern California. Hence the maximum geographic area or limit upon which this group has jurisdiction is the California desert which is the area considered in the EA. We used various sources of data to estimate the number of common ravens that likely occur in the DTMAS and concentration areas within the California desert including demographic data and geographic area. Although the numbers of ravens estimated to be removed are not precise, they were developed using the best available information. The monitoring methods that would be implemented to determine the effectiveness of the proposed action are described in section 3.2 Effectiveness Monitoring and Adaptive Management.



**Response to Brad Bortner, Office of Migratory Birds, U.S. Fish
and Wildlife Service Comments**

Judy Hohman, Chief

Page 2

throughout this EA. We restructured a few paragraphs and we corrected typographical errors where we could find them, but were less diligent beyond page 50. Specific comments follow on the pages below.

Feel free to call Mike Green if you have questions about any of these edits, at 503-872-2707.

Sincerely,

Brad Bortner, Chief
Division of Migratory Birds and Habitat Programs

Attachment

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May 7, 2007
page 1 of 2

Via Electronic Mail

Field Supervisor
Attn: Raven EA
U.S. Fish and Wildlife Service
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003

Re: Draft Environmental Assessment
Raven Management: Desert Tortoise Recovery Plan

Dear Sir or Madam:

I have reviewed the Draft Environmental Assessment (Draft EA) analyzing various measures proposed to control predation by Common Ravens on Desert Tortoise. The preferred measures focus primarily on removing Common Ravens known to prey on Desert Tortoise, and removing Common Raven nests from within and near established Desert Tortoise Management Areas (DTMAs). More aggressive, alternative measures target more Common Ravens for removal, but none of the measures in the Draft EA realistically or practically address the basic problems of human-provided subsidies for Ravens, which allow Ravens to live, reproduce and thrive in Desert Tortoise habitat where they should be mere transients. The Raven Control measures discussed in the Draft EA will not significantly reduce Common Raven predation on Desert Tortoise, and more aggressive measures must be considered and implemented.

Even the most aggressive Raven removal option discussed in the Draft EA would eliminate only 8 to 18 percent of the existing Raven population. This is insignificant at best. As explained in the Draft EA, the current Raven population has grown by over 700 percent since non-native people moved into the desert regions a little over 100 years ago. The Raven population has exploded, and most of those Ravens are permanent residents in the desert, rather than the migratory transients they once were. The change is due entirely to humans and the Raven subsidies they provide in terms of food, water, nesting, perching and roosting sites. If human activities that lead to such subsidies are not squarely addressed and controlled, all other measures are superfluous.

The Draft EA proposes a public education program and coordination with public and private land managers to encourage the voluntary removal of subsidies for Common Ravens throughout the desert regions of southern California. Specifically, the measures discuss merely sharing information with the public about the status and needs of the Desert Tortoise and the growing problem of predation by Common Ravens, and relying on *voluntary* efforts by the public and by public and private land managers to control Raven subsidies. Public education and voluntary efforts by land managers are important first steps, but they are not adequate in and of themselves. Relying on such measures amounts to a band-aid approach for a badly hemorrhaging wound.

As pointed out in the Draft EA, Common Ravens prey on nascent and juvenile Tortoises, and can eliminate nearly all hatchlings in a given area. By routinely harvesting nearly all Tortoises born in a given year in a given area, Common Ravens are eliminating the ability of the Desert Tortoise population to maintain itself:

Response to Celeste Doyle, Desert Tortoise Council Comments

We have selected a phased approach of Alternative D to implement. Please see our response to Gerald Hillier, Quadstate Coalition. The non-lethal management portion of the proposed action uses cultural and mechanical methods which include reducing food, water, nest sites, roosting sites, and aggressive nest removal. We have noted your suggestions on specific methods to reduce human subsidies to the common raven.

Response to Celeste Doyle, Desert Tortoise Council Comments

May 7, 2007
page 2 of 2

The viable, adult breeding population in Raven-affected areas is slowly but surely dying out, and adults are not being replaced because young Tortoise are eaten before they attain breeding age. Eliminating a handful of Common Ravens and cleaning up some trash dumps will not control the Common Raven population and will not aid in the recovery of the Desert Tortoise. Broader and more aggressive land management measures are necessary.

Simply offering educational material, regardless of the quality of it, is not enough. The Service should actively seek out public meetings and classrooms where it can present information on Desert Tortoise and Raven predation. Written material should be available and prominently displayed at all federal, state and local offices in the desert regions that are open to the public, and especially in all such offices that distribute permits for land use activities.

Additional measures should include active opposition by federal land managers in the desert regions against new utility corridors and roads that provide more human access and more Raven nesting sites than already exist. (Human access leads to road-kill, trash, water and dump sites, all used by Common Ravens to full advantage.) All Raven nests on all artificial structures, including utility poles, should be removed. Surface disturbing activities, especially livestock grazing and OHV use, which eliminate escape cover for Tortoises, should be more actively restricted and regulated in and around DTMA's. Artificial structures that Ravens use for nesting or perching in the desert regions should all be removed or altered so they no longer serve those functions. New structures near DTMA's should not be allowed unless necessary, and in such cases they must be designed and constructed so as not to offer nesting or perching sites for Common Ravens.

Thank you for this opportunity to comment and for reading and considering these concerns.

Sincerely,

Celeste J. Doyle
[REDACTED]
[REDACTED]

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