Washington State Office, P.O. Box 2965, Portland, Oregon 97208–2965, 503–952–6171.

By virtue of the authority vested in the Secretary of the Interior by Section 204 of the Federal Land Policy and Management Act of 1976, 43 U.S.C. 1714 (1988), it is ordered as follows:

1. The Executive Order dated November 24, 1916, which established Powersite Reserve No. 566, is hereby revoked insofar as it affects the following described land:

Willamette Meridian

T. 1 N., R. 19 E.,
Sec. 14, S½S½SW¼SW¼SE¼.

The area described contains 2.50 acres in Gilliam County.

2. At 8:30 a.m. on April 10, 1995, the land described above will be opened to the operation of the public land laws generally, subject to valid existing rights, the provisions of existing withdrawals, other segregations of record, and the requirements of applicable law. All valid applications received at or prior to 8:30 a.m. on April 10, 1995, shall be considered as simultaneously filed at that time. Those received thereafter shall be considered in the order of filing.

Dated: February 24, 1995.

Bob Armstrong,

Assistant Secretary of the Interior.

[FR Doc. 95–5697 Filed 3–8–95; 8:45 am]

BILLING CODE 4310–33–P

43 CFR Public Land Order 7122

[CA–010–1430–01; CACA 7645]

Partial Revocation of Secretarial Order Dated July 9, 1927; California

AGENCY: Bureau of Land Management, Interior.

ACTION: Public land order.

SUMMARY: This order revokes a Secretarial Order dated July 9, 1927, insofar as it affects 160.02 acres of public land withdrawn for the Bureau of Land Management's Powersite Classification No. 183. The land is no longer needed for this purpose, and the revocation is necessary to facilitate the completion of a land exchange under Section 206 of the Federal Land Policy and Management Act of 1976. This action will open the land to surface entry unless closed by overlapping withdrawals or temporary segregations of record. The land has been and will remain open to mineral leasing. The Federal Energy Regulatory Commission has concurred with this action.

EFFECTIVE DATE: June 8, 1995.

FOR FURTHER INFORMATION CONTACT: Duane Marti, BLM California State Office, 2800 Cottage Way, Sacramento, California 95825, 916–979–2858.

By virtue of the authority vested in the Secretary of the Interior by Section 204 of the Federal Land Policy and Management Act of 1976, 43 U.S.C. 1714 (1988), it is ordered as follows:

1. The Secretarial Order dated July 9, 1927, which withdrew lands for Powersite Classification No. 183, is hereby revoked insofar as it affects the following described land:

Mount Diablo Meridian

T. 17 N., R. 7 E.,
Sec. 2, lot 1, SE¼NE¼, and E½SE¼ (described as sec. 2, E½E½ in the original order).

The area described contains 160.02 acres in Yuba County.

2. The State of California, with respect to the land described in paragraph 1, has a preference right for public highway rights-of-way or material sites for a period of 90 days from the date of publication of this order and any location, entry, selection, or subsequent patent shall be subject to any rights granted the State as provided by the Act of June 10, 1920, Section 24, as amended, 16 U.S.C. 818 (1988).

3. At 10 a.m. on June 8, 1995, the land will be opened to the operation of the public land laws generally, subject to valid existing rights, the provision of existing withdrawals, other segregations of record, and the requirements of applicable law. All valid applications received at or prior to 10 a.m. on June 8, 1995, shall be considered as simultaneously filed at that time. Those received thereafter shall be considered in the order of filing.

The land has been open to mining under the provisions of the Mining Claim Rights Restoration Act of 1955, 30 U.S.C. 621 (1988), and these provisions are no longer required.

Dated: February 24, 1995.

Bob Armstrong,

Assistant Secretary of the Interior.

[FR Doc. 95–5698 Filed 3–8–95; 8:45 am]

BILLING CODE 4310–40–P

43 CFR Public Land Order 7123

[AK–932–1430–01; AA–62904]

Revocation of Geological Survey Order dated April 23, 1948, as Modified; Alaska

AGENCY: Bureau of Land Management, Interior.

ACTION: Public Land Order.

SUMMARY: This order revokes in its entirety a Geological Survey order as it affects approximately 5,000 acres of land withdrawn for power purposes at Taiya River. The land, which includes public land and land which has been conveyed out of Federal ownership, is no longer needed for the purpose for which it was withdrawn. The public land lies within the Klondike Gold Rush National Historical Park; the remainder has been conveyed to the State of Alaska.

EFFECTIVE DATE: March 9, 1995.

FOR FURTHER INFORMATION CONTACT: Sue A. Wolf, BLM Alaska State Office, 222 W. 7th Avenue, No. 13, Anchorage, Alaska 99513–7599, 907–271–5477.

By virtue of the authority vested in the Secretary of the Interior by Section 204 of the Federal Land Policy and Management Act of 1976, 43 U.S.C. 1714 (1988), it is ordered as follows:

1. The Geological Survey Order dated April 23, 1948, as modified, which established Powersite Classification No. 396, is hereby revoked as it affects the following described land:

Copper River Meridian

Land located within T. 25 S., R. 60 E., T. 26 S., R. 59 E., and T. 26 S., R. 60 E., and more particularly described as:

Land located in approximate latitude 59°40′ N., and longitude 135°16′ W., being every smallest legal subdivision, any portion of which, when surveyed will be within ½ mile of Taiya River from the mouth of Nourse River to the International Boundary. The area described contains approximately 5,000 acres.

2. The public land described above will remain part of the Klondike Gold Rush National Historical Park as established by Public Law 94–323, 16 U.S.C. 410(bb)(1988). The remaining land described above has been conveyed out of Federal ownership subject to Section 24 of the Federal Power Act of June 10, 1920, 16 U.S.C. 818 (1988).

Dated: February 24, 1995.

Bob Armstrong,

Assistant Secretary of the Interior.

[FR Doc. 95–5763 Filed 3–8–95; 8:45 am]

BILLING CODE 4310–JA–P

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AB88

Endangered and Threatened Wildlife and Plants; Removal of Three Kangaroos From the List of Endangered and Threatened Wildlife

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The U.S. Fish and Wildlife Service (Service) has determined that three common species of kangaroos, the red kangaroo, the western gray kangaroo, and populations of the eastern gray kangaroo in mainland Australia, should be removed from the list of threatened species under the Endangered Species Act (Act or ESA). The Service also announces that it is denying a December 20, 1989, petition to reimpose a ban on the commercial importation of products from these three species of kangaroos from mainland Australia on procedural grounds. The Service, with this rule, also rescinds the existing special rule applicable to threatened kangaroo populations.

EFFECTIVE DATE: April 10, 1995.

ADDRESSES: The complete file for the rule is available for public inspection by appointment, from 8 a.m. to 4 p.m., in Room 750, 4401 North Fairfax Drive, Arlington, Virginia 22203.

FOR FURTHER INFORMATION CONTACT: Dr. Charles W. Dane, Office of Scientific Authority, at the above address, or by phone (703–358–1708) or by fax (703–358–2276).

SUPPLEMENTARY INFORMATION:

Background

The term ''kangaroo'' in this rule refers to all populations of the red kangaroo (*Macropus rufus*), the western gray kangaroo (*M. fuliginosus*), and the eastern gray kangaroo (*M. giganteus*) in mainland Australia, which are being removed from the list of endangered and threatened wildlife (50 CFR 17.11) under Act (16 U.S.C. 1531–1544). The subspecies of the eastern gray kangaroo (*M. g. tasmaniensis*), which occurs solely in Tasmania retains its endangered classification under the Act. The red kangaroo, western gray kangaroo, and the eastern gray kangaroo in mainland Australia were listed on December 30, 1974 (39 FR 44990), as threatened species pursuant to the Act and the commercial importation of kangaroos, their parts, and products was banned. A special rule to allow such importations into the United States after development of adequate State management plans accompanied the listing. The Service accepted the management programs for four Australian States and lifted the importation ban on April 29, 1981 (46 FR 23929), after kangaroo management plans and population survey techniques had been strengthened. The Service, in two **Federal Register** notices of April 8, 1983, proposed to delist the three species of kangaroos (48 FR 15428) and to continue the commercial importation of kangaroos (48 FR 15434). The final rule allowing the continuation of the importation of kangaroos was published on August 1, 1983 (48 FR 34757). The Service withdrew the proposed rule to delist the three kangaroo species on April 24, 1984 (49 FR 17555), after receiving new data from the Australian Government that the severe drought in the summer of 1982–3 had caused significant reductions in kangaroo populations. It was noted that the drought was broken in winter 1983, that kangaroos were again beginning to breed, but the ability of kangaroo populations to recover from the major 1982–3 population fluctuation was unknown. It was further noted that the delisting action could be reconsidered after the Service had a better understanding of how kangaroo populations recover from drought events.

The Service was petitioned on December 20, 1989, by Greenpeace USA, with subsequent support from other groups, ''to reinstate the ban on commercial importation of kangaroos and of kangaroo products.'' The petitioners contended that Australia's management of kangaroos was inherently flawed and that Australian States did not have adequate and effective conservation programs that ensured the protection of the threatened species. The Service, in order to respond to the December 20, 1989, petition in a meaningful manner, sent three representatives to Australia in March 1990 to investigate the population status of the three kangaroo species (survey methods, numbers, and trends) and the implementation of management programs. In addition, the team received comments about the conservation benefit of management plans that allowed the harvest of kangaroos. The Service team spent 12 days meeting with selected members of Parliament, representatives of various nongovernmental organizations, scientists, State and federal natural resource managers, enforcement personnel, grain growers, and ranchers. The team also visited parks, open range, chillers, faunal dealers, ports and exporters. The team presented their findings in a June 5, 1990, report (Nichols et al. 1990). The Service, in a **Federal Register** notice of August 8, 1990 (55 FR 32276), announced the receipt of the Greenpeace petition and the availability of the June 5, 1990, Service report and requested comments on the status of the three species of kangaroos in Australia. The comment period on the status review for the December 20, 1989, petition was extended to November 6, 1990.

The Wildlife Legislative Fund of America submitted a petition dated November 6, 1990, which was received by the Service on the following day. That petition requested that all populations of the red kangaroo (*Macropus rufus*), the western gray kangaroo (*M. fuliginosus*), and the eastern gray kangaroo (*M. giganteus*), except the subspecies *M. g. tasmaniensis*, be removed from the list of threatened species under the Endangered Species Act (Act).

The Wildlife Legislative Fund petition presented the June 5, 1990, report prepared by Service personnel as the principal basis for the petition. Among other things, the petitioners cited the conservative estimates of the 1987 kangaroo populations (red kangaroos—7.5 million, western gray kangaroos—1.7 million, and eastern gray kangaroos—4.7 million) and the fact that kangaroo conservation programs exist within individual range states as reasons for delisting the species.

The Service, in a **Federal Register** notice of June 12, 1991 (56 FR 26971), found that the action requested in the November 6, 1990, petition may be warranted and requested additional comments as part of a continuing status review of kangaroos and kangaroo management in Australia. The comment period was reopened until September 10, 1991. That comment period was later extended to September 24, 1991, in a **Federal Register** notice dated September 17, 1991 (56 FR 47060).

The Service published a proposed rule in the **Federal Register** on January 21, 1993 (58 FR 5341) proposing to remove the three species of kangaroos in mainland Australia from the list of threatened species under the Act. The Service had found that the four States that commercially harvest kangaroos (New South Wales, Queensland, South Australia, and Western Australia) had developed and implemented adequate and effective conservation programs that ensured the protection of these species. The Service additionally found that kangaroo populations were high and that the three species were protected by appropriate legislation, had their populations regularly monitored by direct and indirect procedures, and were managed by a complex licensing system which regulated the extent of the legal harvest. The Service in that **Federal Register** document also announced that it was deferring a decision on the December 20, 1989, petition by Greenpeace USA to reimpose the ban on the importation of kangaroo products until the final

decision on the proposed action was made. The Service also indicated that if the final decision was to delist the three species that it would then act to rescind the special rule allowing imports of kangaroo products from threatened populations into the United States.

The Service notes that a nonlisted status for these three species under the Act is wholly consistent with listing decisions made by other organizations. The three species of kangaroos are described as abundant by the Australian Conservation Foundation. The species are not on lists published by the Council of Nature Conservation Ministers, World Wide Fund for Nature Australia (WWF), or Fund for Animals Ltd., that variously identify species of Australian fauna they find to be endangered, threatened, or vulnerable. The status of the three species in mainland Australia is described as stable by the Species Survival Commission of the World Conservation Union's (IUCN/SSC) Australasian Marsupial and Monotreme Specialist Group in its 1992 publication (Kennedy 1992). That publication also indicates that the western gray kangaroo has declined less than 10 percent in geographic range since European settlement and that the eastern gray kangaroo and the red kangaroo may actually have increased their geographic range since European settlement. The IUCN/SSC publication also listed the three kangaroos as among those taxa for which there is no genetic concern—either because they are common in captivity, or readily available from the wild, requiring monitoring only by annual census.

Summary of Comments and Recommendations

The Service received about 740 comments in response to the January 21, 1993, request for comments published in the **Federal Register** (58 FR 5341). Virtually all correspondents supported the request to ban the importation of kangaroo products into the United States and/or advocated the retention of threatened status for the species. Most comments provided no substantive information on these issues.

The harvest of kangaroo products provides raw materials for a primary industry in Australia. Many individuals and organizations expressed dissatisfaction or distaste for this fact. For example, about 700 comments were in response to an Action Alert published by the Humane Society of the United States (HSUS) which stated that the Australian Government sanctioned the slaughter of 5.2 million kangaroos in 1992 to supply the domestic and international market for kangaroo skins. This was from a combined kangaroo population which the HSUS claimed only totaled 13.9 million. Respondents especially advocated the retention of threatened status (374 replies), or the retention of threatened status and the reimposition of the importation ban (260 replies).

The underlying concern expressed by the HSUS respondents as well as many other commentators regarded the commercial harvest and trade in these kangaroo species, which are protected species under Australian domestic legislation. Commenters frequently expressed (1) an outrage that a commercial harvest was allowed to occur by an industry that many persons characterized as illegitimate; (2) a view that market forces, if not at present, might in the future overwhelm conservation practices to the detriment of the species; and (3) a view that the threat of trade restrictions was necessary to ensure that Australian governments continue to manage kangaroos in a responsible manner.

The Service response to this recurring and significant concern is as follows. The determination to utilize, in commercial trade, kangaroo products from well-managed populations is a domestic issue that will ultimately be determined at the ballot box, in the legislatures, and in the courts of Australia. The Service has the responsibility to determine whether the species are threatened or endangered under the Endangered Species Act and to promulgate certain special rules if required. A finding of threatened or endangered is made after five specific listing criteria have been evaluated. The second of these criteria questions whether overutilization occurs, for among other reasons, commercial purposes. The Service has found, as indicated below, that the commercial quotas are related to kangaroo populations occurring within the commercial utilization area (CUA). The CUA is that portion of the range of the individual species where the commercial harvest is allowed to occur.

Kangaroo populations are known to cycle in abundance within the CUAs because much of inland Australia is an arid and drought-prone landscape where unregulated kangaroo numbers increase when water is plentiful and diminish in times of drought. Extensive annual surveys occur in South Australia, New South Wales and Queensland to estimate kangaroo populations in order to set harvest quotas for the subsequent calendar year. Those surveys using fixed-wing aircraft seem to reliably index kangaroo populations in open and arid landscapes but to significantly underestimate populations in woodlands, such as the mulga woodlands of southern Queensland. Aerial surveys conducted from helicopters seem to more reliably indicate kangaroo populations in the woodland habitats. The kangaroo populations in vast and thinly inhabited Western Australia are estimated every third year from aerial surveys and inferred in intermediate years from a variety of data.

Harvest quotas are usually established as a percentage of the estimated kangaroo population after considering potential range conditions as predicted from current rainfall data. Frequently, the harvest quota has totaled about 15–20 percent of the estimated kangaroo population and about 70 percent of the commercial harvest quota has been annually harvested. Kangaroo shooters are licensed, and can only kill kangaroos for commercial purposes on private properties after shooters have obtained permission from landowners. Commercial shooters can only sell their kangaroo hides and meat to licensed dealers. Products only from these commercially killed kangaroos can enter international commerce. The Service believes that the Commonwealth and State governments in Australia have a sincere interest in the preservation of their native wildlife species and act in a professional manner to manage these kangaroo species so they will occur in abundance into perpetuity. The Service has no reason to believe that market pressures will one day insidiously drive conservation activities in Australia, and notes that the United States and the international community could act to limit the trade in kangaroo products, should the status of these three kangaroo species be significantly reduced in the future.

The Service disagrees that threatened status should be retained for these abundant and sufficiently managed species, at this time, to ensure that a primary industry behaves or because one day the threatened status may somehow be useful in the management of kangaroos. The Service believes the lists of endangered and threatened species should only include those animals and plants whose current status fit the definitions of the Act. The Service has found that these three species of kangaroos are not threatened species (i.e., species in danger of extinction, within the foreseeable future, throughout all or a significant portion of their range).

Several comments stated that the threatened status should be retained for the three species of kangaroos because

of the current quality of kangaroo management in Australia. These comments (A–M) are treated together in this assessment because they are closely related and actually pertain to a larger issue, which is ''How much management is sufficient?'' The comments and Service responses are listed below for comments A–M and this is followed by a discussion of the ''sufficiency of management'' question.

A. *Comment*: Survey methods, especially in Queensland, are unreliable. *Response*: Nichols *et al.* (1990) stated that ''Australian biologists have been leaders in the development of aerial survey ethods for estimating animal population size. Current surveys are very extensive, properly standardized and well thought out. Some additional work needs to be done on the estimation of visibility correction factors, but such work is well underway. Current research indicates that previously-used correction factors may be too small. Published estimates of kangaroo population size thus are based on sound methodology but are probably too small.'' Additional studies have been conducted since 1990. Queensland is especially concerned about methods to more reliably estimate animal numbers in woodland habitats. Queensland has annually accomplished fixed-wing aerial surveys from 1984 to 1992, and helicopter surveys since 1991. Queensland plans to further review the results of population surveys using fixed-wing aircraft and helicopters to establish revised correction factors for use in surveys of woodland habitats.

B. *Comment*: The Commonwealth and State governments have failed to implement measures to make kangaroo plans adequate to protect kangaroos. *Response*: It is unclear whether this comment pertains to the apparent contradiction wherein different domestic statutes provide both protective status to the species and allow a commercial harvest of the species or to some perceived inadequacy in the kangaroo management plans. Any conflict in domestic legislation is an Australian domestic matter. The Service has found that the kangaroo management plans developed by the States and agreed to by the Commonwealth are sufficient to allow the species to be delisted.

C. *Comment*: The commercial slaughter of kangaroos constitutes a very real threat to the survival of the species. *Response*: For the reasons stated above, and later in this final rule, the Service has found that the current commercial harvest of these managed kangaroo species does not threaten the survival of these species in mainland Australia at present nor is it likely to in the foreseeable future.

D. *Comment*: The kangaroo slaughter is unnecessary. *Response*: The necessity and desirability of commercially harvesting kangaroos is an Australian domestic matter. The Service's assessment is only that the present managed harvest does not cause the Service to conclude that the kangaroo populations should be listed as threatened.

E. *Comment*: The development of a meat market will increase demands on kangaroo populations. *Response*: The decision to seek domestic and international markets for kangaroo meat is an Australian domestic issue. The Service believes that the present management is sufficient and notes that extensive non-use of kangaroo protein accompanies a skins-only harvest, and that a well run meat industry can more fully and more efficiently use the current harvest.

F. *Comment*: The adoption of a sustained use management principle for a protected species was accomplished without a public debate. *Response*: The Service considers this to be an Australian domestic matter and not a factor in making a listing decision under the Act.

G. *Comment*: The ''threatened'' listing was valuable because it allowed the Service to act as an international watchdog on the kangaroo industry. *Response*: The Service promotes the international conservation of species and the international enhancement of biodiversity. The Service is obligated to properly classify these species based on the criteria stipulated in the Act.

H. *Comment*: Kangaroos routinely carry such a high parasite load that they are unfit for human consumption. *Response*: It is the responsibility of the Commonwealth government to assure the citizens of Australia and the world, if such exports are allowed, about the quality of any kangaroo meat product. The Service notes this is clearly not an issue to consider when making an evaluation under the Act.

I. *Comment*: Tags placed on carcasses and skins are not species specific. *Response*: The Service agrees that species specific kangaroo tags would likely allow the States to have a better control over the kangaroo harvest and over the marketing of kangaroo products. The Service notes that the kangaroo harvest is sufficiently monitored in other ways such as the assessment of shooter's records, dealer's records, sex-age composition of the kill and descriptors of other biological attributes. These records help ensure that the kangaroo harvest is adequately managed.

J. *Comment*: Customs officers do not inspect all consignments of kangaroo products prior to their export. *Response*: The kangaroo harvest and exports are thoroughly reported and State and Federal enforcement personnel have authority for search and seizures that the Service believes will adequately control any significant illegal activities.

K. *Comment*: Harvest quotas do not include animals killed for the domestic market or for nuisance purposes. *Response*: The Service agrees that it would be beneficial to management if all kangaroos killed were tagged and reported. This effort would benefit the estimate of total harvest and would help curtail any movement of untagged animals into commerce. The Service notes that harvest quotas are based on estimates of the living population so that the establishment of a harvest quota is a function of all sources of mortality that have impacted kangaroo populations up to the time of quota determination. The Service further notes that kangaroos killed for the domestic market are part of the kill regulated by the harvest quotas but that kangaroos killed for pest control are outside the harvest quota. The kill for pest control, however, is limited. For example, the number of kangaroos killed for damage mitigation purposes is believed to be less than 1 percent of the population.

L. *Comment*: There is inadequate enforcement of animal welfare requirements. *Response*: The Service agrees that any wildlife harvest should be conducted in as humane a manner as is possible, but this is not a criterion to be considered in making listing determinations under the Act.

M. *Comment*: The State and Commonwealth governments have inadequate resources for kangaroo management. *Response*: The Service finds that resources available to conservation agencies in Australia are sufficient so these three species of kangaroos are adequately protected under present management.

A decision to list or delist species under the Act often requires a decision about the ''sufficiency of management.'' No government or agency provides perfect management but many governments and agencies provide sufficient management so individual wildlife species can be used in a sustainable manner. A reasonable standard for the Service to use to determine sufficiency of management in any country is to compare the management of the foreign species with the management of a comparable species within the United States. The

white-tailed deer in the United States is, in some ways, comparable to the kangaroo in Australia. The white-tailed deer analogy is utilized herein to provide a measure of scale. Scale is important for understanding the size of ranges, the size of populations, the size of the harvest, and the magnitude of management and law enforcement problems. It is fully understood that harvest mechanisms differ between deer (sport-hunting) and kangaroos (commercial harvest). That significant difference, however, is not directly relevant to the present discussion.

The white-tailed deer may be about as numerous in the United States as are the three kangaroos in Australia, and the white-tailed deer is sufficiently managed at about the same intensity as are the kangaroos. State and the Commonwealth governments in Australia accomplish a variety of aerial and ground censuses and computer simulations to estimate kangaroo populations, and these estimates become the basis for the establishment of harvest quotas. State governments in the United States use a variety of ground surveys and computer simulation models to estimate white-tailed deer populations, and these estimates become the basis for establishing desired levels of harvest. Some level of public comment is sought in establishing harvest levels in both countries. Some level of appraisal of habitat carrying capacity frequently occurs for both deer and the kangaroo species. The actual harvests of kangaroos in Australia and deer in the United States are regulated by complex licensing systems. Landholders seek harvest permits from State governments in Australia and professional hunters seek licenses from those State governments and hunt permission from individual landholders in order to legally kill kangaroos. The professional hunter then sells kangaroo hides and/or carcasses to licensed dealers. State governments in the United States establish hunting seasons and bag limits and sell licenses to individual hunters who must seek permission to hunt on private lands but who may also hunt on certain public lands. Deer hunters vary considerably in their hunting skills and deer products are for personal rather than commercial use. Some level of illegal kill occurs in each country because there are insufficient resources to police all levels of the kangaroo industry and all deer hunting events.

One major difference between deer and kangaroo management is that kangaroos in arid habitats seem more likely to experience large population fluctuations. A second difference between deer and kangaroo management is that in the United States 12 million licensed hunters annually kill 3 million deer for personal consumption, whereas in Australia 3 million kangaroos may be killed by about 1700 licensed professional hunters who each kill an average of 1800 kangaroos for commercial purposes. Neither species is threatened by its respective management regime, as both deer and kangaroos are managed in a way that is adequate to maintain harvestable populations over time.

The Center for International Environmental Law (CIEL) provided three comments that are answered individually, below. The first comment from CIEL stated that the proposal to delist the three species is a political action and is not a justified biological decision. CIEL maintained that Australia had put political pressure on the Bush administration, and that this delisting action was the last act of the Service during that Administration. CIEL also held that a brief 60-day comment period underscores the attempt to sneak a final rule past a new Administration.

The Service response is that the proposal to delist these species, published in the **Federal Register** on January 21, 1993, evolved from a request in a December 20, 1989, petition filed by Greenpeace USA, ''to reinstate the ban on commercial importation of kangaroos and kangaroo products''. That petition generated a review that was subsequently cited in a petition to delist the species filed on November 6, 1990, by the Wildlife Legislative Fund of America. The Service notes correspondence from the Center for International Environmental Law, dated April 9, 1992, requesting that the Service make a final decision on both petitions by the end of the summer of 1992. Consequently, the Service made every effort to arrive at a decision regarding the two petitions and to publish the required proposal in as timely a manner as possible. A Service biologist returned from a fact-finding trip to Australia on August 1, 1992, and prepared the proposed rule by mid-November. The intervening 2-month period from mid-November until publication in mid-January reflects normal Service review time and delays associated with the holiday season. The 60-day comment period on the proposed rule is not at all unusual. It is the same comment period specified in some other recent proposed rules involving foreign species such as the Queen Alexandra's Birdwing Butterfly in the March 1, 1989, **Federal Register** (54 FR 8574) and the Nile Crocodile in the August 3, 1992, **Federal Register** (57 FR 34095).

The second comment from CIEL declared that the proposal to delist the three species of kangaroos continues a pattern seen over the past few years during which time the Service has failed to add protection to, or has reduced protection for, several species of commercial interest.

The Service response is that it has not abrogated its responsibilities to world conservation and arbitrarily reduced protection to species because of their commercial value. The Service supports the sustainable use of wildlife if that use can be shown not to threaten the survival of the species. The Service, since 1989, has added foreign species to the list of endangered species under the United States Endangered Species Act (e.g., the chimpanzee, several snub-nosed monkeys, and a variety of birds, including psittacines, and turtles). The Service periodically reevaluates the status of species as new information becomes available and occasionally transfers species between lists or removes species from the lists of endangered and threatened species when justified. The Service supported the listing of the African elephant and six species of fruit bats to Appendix I at the Seventh Meeting of the Conference of the Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 1989 and successfully proposed the addition of the Goffin's cockatoo and the bog turtle to Appendix I at the Eighth Meeting of the CITES Conference of the Parties in 1992. The Service also successfully proposed five other additions to Appendix II at the 1992 meeting and offered proposals to amend Appendices, in accordance with the 10-year review process of CITES. Some of those proposals required the transfer of species between Appendices. The Service sought to suspend commercial trade in certain wild bird species of concern that are listed in Appendix II of CITES at the 1992 CITES Convention and supported the passage of domestic legislation in 1992 (The Wild Bird Conservation Act of 1992) to ensure that U.S. bird imports do not jeopardize wild bird populations.

The third comment from CIEL states that the Service must retain the kangaroos on the list of threatened species and reinstate the import ban because the long and continuing drought constitutes an important natural factor affecting the existence of these species of kangaroos.

The Service notes that enclosures submitted by CIEL on March 22, 1993, clearly indicate extensive areas in New

South Wales (NSW) and Queensland that retain a drought-declared designation as of March 1, 1993. These enclosures are presented as evidence that drought continues to devastate Australia and kangaroo populations. A February 5, 1993, letter from John Eveleigh, Assistant Regional Manager, Western Region, New South Wales, to the Director, Australian National Parks and Wildlife Service (ANPWS), clearly indicates that economic factors as well as rainfall totals determine the declaration of drought status by the Department of Agriculture.

An El Niño-related drought occurred in parts of Australia during 1991–2 and affected some populations of the three kangaroo species. Rainfall deficiencies from March through October 1991 occurred throughout nearly all of Queensland, in northcentral and northeastern New South Wales, some portions of the Northern Territory and in extreme northeastern Western Australia. Rains during November 1991 through January 1992 essentially reduced the rainfall-deficient area to the eastern two-thirds of Queensland, the northern portion of the Northern Territory and northern Western Australia. Additional rains during February 1992 further reduced the rainfall-deficient areas to southcentral Queensland and the northeastern coastal areas of Queensland, the northern portion of the Northern Territory and northern Western Australia. The rainfall-deficient area, by May 1992, was further reduced to southcentral Queensland, northcentral New South Wales, and the central and northern coasts of Queensland. The rainfall-deficient area for the 17-month period from March 1, 1991 to July 31, 1992, occurred in southcentral Queensland and extreme northcentral New South Wales. Much of this southcentral Queensland and northcentral New South Wales area experienced severe rainfall deficiencies and two small localized portions of this area recorded record rainfall deficiencies during this 17-month period. These portions of Queensland and New South Wales constitute important kangaroo habitat.

The 1991–1992 drought event ended in these kangaroo habitats because rainfall totals listed as highest on record were recorded throughout the southern portion of South Australia, southwestern New South Wales and much of Victoria from November 1, 1992 to January 31, 1993. Rainfall totals recorded as very much above average were recorded for much of the remainder of South Australia and western and central New South Wales during this same three month period. At least average rainfall fell over most of Queensland, including the most important kangaroo habitats, in the November 1, 1992 to January 31, 1993 period. Drought areas in New South Wales received reasonable rains in the first half of 1993 and even better rains in the second half of the year. Drought declarations in Queensland, by early 1994, occurred in about 46 percent of the State's land area. No rangelands are drought declared in Western Australia in early 1994, and South Australia has experienced good rainfall years from 1989–1993 in most parts of the State. The 1991–2 drought, at one time or another, affected northern New South Wales, most of Queensland, eastern and northern portions of the Northern Territory and northern Western Australia. The 1991–2 drought was not experienced in the other 60 percent of the continent.

About 70 percent of Australia is classified as arid or semi-arid and is characterized by high variability in rainfall. Drought periodically occurs to these landscapes, and its severity and duration can clearly affect pasture quality and kangaroo well-being and numbers. At least 47 major drought events have been recorded somewhere on the continent during the 100 year period from 1888 to 1988 (data provided by ANPWS and excerpted from ''Water 2000: Consultants Report No 13—Water Resources Aspects of Drought in Australia'' Dept. Resources and Energy (1983) and Bureau of Meteorology). Areas of deficient rainfall are to be expected on the Australian continent. Wildlife management specialists accept drought as a ''normal'' event and manage their resources accordingly by reducing kill during years when kangaroo populations are diminished and increasing harvest when populations are increased (see below). The 1991–1992 drought impacted kangaroos, especially in northern New South Wales and southern Queensland, but did not and does not threaten the continental population of these three species.

Drought areas were declared in most of New South Wales and some southern and eastern areas of Queensland in Australia's winter of 1994. The effect of this drought on kangaroo populations is not yet known, but as noted earlier, kangaroo populations have recovered from the previous severe drought of 1982–83 (longer in some areas). Furthermore, while 1995 kangaroo harvest quotas are not yet known, the Service has reviewed and discussed the State and Commonwealth management program and believes that appropriate quotas will be established to maintain kangaroo populations.

An additional comment expressed by several persons concerned the capability and willingness of wildlife managers to reduce the kangaroo kill when populations are diminished. They claimed that Australia's management plans do not reduce the kill quotas during droughts and the present drought has sharply reduced kangaroo populations and clearly placed the species in jeopardy.

The Service responds with a summary description of the management actions that one state, New South Wales (NSW), has undertaken to manage kangaroos during drought declared conditions in the 1980s and 1990s. NSW has about a third of the continent's population of red and gray kangaroos. This summary is excerpted from a letter from John Eveleigh, Assistant Regional Manager, Western Region, New South Wales National Parks and Wildlife Service, to the Director, Australian National Parks and Wildlife Service, dated February 5, 1993. A significant area of NSW was declared to be within a drought declared zone in 1982. A total harvest quota of 843,000 animals had previously been established for 1982, which was 12 percent of the 1981 estimated NSW population of 7 million kangaroos. A fixed quota was allocated for the first six months of 1982 and a notional quota was allocated for the second half of the year to be modified if climatic conditions dictated. The 1982 mid-winter (June-August) population survey estimated a total NSW kangaroo population of about 9.4 million animals with the population of red kangaroos still increasing but that of gray kangaroos being diminished by about 29 percent.

Because of the drought conditions the harvest quota for calendar year 1983 was maintained at 843,000, about 9 percent of the 1982 estimated population. Drought conditions prevailed throughout far western and eastern portions of NSW during 1983, but relieving rains fell throughout the central portion of the state. Quotas were allocated as in 1982. The mid-winter 1983 population estimate indicated a total NSW kangaroo population of 5.5 million, with some decline in red kangaroos and a significant decline in the number of gray kangaroos. A total harvest quota of 500,000 was established for 1984, which represented about 9 percent of the total 1983 population. The harvest quota for red kangaroos was set at 12 percent, but no culling was authorized in selected one-degree blocks within management zones. Culling of gray kangaroos was

allowed in three management zones and was disallowed in seven other zones. In addition, properties of applicants for non-commercial culling of red or gray kangaroos within the closed areas were subject to physical inspection by NSW Rangers prior to license grant considerations.

Drought conditions continued to widen across NSW in 1984. The mid-winter 1984 population estimate indicated a total NSW kangaroo population of about 2.8 million with an increasing red kangaroo population, a static gray kangaroo population in the eastern management zones, and a decline in both red and gray populations in western management zones. A harvest quota of 300,000 (11 percent of the 1984 population) was established for 1985, but no harvest was allowed in areas containing estimated population densities of one or fewer red or gray kangaroos per sq km. Drought conditions still extended across NSW in early 1985, except for the extreme southwestern portion of the state. Drought-breaking rains fell in late 1985, and early 1986 and the state was declared drought-free in 1986. The mid-winter 1985 population estimate indicated a total kangaroo population of about 4.15 million with a recovery of both red and gray kangaroo populations. Some pockets with low populations remained, and no harvest was allowed during 1986 in areas with a kangaroo density less than or equal to one per sq km. A 1986 harvest quota of 577,000 was established (14 percent of the population) but 15 percent of the quota was withheld and not allocated.

Drought conditions did not occur in NSW from 1987–1991, and populations of both red and gray kangaroos and harvest quotas progressively increased each year. The total harvest also usually increased each year. The mid-winter 1990 population estimate indicated a total kangaroo population in NSW of 8.55 million with increases in both red and gray kangaroos. A 1991 harvest quota of 1.5 million was established which was 18 percent of the population estimate. Thirteen percent of the quota was held back and not allocated. Drought conditions began to extend southward from Queensland into the northern management zones of NSW. The mid-winter 1991 population estimate indicated a total kangaroo population in NSW of 9.1 million. A harvest quota of 2.1 million was established which was about 23 percent of the 1991 population estimate. Fifteen percent of the harvest quota was held back and not allocated. By January 1992, the 1991–2 drought had extended further into NSW and was declared to cover the northern and eastern portions of the state. Kangaroos reportedly moved to the south as the drought progressed and some quota allocations were transferred from northern management zones to more southern zones. The notional quotas for July-December 1992 were reviewed in July 1992. Preliminary 1992 survey figures indicated that central and southern populations were barely impacted by the drought and kangaroo populations were increasing in the most southern management zones.

By December 1992 the drought declarations indicated that the drought had retreated to the most northern management zones of NSW. The mid-winter 1992 population estimate indicated a total NSW kangaroo population of 8.04 million. A harvest quota of 1.66 million was established which was about 21 percent of the 1992 population estimate.

The 1992 survey indicated declines of the red kangaroo throughout the northern management zones, stability in the central management zones and increases in the southern management zones. Populations of the gray kangaroo were somewhat diminished in some management zones. Harvest quotas for 1993 were diminished for populations in those management zones where kangaroo populations were found to be reduced. Fourteen percent of the potential harvest quota was held back and not allocated.

The notional quota for the second half of 1993 was reviewed when preliminary mid-winter 1993 population estimates were available. February 1993 reports indicated that drought-breaking rains were widespread in NSW and that drought conditions were retracting to the north.

This synopsis indicates how New South Wales strives to manage kangaroos on ranges periodically impacted by droughts. It is not possible to attain and maintain a specific kangaroo population on such landscapes, and such populations are expected to cycle as periodic droughts overtake portions of the continent. Management strives to follow the cycle. This requires frequent monitoring of kangaroo populations and the setting of low harvest quotas when populations are low but allows for the setting of higher quotas when kangaroo populations are expanding. This is exhibited by the NSW data where a harvest quota of 300,000 was established for 1985 when the mid-winter 1984 NSW population was estimated at 2.7 million and a harvest quota of 2.07 million was established for 1992 when the 1991 mid-winter NSW kangaroo population was estimated at 9.11 million.

Harvest quotas represent the maximum number of kangaroos that can enter domestic or international commerce in a given year after having been taken in accordance with state-approved plans. About 70 percent of the quota has been harvested during recent calendar years. The maximum allowable kill is regulated as is the relative location of that kill. New South Wales has closed management zones to harvest, has closed degree blocks within management zones to harvest, has reallocated harvest quotas between management zones as a result of new population survey information, routinely issues the second half of the harvest quota in the second half of the calendar year, and routinely holds back some percentage of the commercial quota as a safety precaution. In addition, the legal harvesting of kangaroos is a licensed operation and all aspects of licensing can be suspended at any time during the calendar year if such actions are necessary. Other harvesting States also have regulatory measures that allow the reduction of take if environmental or other factors adversely impact kangaroo populations.

A comment supporting the Service's proposed rule was provided by The Wildlife Legislative Fund of America (WLFA) which had filed the November 6, 1990, petition to delist the three kangaroo species. WLFA stated it is a strong supporter of the Endangered Species Act when it is applied to species that truly require protection from over-exploitation or critical habitat destruction. WLFA also stated that listing species like these three species overburdens the system and detracts from the ultimate goal of protecting truly endangered species. WLFA stated that recovered species should be delisted as quickly as possible to encourage recovery efforts for other listed species and to focus the limited efforts of the Service on species and populations in greater need of scientific and public attention. WLFA stated that keeping these species on the threatened list could only be interpreted as bureaucratic red tape designed to stifle the legitimate trade in a closely controlled and monitored renewable resource. WLFA further stated that delisting does not foreclose continued efforts by the Service to selectively monitor the kangaroo management programs of Australia. The Service concurs.

The Australian National Parks and Wildlife Service, now known as the Australian Nature Conservation Agency (ANCA), also submitted comments

about the extent and duration of the 1991–2 drought, the sensitivity of the kangaroo management plans of New South Wales to drought and environmental stress during the 1980s and 1990s, and the 1992 population estimates and the kangaroo harvest quotas determined for 1993.

The notice containing the proposed rule, published on January 21, 1993 (58 FR 5341), described a series of monitoring reports to be submitted annually from the Commonwealth to the Service. The Service, on January 27, 1994, received a report of the 1993 population surveys. The Service, because the additional information was received before the final rule was finalized, announced the new information and extended the comment period in a **Federal Register** notice on February 18, 1994 (59 FR 8163).

After the close of the 1993 comment period on the proposed rule, additional letters were received before the comment period was reopened. These were tallied with those received when the comment period was reopened in 1994, and all of these comments were considered in the preparation of this rule. Comments received during this combined period included 883 letters and 14 ''petitions'' containing an additional 310 signatures. Most of these letters received during the interim period continued to raise concerns about the inhumane aspects of the harvest, the effects of drought, the adequacy of management plans, high harvest quotas, and high unregulated or illegal killings. The Service's responses to these issues were addressed above in the responses to earlier comments. One commenter supported the delisting because of its perception that this would enable the species to be used in ranching. This is not relevant to our decision.

Several new comments were received in response to the February 18, 1994, **Federal Register** notice. CIEL submitted several comments that seem based on inadequate or incomplete information. In addressing those, the Service notes (1) that the information submitted by ANCA was in voluntary compliance with monitoring provisions listed in the January 21, 1993, **Federal Register** (58 FR 5341); (2) that the 1993 surveys were accomplished using standardized techniques that have been developed and improved upon for over a decade; (3) that the submitted numerical estimates represent additional data points in a long-term description of kangaroo populations in the commercial utilization areas of four different states; (4) that a substantial assessment of the status of kangaroos and kangaroo management is made in this final rule; (5) that the Service has actively sought input into the kangaroo issue by sending Service biologists to Australia in 1980, 1990 and 1992; (6) that the destructive fires of 1993 were largely outside the commercial utilization areas of New South Wales and Queensland; and (7) that the Service has a responsibility to delist species that are not presently threatened or endangered. The Service has considered and used the best available scientific and commercial information available in this decision and believes that no further data is necessary for it to make this delisting decision. The Service makes this decision based on all of the factors required by the Act as discussed specifically in this rule. In addition, the comment periods provided for consideration of this proposal met the requirements imposed by law; and this delisting will not breach the ESA duty to conserve the species as they are no longer threatened under the Act.

Other comments by CIEL pertaining to the alleged political nature of the listing decision, the perceived failure of the Service to exercise its responsibilities to provide protection to commercially utilized species, and the importance of drought as an environmental hazard threatening kangaroo populations are addressed above in this final rule.

The Kangaroo Protection Cooperative, Ltd., and the Australian Wildlife Protection Council believed the selection of large males in the commercial harvest would threaten the future fitness of the species. It is likely that this selective harvest will shorten the age structure in populations of wild kangaroos, but it is not evident whether it will adversely impact the gene pool of the species. The Species Survival Commission of the World Conservation Union (IUCN/SSC) Australasian Marsupial and Monotreme Specialist Group lists populations of the three species as stable with no genetic concerns (Kennedy 1992).

The Humane Society of the United States (HSUS), the Australian and New Zealand Federation of Animal Societies, Dr. John Auty, representing the Australian Wildlife Protection Council, and CIEL each expressed concern about the estimates of major reductions in the kangaroo populations of Western Australia, from 1990–1993, and the explanation for that decline offered by ANCA. Dr. Gerry Maynes, of the ANCA, in a March 4, 1994, letter to Mr. Chris Wold of CIEL, offered the following explanation for the Western Australian data:

''The results for 1990 may be distorted by population estimates for the two blocks 012 and 013, which together contributed 50% to the overall estimate (this contrasts with contribution of 20% and 22% in 1984 and 1987, respectively). The estimated density in the 012 block (45 per sq km) is far higher than in any previous year for either kangaroo species. This result may be an artifact of change placement in the transect line; in 1990 the flight line coincided exactly with the distinct vegetation ecotone of mallee and open plain (ideal habitat for kangaroos), but in previous years this may not have been so (navigational variation of a few kilometers is common, even with satellite navigation gear, and this could lead to such variation between years). Placement of only one line in each of these blocks in the 1990 and previous surveys would facilitate such possible random variation. We therefore suggest caution when interpreting the recent acceleration in population numbers, and recommend that in future surveys two lines be allocated to these blocks. Thus, while the long term increase is likely to be real, the estimated increase of 99% from 1987 to 1990 may be an overestimate of the increase.''

The U.S. Fish and Wildlife Service believes the kangaroo populations in Western Australia should be more intensively monitored to enhance the quality of their management.

Several commenters suggested that the recent devastating fires in New South Wales and Queensland represented environmental disasters that threatened these species. Dr. Gerry Maynes of ANCA in a March 7, 1994, letter to Dr. C. Dane, indicated that:

''The area in which fires occurred was from the Queensland border to just north of the Victorian border. These fires had no effect on population numbers of kangaroos in the commercial harvest zone of New South Wales * * * Although the fires were widespread throughout the non-commercial zone they have had variable impacts on wildlife including kangaroos due to the variable areas involved and intensities of the fires. The New South Wales National Parks and Wildlife Service has initiated follow-up research in parks which were burnt to determine the effects of the fires and the recovery of wildlife populations. While fires have had localized impacts on wildlife populations, wildfires are only a significant threat to populations of wildlife which are restricted in distribution * * * or do not possess adaptations to avoid the immediate impacts of the fire or to recover quickly after the fire.''

The HSUS indicated that the kangaroo species should be listed on CITES before

being removed from the lists of endangered and threatened species. This is not a statutory pre-condition to delisting, and is not relevant in light of the Service's finding that Australian regulatory mechanisms are adequate. Neither the HSUS nor any other group or individual petitioned the Service to list these kangaroos on the CITES Appendices when the Service published a **Federal Register** notice on July 15, 1993 (58 FR 38112) inviting CITES proposals. In addition, neither the HSUS nor any other group or individual commented on the absence of these kangaroos from the proposed list of species to be considered by the Service for possible CITES action, (59 FR 3832, January 27, 1994).

Two comments dealing with the validity of the population estimates were received after the close of the February 18, 1994, comment period and are herein addressed. The first comment alleged that the Caughley correction factors overestimated the number of red kangaroos and the second comment alleged that the Caughley correction factors overestimated the number of gray kangaroos during extended drought conditions. The Service notes that a senior FWS biometrician traveled to Australia in 1990 and evaluated the procedures currently used to estimate kangaroo populations. His assessment, summarized in item A (above), indicates that current surveys are very extensive, properly standardized, well thought out, and that additional work to improve visibility correction factors is ongoing. Results from surveys, listed in Tables 1–4, indicate trends that are interpretable using data that have driven successful kangaroo management programs for over a decade. Further development of sampling procedures, including the additional refining of visibility correction factors, should further improve census data.

Other comments submitted in response to the February 18, 1994, **Federal Register** notice are also addressed above in this final rule. These comments concern the impact that a meat market might have on the commercial utilization of kangaroos, the belief that staff cuts to the U.S. Customs Service might lead to nefarious activities in commerce, the belief that cruelty is rampant in the harvest of kangaroos, the belief that population data and management activities and trade controls are inadequate in kangaroo management, the argument that harvest quotas should consider all forms of mortality, and the perception that droughts and periodic floods represent substantial hazards to kangaroo populations.

Summary of Factors Affecting the Species

Section 4(a)(1) of the Act and regulations implementing the listing provisions of the Act (50 CFR part 424) set forth the procedures for adding species to or deleting species from the List of Endangered and Threatened Wildlife. A species shall be listed or reclassified on the basis of the best scientific or commercial data available after conducting a review of the species' status with regard to the five following evaluation factors: (A) The present or threatened destruction, modification or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; and, (E) other natural or manmade factors affecting its continued existence.

This final rule is based on an assessment of the five listing criteria within the Act. The assessment considered the present biological status of the three kangaroo species in mainland Australia. The five factors, as they apply to eastern gray kangaroo (*Macropus giganteus*), western gray kangaroo (*Macropus fuliginosus*), and red kangaroo (*Macropus rufus*) are as follows:

A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range

Extensive kangaroo habitats have been lost or seriously degraded where urbanization and several forms of intensive agriculture have occurred. The eastern gray kangaroo has lost important habitats to development and agriculture in eastern Queensland, New South Wales (NSWNPWS 1991a) and throughout Victoria. The species, however, is considered abundant and widespread over large areas of eastern Australia where annual rainfall exceeds 250 mm but has little seasonal trend or where summer rains exceed winter rains (ANPWS 1991b). That publication summarizes habitats for the eastern gray kangaroo as including semi-arid mallee scrub, woodland, and forest. The densities of eastern gray kangaroos are frequently low in the more arid portion of their potential range, where they may be confined to narrow belts of woodland bordering watercourses, and are sometimes high elsewhere. The 1991 density of gray kangaroos, for example, was estimated at about 1 per sq km in arid extreme northwestern New South Wales and averaged more than 10 per sq km on about 125,000 sq km of habitat in mesic northcentral New South Wales (NSWNPWS 1991b). Caughley, *et al.* (1987) listed densities for eastern gray kangaroos that were greater than 20 kangaroos per sq km on some transects in extreme southcentral Queensland as determined from 1980–1982 aerial surveys. The western border of the range of the species has apparently moved westward since European settlement because of the establishment of numerous semi-permanent watering points for stock. Pastoral development is considered to have generally favored the eastern gray kangaroo (NSWNPWS 1991a). The action plan for the conservation of Australasian Marsupials and Monotremes (Kennedy 1992) listed an increased geographic range since European settlement for eastern gray kangaroos.

The red kangaroo is considered abundant over much of inland Australia in areas receiving less than 500 mm annual rainfall (ANPWS 1991). The species occurs in mulga and mallee scrub, shrubland, woodland, grassland, and desert. The species seems to prefer open plains with scattered trees or shrubs. The 1991 density of red kangaroos was estimated at less than 3 per sq km in central NSW but at more than 14 per sq km on about 125,000 sq km of habitat in arid extreme northwestern NSW (NSWNPWS 1991a). Caughley, *et al.* (1987) listed densities greater than 20 per sq km for the red kangaroo on some transects determined from 1980–1982 aerial surveys. Red kangaroos occur in almost a continuous distribution but at varying densities over all the pastoral areas and a large portion of the interior of South Australia. The red kangaroo favors the open but better watered country inside the 2000 km dingo-proof fence in lands used primarily for sheep grazing. Red kangaroo densities are much lower outside the fence (SANPWS 1991). The habitat changes associated with sheep grazing such as closely spaced stock water, the production of shrubland with ephemeral grasses, and the exclusion of the dingo are considered favorable for the red kangaroo. The action plan for the conservation of Australasian Marsupials and Monotremes (Kennedy 1992) listed an increased geographic range since European settlement for the red kangaroo.

The western gray kangaroo occurs across the south of the continent from Western Australia to extreme southcentral Queensland but generally not east of the great divide. This distribution generally corresponds to the area where winter rainfall predominates. Caughley, *et al.* (1987) listed densities greater than 10 per sq km for transects in a relatively small

area of southwestern New South Wales as determined from 1980–1982 aerial surveys. The increase of watering points to aid the pastoral industry has been beneficial to the western gray kangaroo but intensive agriculture has adversely impacted some habitats. Arnold (1990), for example, indicated that the sizes of some populations of western gray kangaroos have declined significantly where habitat fragmentation to favor intensive agriculture has occurred in southwestern Western Australia. Arnold (1990) further believes losses to kangaroo populations will continue in these areas as the remnant native vegetation continues to be degraded. The western gray kangaroo occurs widely through the southern agricultural area of South Australia and extends into the central pastoral areas. This macropod is considered to be basically a dweller of scrublands and woodlands that grazes at the edges of adjacent grasslands. That portion of the gray kangaroo's range in the pastoral zone of South Australia has been favored by management actions beneficial to sheep production. A portion of the gray kangaroo's range in the southern agricultural zone has been degraded or destroyed by extensive habitat destruction caused by the clearing of native vegetation for agricultural and industrial purposes and for urban and suburban developments (SANPWS 1991). The action plan for the conservation of Australasian Marsupials and Monotremes (Kennedy 1992) listed no change to a decline of less than 10 percent in the geographic range of the western kangaroo since European settlement.

The three species of kangaroos occur over a vast region of Australia. Census lines representative of about 2.25 million sq km of habitat are routinely surveyed by air to estimate kangaroo numbers. Kangaroos are abundant in major portions of this habitat. As indicated below, an extensive series of parks and reserves totaling over 400,000 sq km has been and is being established that will contribute directly to the conservation of macropods throughout their natural range. Current kangaroo populations could exceed those present before European man arrived on the continent. This seems possible because kangaroos have a reproductive capability efficiently attuned to the boom-or-bust nature of the usual precipitation-range forage cycle on arid lands and because kangaroos have been an impressive and inadvertent beneficiary of the sheep management system that included the clearing of woodlands, production of watering points, and the control of predators. Kangaroos that inhabit vast areas of Australia in impressive numbers cannot be considered threatened because of habitat and range conditions even though much native range is severely degraded. Kangaroos do well when habitats are in adequate condition due to sufficient rainfall and more poorly when droughts occur. This cyclic or fluctuating pattern in response to the vegetative condition of rangelands is a normal periodicity in the arid land system and does not in itself comprise a threat to the species.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

The intent of kangaroo conservation in Australia is to maintain viable populations of the three species of kangaroos over their existing range and minimize any deleterious effects that high densities of these species could have on agricultural and pastoral products. Management is an art in the arid-zone ecosystems that comprise much of interior Australia where lands normally cycle in productivity in response to a variable rainfall. Viable kangaroo populations need to be maintained when range productivity and carrying capacities are low, but kangaroos can represent an additional range resource when populations and range productivities are increased. The ANCA and the Parks and Wildlife Services of the individual states regularly monitor population trends of red and gray kangaroos. The species are protected on National Parks and Reserves that total about 5 percent of the continental land area (over 400,000 sq km). Some of these lands represent important kangaroo habitats. The species can be legally killed, but not commercially utilized, by permitted actions in many urban, suburban, and agricultural areas for damage mitigation reasons. A major commercial harvest of kangaroos occurs in large designated areas of Queensland, New South Wales, South Australia, and Western Australia. The magnitude and characteristics of this commercial harvest are regulated by the ANCA as a wildlife management strategy. The total commercial harvest is conducted within the framework of a harvest quota system. The commercial quota is the maximum number of kangaroos of a designated species that may enter domestic or international commerce during a specific year after having been taken in accordance with approved State management plans.

The assessment of this factor did not evaluate whether the commercial utilization of kangaroos violates their protected status as provided by Australian legislation or the legitimacy of the commercial kangaroo industry. Those are Australian domestic issues. The Service assumed that kangaroo products are a legitimate product of the land if kangaroos are managed as a sustainable resource, and if Australian society approves of the harvest. The Service's evaluation in particular focused on whether the commercial enterprise threatened the existence of kangaroos, whether the Commonwealth and State governments adequately manage the kangaroo resource, and how harvest management responds to changes in kangaroo populations, especially during droughts.

Kangaroo population levels are estimated from large-scale aerial and/or ground surveys. These population estimates reflect the effects of all forms of mortality acting on kangaroos. Commercial harvest quotas are determined from estimates of the living population and are intended to regulate the harvest which is the principle human-caused form of mortality. The commercial harvesting of kangaroos is directly controlled through the licensing of shooters and their operations.

The population surveys are accomplished during winter (June-August), annually in South Australia, New South Wales, and Queensland and triennially in Western Australia. The raw data from surveys represent index values that can be compared to develop trends, or they can be expanded by the use of suitable correction factors to provide estimates of kangaroo populations. Correction factors strive to account for differences in the behavior of kangaroo species regarding their sightability and the ability to view kangaroos in different habitats. Research is ongoing to further enhance the quality of surveys and correction factors. In Western Australia, where aerial surveys are only accomplished at 3-year intervals, population status in the intervening years is assessed from monthly reports of the commercial harvest, the intermittent aerial surveys and ground surveys and patrols by appropriate staff (WADCLM 1991a and 1991b).

Harvest quotas are determined on the basis of population information, estimates of habitat quality, and the perceived or estimated requirements for damage mitigation. Conservation interests are considered to drive the establishment of harvest quotas because quotas are usually fixed as conservative proportions of the estimated populations. Individual States could temporarily set quotas at high rates if their stated management goal was to

reduce statewide or localized kangaroo populations to more sustainable levels.

Tables 1–9 provide population estimates and data about the commercial harvest of kangaroos in Western Australia, South Australia, New South Wales, and Queensland. Population estimates, except for South Australia, usually include the mean and the standard error, which is a measure of the variance around the mean. Population estimates and data about the commercial harvest of red and western gray kangaroos from the Commercial utilization areas (CUAs) of Western Australia, from 1987–1993, are listed in Tables 1 and 2. Population data within the CUAs are only collected at 3-year intervals in Western Australia so status and trend data are weaker than in the other three states. Red kangaroo populations were apparently similar in 1987 and 1990 and significantly reduced in 1993, and populations of western gray kangaroos seemed increased in 1990 and significantly reduced in 1993. Australian authorities believe the reduced estimates of kangaroo populations in 1993 could be sampling anomalies, but this will remain unknown until additional population surveys have been conducted. Harvest quotas for red and western gray kangaroos in 1994 are each about 15 percent of the mean populations estimated in 1993. Because the commercial kill is consistently less than the commercial quota, it is expected that the 1994 harvest will be less than 15 percent of the estimated 1993 populations in Western Australia.

TABLE 1.—POPULATION ESTIMATES AND DATA ABOUT THE COMMERCIAL HARVEST OF RED KANGAROOS FROM WESTERN AUSTRALIA

	Population estimate (mean +/− SE) (total survey area)	Commercial quota	Commercial kill	Percent males in kill
1987	2,335,900±177,500	200,000	150,462	58.4
1988	NA	230,000	216,834	56.8
1989	NA	290,000	186,042	58.0
1990	2,365,500±165,600	290,000	224,423	58.6
1991	NA	290,000	186,749	55.2
1992	NA	350,000	107,605	50.1
1993	1,362,700±90,200	350,000	139,833	47.8
1994	NA	220,000	NA	NA

TABLE 2.—POPULATION ESTIMATES AND DATA ABOUT THE COMMERCIAL HARVEST OF WESTERN GRAY KANGAROOS FROM WESTERN AUSTRALIA

	Population estimate (mean +/− SE) (total survey area)	Commercial quota	Commercial kill	Percent males in kill
1987	691,000±167,500	45,000	40,092	55.1
1988	NA	45,000	29,061	55.2
1989	NA	45,000	28,355	53.0
1990	1,069,100±145,600	45,000	36,868	56.8
1991	NA	45,000	38,043	58.4
1992	NA	65,000	46,694	57.1
1993	433,500±170,900	65,000	47,070	NA
1994	NA	60,000	NA	NA

Population estimates and data about the commercial harvest of red and western gray kangaroos from the commercial utilization area of South Australia, from 1987–1993, are listed in Table 3 and 4. Estimates of red kangaroo populations may not differ significantly at least from 1988–1993, and populations of the western gray kangaroo may be greater in 1992 and 1993 than in some of the earlier years. The 1993 commercial harvest of red kangaroos totaled 15 percent and that of western gray kangaroos totaled about 9 percent of the estimated 1993 populations, and the 1994 harvest quota totaled 19 percent and 14 percent, respectively, of the 1993 population estimates.

TABLE 3.—POPULATION ESTIMATES AND DATA FOR THE COMMERCIAL HARVEST OF RED KANGAROOS FROM SOUTH AUSTRALIA

	Population estimate (mean +/− SE)	Commercial quota	Commercial kill	Percent males in kill
1987	[1] 963,000	180,000	100,507	[2] NA
1988	1,491,900	146,000	118,232	NA
1989	1,428,500	260,400	124,173	NA
1990	1,950,000	276,300	172,793	NA
1991	1,669,100	408,600	213,628	NA
1992	1,647,400	317,700	219,338	NA
1993	1,483,700	290,400	227,056	55
1994	NA	286,500	NA	NA

[1] Population estimates that ANCA has received from South Australia do not include standard errors.
[2] Information is unavailable about the sex ratios of kangaroos killed in South Australia, except for 1993.

TABLE 4.—POPULATION ESTIMATES AND DATA FOR THE COMMERICAL HARVEST OF WESTERN GRAY KANGAROOS FROM SOUTH AUSTRALIA

	Population estimate (mean +/− SE)	Commercial harvest quota	Commercial kill	Percent males in kill
1987	[1] 208,000	30,900	14,849	[2] NA
1988	222,600	31,700	13,778	NA
1989	253,200	33,000	11,546	NA
1990	193,900	36,850	18,593	NA
1991	272,600	31,700	14,533	NA
1992	358,100	35,500	18,999	NA
1993	380,800	48,600	32,798	67
1994	NA	55,600	NA	NA

[1] Population estimates that ANCA has received from South Australia do not include standard errors.
[2] Information is unavailable about the sex ratio of kangaroos killed in South Australia, except for 1993.

Population estimates and data about the commercial harvest of red, western gray, and eastern gray kangaroos from the commercial utilization areas of New South Wales, from 1987–1993, are listed in Tables 5 to 7. Populations of red kangaroos apparently increased to 1991 and have diminished since that time, possibly in response to locally severe drought conditions. The commercial kill in 1993 was about 13 percent of the 1993 population and the 1994 harvest quota is about 18 percent of the 1993 population estimate. The pattern of population change of western gray kangaroos also suggests a population increase to 1991 and a decrease since that time. The 1993 commercial kill was about 10 percent of the population estimated in 1993 and the 1994 commercial quota was set at about 21 percent of the 1993 population estimate. Populations of the eastern gray kangaroo on the Western Plains also increased to 1991 and have apparently diminished since that year. The 1993 commercial harvest totaled about 12 percent of the 1993 population estimate. The 1994 harvest quota has been set at 27 percent of the 1993 population estimate.

TABLE 5.—POPULATION ESTIMATES AND DATA FOR THE COMMERCIAL HARVEST OF RED KANGAROOS FROM NEW SOUTH WALES

	Population estimate (mean +/− SE)	Commercial harvest quota	Commercial kill	Percent males in kill
1987	2,777,000±189,400	313,000	270,467	[1] NA
1988	3,440,000±217,000	354,000	218,086	NA
1989	4,101,000±323,200	487,000	297,029	NA
1990	4,499,000±254,200	626,000	377,155	NA
1991	4,755,000±289,500	706,000	495,986	NA
1992	3,384,900±299,300	956,000	412,189	NA
1993	2,759,800±181,700	598,800	359,820	NA
1994	NA	483,850	NA	NA

[1] NSW does not calculate percent males on a regular basis, as they have found that it varies greatly due to shooter preference—averaging 70% but varying from 50–90%.

TABLE 6.—POPULATION ESTIMATES AND DATA FOR THE COMMERICAL HARVEST OF WESTERN GRAY KANGAROOS FROM NEW SOUTH WALES

	Population estimate (mean +/− SE)	Commercial harvest quota	Commercial kill	Percent males in kill
1987	741,500±61,908	75,000	62,926	[1] NA
1988	616,000±48,546	105,000	72,786	NA
1989	940,000±78,952	95,000	67,253	NA
1990	1,296,000±93,632	152,000	83,708	NA
1991	1,391,700±118,624	220,000	106,629	NA
1992	1,320,000±108,966	327,700	117,994	NA
1993	1,250,000±78,423	307,800	129,378	NA
1994	NA	268,050	NA	NA

[1] NSW does not calculate percent males on a regular basis, as they have found that it varies greatly due to shooter preference—averaging 70% but varying from 50–90%.

TABLE 7.—POPULATION ESTIMATES AND DATA FOR THE COMMERCIAL HARVEST OF EASTERN GRAY KANGAROOS FROM NEW SOUTH WALES

	Population estimate (mean +/− SE)	Commercial harvest quota	Commercial kill	Percent males in kill
1987	1,906,500±159,192	189,000	140,061	[1] NA

TABLE 7.—POPULATION ESTIMATES AND DATA FOR THE COMMERCIAL HARVEST OF EASTERN GRAY KANGAROOS FROM NEW SOUTH WALES—Continued

	Population estimate (mean +/− SE)	Commercial harvest quota	Commercial kill	Percent males in kill
1988	1,442,000±113,654	271,000	130,335	NA
1989	2,007,000±168,548	222,000	136,073	NA
1990	2,755,000±198,968	394,000	170,766	NA
1991	2,957,000±252,076	584,000	253,791	NA
1992	2,683,000±221,434	790,300	264,447	NA
1993	2,440,000±153,077	757,000	284,344	NA
1994	NA	657,200	NA	NA

[1] NSW does not calculate percent males on a regular basis, as they have found that it varies greatly due to shooter preference—averaging 70% but varying from 50–90%.

Population estimates and data about the commercial harvest of red and eastern gray kangaroos from the commercial utilization areas of Queensland, from 1987–1993, are listed in Tables 8 and 9. Recent population trends are unclear in the data of Table 8 and 9 because two different techniques have been used to estimate populations. Queensland, from 1984–1992, annually surveyed over 500,000 sq km of habitat in the pastoral zone by fixed-wing (FW) aircraft and, since 1991, has surveyed selected 0.5 by 0.5 degree blocks by helicopters (Hel). Surveys from FW aircraft seem to consistently produce low estimates of kangaroo populations in woodland habitats, such as the 190,000 sq km of mulga woodlands in southcentral Queensland. Presumably the ''Caughley correction factors'' developed in the sparsely vegetated zones of western New South Wales are not adequate multipliers for estimating kangaroo populations in the woodland habitats of southcentral Queensland. Data in Table 8 suggest that the population of red kangaroos may have diminished since 1991, presumably because of locally severe drought conditions, and that 1993 populations of eastern gray kangaroos may also be diminished from 1991 levels. The commercial kill of red kangaroos in 1993 was about 20 percent of the 1993 population estimate and the commercial quota for 1994 is about 20 percent of the 1993 population estimate. The 1993 commercial kill of eastern gray kangaroos was about 12 percent of the 1993 population estimate and the 1994 commercial quota has been set at about 15 percent of the 1993 population estimate (Table 9).

TABLE 8.—POPULATION ESTIMATES AND DATA FOR THE COMMERCIAL HARVEST OF RED KANGAROOS FROM QUEENSLAND

	Population estimate (mean +/− SE)	Commercial harvest quota	Commercial kill	Percent males in kill
1987 (FW)	[1] 1,476,800±102,100	375,000	365,138	75
1988 (FW)	[1] 1,758,100±145,100	320,000	359,985	77
1989 (FW)	[1] 1,538,500±121,700	480,000	473,985	66
1990 (FW)	[1] 1,817,300±176,000	480,000	476,636	67.5
1991 (FW)	[1] 1,136,400±146,300	480,000	471,643	[2] NA
1991 (Hel)	[3] 4,630,000	.....	.....	.....
1992 (FW)	[1] 1,328,800±94,468	600,000	570,885	61.5
1992 (Hel)	[4] 3,070,000±910,000	.....	.....	.....
1993 (Hel)	[5] 2,960,000±950,000	600,000	595,488	55.5
1994 (Hel)	.....	600,000	.....	.....

[1] Fixed Wing estimates have been corrected using Caughley Correction Factors for Habitat but have not been corrected for temperature.
[2] ANCA does not have this data for 1991.
[3] Estimate received from the 1992 Quota application.
[4] Estimate received from the 1993 Quota application.
[5] Estimate received from the 1994 Quota application.

TABLE 9.—POPULATION ESTIMATES AND DATA FOR THE COMMERCIAL HARVEST OF EASTERN GRAY KANGAROOS FROM QUEENSLAND

	Population estimate (mean +/− SE)	Commercial harvest quota	Commercial kill	Percent males in kill
1987 (FW)	[1] 3,341,200±176,700	1,300,000	1,231,889	79
1988 (FW)	[1] 2,916,700±192,600	1,300,000	1,292,196	79
1989 (FW)	[1] 2,598,500±172,300	1,500,000	1,143,314	66
1990 (FW)	[1] 2,278,300±232,000	1,500,000	1,097,890	62.5
1991 (FW)	[1] 1,736,900±155,600	1,300,000	1,017,086	[2] NA
1991 (Hel)	[3] 10,280,000	.....	.....	.....
1992 (FW)	[1] 2,782,400±184,700	1,500,000	919,234	62.5
1992 (Hel)	[4] 10,310,000±3,260,000	.....	.....	.....
1993 (Hel)	[5] 8,360,000±2,670,000	1,500,000	989,578	58.1

TABLE 9.—POPULATION ESTIMATES AND DATA FOR THE COMMERCIAL HARVEST OF EASTERN GRAY KANGAROOS FROM QUEENSLAND—Continued

	Population estimate (mean +/− SE)	Commercial harvest quota	Commercial kill	Percent males in kill
1994	.....	1,250,000	.....	.....

[1] Fixed Wing estimates have been corrected using Caughley Correction Factors for Habitat but have not been corrected for temperature. Caughley correction factors for gray kangaroos are known to give very conservative estimates of total population numbers. They are maintained in the publicly published figures to enable comparisons in population trends with the earlier published data for gray kangaroos until an agreed revised set of correction factors is published for the species.
[2] ANCA does not have this data for 1991.
[3] Estimate received from the 1992 Quota application.
[4] Estimate received from the 1993 Quota application.
[5] Estimate received from the 1994 Quota application.

The total national commercial quota in 1992 for red and gray kangaroos in the commercial utilization areas was 4,942,000, which was about 19 percent of the estimated 1992 red and gray kangaroo population of 26.2 million (using the estimates developed for Queensland from 1992 helicopter counts, for New South Wales and South Australia from 1992 FW surveys, and for Western Australia from 1990 FW surveys). The 1992 commercial kill was 2,676,000, which was 54 percent of the commercial quota and about 10 percent of the presumed 1992 population estimate. The total national commercial quota in 1993 for red and gray kangaroos was 4,517,600 which was about 21 percent of the estimated 1993 red and gray kangaroo population of 21.4 million in the CUAs (data from 1993 helicopter counts in Queensland, and 1993 FW counts in South Australia, New South Wales, and Western Australia). The 1993 commercial kill was 2.8 million which was 62 percent of the 1993 commercial quota and 13 percent of the 1993 population estimate. The 1994 national commercial quota is set at 3.88 million, which is about 18 percent of the 1993 population estimate. An additional 153,000 red and gray kangaroos were reported killed during 1993 for damage mitigation purposes outside the commercial harvest quotas. This damage mitigation kill was an unknown small percent of the continental population of red and gray kangaroos (153,000 equals about 0.7 percent of the 1993 presumed population of red and gray kangaroos within the CUAs which comprise a fraction of the continental land area).

Queensland has received criticism in past years for its harvest management system. That system has been substantially modified in recent years (QNPWS 1992). Queensland now establishes its kangaroo harvest quota in the following manner. Survey data from aerial and ground surveys are utilized to provide population estimates. A conservative possible harvest quota is formulated from this mid-winter survey information. This statewide potential quota for the state, by management areas, is reviewed by the Area Director, Regional Director, and the Manager-Wildlife Management, Queensland. The potential quota is then passed before the Macropod Management Committee (a State Ministerial committee) to receive public input from the rural community, pastoralists, graziers, shooters, dealers, the Department of Primary Industries, conservation groups, and politicians whose constituents are impacted by kangaroos. The committee advises on the acceptability of the proposed quota and may make recommendations about the quota. The proposed quota and the comments are passed to the Queensland Minister, who determines the final quota to be submitted to the Commonwealth for approval. Commonwealth approval may be gained after the proposal has been reviewed by ANCA and the Commonwealth Minister's Scientific Advisory Committee on Kangaroos.

The CUA in South Australia occurs on about 282,000 sq km of pastoral landscape, which comprises about 28 percent of the State's land area. The harvest quota in South Australia is based on the winter aerial survey of the CUA and is developed for each of 10 kangaroo management zones within the CUA. The commercial quota is set as a best estimate of the maximum number of each species that may need to be killed to contain deleterious effects on stock, crops, or property without jeopardizing the viability of kangaroo populations (SANPWS 1991). The proposed quota has to be approved by the appropriate South Australian Minister before its submission to the Commonwealth. The Commonwealth Minister subjects the proposed quota to review by ANCA and the Minister's Scientific Advisory Committee on Kangaroos before any implementation of the kangaroo management program can occur.

The CUA covers the western two-thirds of New South Wales. The harvest quota in the State is based on population estimates from the most recent annual surveys, recent trends in population numbers and distribution, harvest monitoring data, information about nonharvest mortality and noncommercial harvest mortality, climatic conditions over at least the past year, current land use, the proportion of the population not subject to damage mitigation culling, and the demand for agricultural damage mitigation culling (NSWNPWS 1991a). The proposed quota is subject to peer review by the NSW Kangaroo Management Review Committee and must be approved by the appropriate New South Wales Minister before its submission to the Commonwealth. The quota must be approved by the Commonwealth Minister, after its review by ANCA and the Minister's Scientific Advisory Committee on Kangaroos, before the harvest program can be implemented.

The CUA may total about one-half of Western Australia. Parks, reserves, and State forest lands occupied by and providing protective status to western gray and/or red kangaroos may total 100,000 sq km within this vast state. The harvest quota in Western Australia is conservatively established on the basis of current population trends, seasonal conditions, the review of previous annual harvests, the proportion of the habitat and population not subject to harvesting, current land use practices, and the significance of the take outside the commercial quota (WADCLM 1991a and 1991b). The proposed quota is subject to peer review by the Kangaroo Management Advisory Committee and must be approved by the appropriate Western Australian Minister before being forwarded to the Commonwealth Government. The Commonwealth Minister (after review by ANCA and the Minister's Scientific

Advisory Committee on Kangaroos) must approve the quota before the harvest program can be implemented.

Individual states have the capability to monitor their kangaroo harvest. For example, Queensland has recently established a Macropod Management System that is a new and large computerized database containing information about shooters' records, dealers' records, location of kill, date of kill, sex and species of kill, etc. The capability to track harvest information helps managers assess whether populations are being overharvested. A computerized database in Western Australia, built on harvest data, allows for the analysis of total commercial take by management area, trends in the sex ratio of the commercial take, trends in the average weight of kangaroos in the commercial take, and trends in the commercial take per unit effort (WADCLM 1991a and 1991b). South Australia is collecting, but not yet utilizing in its kangaroo management program, monitoring data about catch per unit of effort, sex ratio of the kill, and average weight of carcass by sex for each species (SANPWS 1991). New South Wales obtains specific information from trappers, chillers, and faunal dealers to determine catch per unit effort, average carcass weight by sex per species, sex ratios of kill, and the distribution of the harvest. This information is available by management zone and on a statewide basis (NSWNPWS 1991a).

The monitoring and assessment of population trends and harvest returns as specified in the approved kangaroo management programs are intended to ensure the conservation of the species.

The State and Commonwealth governments have the capability to police and regulate the commercial take of kangaroos. State governments control illegal trade in kangaroos through regular and random field inspections of shooter and dealer operations and checks on the returns required from them. Law enforcement staff may also respond to public reports of illegal activities. The primary focus in law enforcement activities at the State or Territory level is to detect illegal trade long before material may be proposed for export. This is feasible because of the relatively small number of people involved in the commercial kangaroo industry and the difficulties involved in obtaining and dealing in large quantities of kangaroo meat or skins in a secretive manner. There is also little incentive to become involved in illegal activities when quotas are not being reached (on average only about 70 percent of the total quotas have been taken in recent years) (ANPWS *in litt.*).

The Commonwealth capability to control illegal trade rests primarily with Customs officers and the Australian Federal Police. Checks on permitted exports of kangaroo products by Customs officers usually are restricted to the inspection of paperwork associated with the export. Customs officers will conduct more detailed inspections and enforcement activities where intelligence indicates that illegal activities may be occurring (ANPWS *in litt.*). The Wildlife Protection Squad formed within the ANPWS in 1992 is intended to coordinate enquiries/investigations into allegations of illegal trade in wildlife.

Annual surveys are useful indicators of the comparative health of kangaroo populations over time. Drought is the major natural event that influences the numbers of red and gray kangaroos throughout the CUAs. Annual surveys in New South Wales have been conducted for a sufficient time to indicate the influence of drought on populations. Combined populations of red and gray kangaroos in the CUAs of New South Wales from 1981–1993 (with numbers of animals commercially harvested listed in parentheses) are estimated as follows (population numbers are in millions of animals): 1981=7.05(0.49), 1982=9.40(0.66), 1983=5.50(0.40), 1984=2.74(0.23), 1985=4.16(0.33), 1986=4.66(0.45), 1987=5.43(0.47), 1988=5.50(0.42), 1989=7.05(0.50), 1990=8.55(0.63), 1991=9.10(0.86), 1992=7.39(0.79), and 1993=6.45(0.77). The data, unfortunately, provide an imperfect comparison because both census procedures and evaluation areas changed somewhat during the evaluation period. The trend seems clear, however: a population buildup to 1982, a major population reduction measured in 1983 and 1984 in response to the severe drought in summer 1982–1984, a gradual population recovery to 1991, with populations again declining in 1992 and 1993 as the sheep range of New South Wales was again impacted by a severe drought in 1991–2. The commercial harvest (numerically identified in the parentheses, above) is managed as a product of current kangaroo populations, which seem ultimately to be driven by current or recent rainfall conditions. Similar trends may exist for the other states, as well, but the data bases are not as complete or as extensive as those of New South Wales. For example, the data base in Queensland reflects the original use of FW aircraft and more recent use of helicopters in aerial survey efforts, and aerial surveys have been conducted only at 3-year intervals in Western Australia.

Nevertheless, population information for 1981, 1984, and 1987 (Fletcher, M. *et al.*, 1990) clearly indicates that kangaroo populations subject to harvesting can recover from significant droughts such as occurred in Eastern Australia in 1982–1984.

The major problem in the sheep range is too little herbage and too many herbivores. Efforts to implement a total grazing management policy call for the elimination of feral herbivores and introduced rabbits coupled with reductions in numbers of either sheep and kangaroos, or both.

Skill is required to manage animal populations that tend to respond to fluctuating environmental conditions. For example, New South Wales managed its kangaroo harvest during the drought by monitoring the progression of the drought and transferring harvest quotas from northern management zones where the drought was impacting habitats to more southerly management zones where drought effects were minimal and kangaroo populations were little affected. New South Wales did not reduce the notional quota for the second half of 1992 because the mid-winter 1992 surveys indicated that kangaroo populations remained high. However, New South Wales did hold back and did not allocate 15 percent of the potential harvest quota in case extensive habitat deterioration occurred after the mid-winter surveys were accomplished.

The Service finds that State and Commonwealth governments manage kangaroo populations sufficiently well to ensure that red and gray kangaroo populations are not being overutilized in mainland Australia at this time.

C. Disease or Predation

There is no evidence that kangaroos at this time are threatened by disease or predation. Predation by dingos may have been an important limiting factor before the arrival of Europeans. Dingo predation has been severely curtailed to enhance sheep husbandry, and kangaroos have incidentally benefitted from this action. Mortality of red and gray kangaroos, believed caused by an unidentified post-flood agent, was observed in southwestern Queensland following the April 1990 floods. The impact was short-term (ANPWS 1990), however, as regenerating vegetation stimulated increases in subsequent kangaroo populations.

D. The Inadequacy of Existing Regulatory Mechanisms

Red and gray kangaroos have protected status in all parts of their respective distributional ranges throughout Australia under relevant State or Territory legislation. The responsibility for wildlife conservation rests with individual State or Territorial governments through their faunal conservation authorities (ANPWS 1991). The decision to provide for a commercial harvesting industry is determined by State or Territory government policy and legislation. The Commonwealth has no power in law to influence how States and Territories manage red and gray kangaroos except for those populations subject to export or international agreements. The Commonwealth would be powerless, for example, to directly intervene should any individual State or Territory, with no export program, develop or operate an intrastate program that was counter to the Commonwealth views of conservation and management. The ANCA, however, is aware of the level of protection provided in mainland States and Territories that do not seek to export kangaroo products, and the Commonwealth is satisfied that management in those mainland States and Territories (Victoria, Northern Territory, Australian Capital Territory) is in significant agreement with Commonwealth standards of conservation and management (ANPWS *in litt.*).

The management of kangaroos in New South Wales, Queensland, South Australia, and Western Australia is based on legal protection and regulations controlling the harvest of kangaroos. Each of these four States has a kangaroo management program that includes provisions for the establishment of harvest quotas and for the reduction of harvests, if necessary, and each State has the responsibility to implement the provisions of its individual kangaroo management programs. The largest populations of red and gray kangaroos occur in the four States, and the Commonwealth Government does have a mechanism to enhance the protection of those populations. That mechanism exists through the Wildlife Protection (Regulation of Exports and Imports) Act of 1982 (WP(REI)A). The WP(REI)A consolidated wildlife controls into a single act so the Commonwealth could more effectively implement the objectives of CITES. Commercial trade is permitted only if it has been conclusively established that the native species will not become threatened because of the inadequate control of exports or through the import of some non-native species. The Commonwealth Minister for the Arts, Sport, the Environment and Territories can approve or disapprove of proposed management programs for individual species after having been advised of their merit by the ANCA and the Minister's Scientific Advisory Committee on Kangaroos. State governments in Western Australia, South Australia, New South Wales, and Queensland have each developed kangaroo management plans that have been approved by the Commonwealth so that an export trade in kangaroo products is allowed from each of those States. The kangaroo management plan for each State has a monitoring provision for both population trends and harvest returns to ensure that conservation of the species is the foremost objective.

An approved kangaroo management program indicates that kangaroo products for export must be from kangaroos taken in a specified and approved manner. An approved kangaroo management program must contain sufficient biological information so it can be evaluated. There also needs to be ample proof that the biological information has been considered in developing the program, and discussions must have occurred between the State and Commonwealth governments so the management programs attain acceptable standards. The management program must ensure that taking in the wild will not be detrimental to the survival of the species, will be carried out at minimal risk to the continuing role of that species in the ecosystem, will occur in a humane manner, and that adequate periodic monitoring and assessment of the effects of the taking of specimens will occur to ensure the long-term survival of the species.

The kangaroo management programs are generally based on multiple-use tenets and are designed to ensure the continued survival of kangaroos throughout their range. The programs assume that kangaroos are successful native herbivores whose numbers frequently need to be controlled. The programs are based on population monitoring and use a licensing system to control the legal harvesting of animals. The individual States have the responsibility to ensure that the harvesting of kangaroos does not significantly affect the distribution and abundance of the species.

The general objectives of the kangaroo management programs are to (1) maintain viable populations of kangaroos throughout their natural range, (2) minimize the effects of kangaroos on pastoral and agricultural development, (3) maintain populations of kangaroos at levels that will not produce long-term adverse impacts to habitat, and (4) manage the species as a renewable resource. Implementation to achieve objectives includes enabling legislation and an administering organization with sufficient funding to accomplish appropriate research, management, and monitoring activities.

The New South Wales National Parks and Wildlife Service controls the harvest of kangaroos through the National Parks and Wildlife Act 1974. All kangaroos entering commercial trade must be legally taken in accordance with this Act, and it is an offense to kill kangaroos or have them in possession without an appropriate license. Landholders have to approach the NSWNPWS for a permit to kill kangaroos on their property, and tags are issued if the killing is found to be warranted. Shooters, commercial dealers, and tannery operators are each licensed so controls exist at several levels of the commercial harvest. The total allowable commercial harvest occurs within the framework of the commercial quota. The development of the quota has been described in a general manner under factor B above.

The legislation protecting and conserving nature in Queensland is the Faunal Conservation Act 1974, which has been replaced by the Nature Conservation Act 1992. The new Queensland Act has been implemented for kangaroos, replacing the existing legislation. The Nature Conservation Act 1992 creates classes of protected areas; designates classes of wildlife; and provides for development of conservation plans to protect, use, and manage protected areas, critical habitats, and classes of wildlife. The Queensland kangaroo management program describes how the activities of shooters and dealers are regulated, how the size and/or composition of the population is to be monitored, the harvest regulations and checks to prevent illegal harvest or over-harvest, and other measures to ensure the conservation of the species. The approval of Queensland's kangaroo management program by the Commonwealth Government indicates an assurance that commercialism will not threaten the survival of kangaroo populations throughout their range.

Kangaroos and all native fauna in South Australia are protected under the National Parks and Wildlife Act 1972. A permit is required to take any animal for damage mitigation purposes and any kangaroo that enters the commercial

trade must be tagged with a species-specific tag. Quotas are developed after the direct monitoring of populations on an annual basis, and individual properties may be monitored through ground surveys and property inspections before receiving a quota. Quotas are released in stages so management can respond to changes in climatic conditions. Kangaroo shooters are licensed to shoot on individual properties.

The Department of Conservation and Land Management has the responsibility for the conservation and protection of all flora and fauna under the Western Australia Conservation and Land Management Act of 1984. The Department has authority under the Wildlife Conservation Act 1950 and associated regulations to control the killing of red and gray kangaroos. Landowners and their agents may take kangaroos non-commercially for damage mitigation purposes in open-season areas. Kangaroos can only be taken under a damage license specifically issued to particular properties in non-open-season areas. The harvest is monitored by using species-specific tags and by monitoring monthly reports from licensed shooters and dealers. Population trends are monitored on a triennial basis because of the State's vast area and because kangaroo densities are frequently low.

Critics of the kangaroo management program in Australia cite the incongruity of legislation granting a measure of protection to the species and the presence of a commercial industry that is responsible for the harvest of several million kangaroos per year. Critics also state that few studies substantiate claims that kangaroos are major depredators of range and agricultural crops, so that arguments that kangaroos are harvested to reduce damage especially to range products are specious, especially when sheep numbers remain too high for fragile ranges. The Service believes that any perceived incongruity in domestic laws needs to be resolved domestically and is not a reason for an ESA listing decision. It is additionally not necessary for the Service to address the argument that the commercial killing of kangaroos is solely for damage mitigation purposes to make a decision on a listing status. Kangaroos incidentally prosper at this time because of land management accomplished for other purposes. Active kangaroo management essentially only regulates kind and level of take so that overutilization does not occur and so that sustainable populations are maintained throughout their range. Regulatory mechanisms in place are adequate to perform this function.

E. Other Natural or Manmade Factors Affecting Its Continued Existence

Kangaroo populations fluctuate in response to environmental and climatic conditions. Appropriate wildlife management agencies routinely evaluate kangaroo populations over a wide area and monitor current harvest statistics to track population trends. This activity is intended to provide a sufficient understanding so that harvest activities, can be slowed or terminated if that becomes necessary. This may be appropriate, especially during drought, when kangaroo populations may become reduced and are most vulnerable to population control activities.

There is great concern among critics that management programs both for individual States and the Commonwealth are insensitive to the plight of kangaroos during environmental stress periods as during the 1982–1984 drought. The perceived insensitivity at that time was an apparent inability or unwillingness to reduce the commercial harvest of kangaroos in what critics considered a timely manner during an environmental stress period. The critics argue that demands from the pastoral industry and the commercial kangaroo industry superseded important kangaroo management decisions. The present concern with insensitivity occurred because some important kangaroo habitats experienced droughts during 1992 at a time when a record macropod harvest quota of 5.2 million animals (including 4,942,000 red and gray kangaroos) was established. The Commonwealth indicates (ANPWS *in litt.*) that the determination of quotas during a dry period as during a normal period is on the basis of estimated kangaroo populations.

Droughts are quite variable in their duration and distribution and kangaroo populations do not automatically decline in response to dry seasonal conditions. The 1983 harvest quotas were set at high levels because kangaroo populations measured during the June-August 1982 winter period were still high. The actual harvest during 1983 was considerably less than the actual quota and the quotas in 1984 and 1985 were maintained below 2 million animals as populations recovered.

Kangaroo populations have risen across Australia since that time and quotas have correspondingly increased. For example, the 1991 mid-winter kangaroo population in New South Wales was estimated at 9.1 million and the 1992 harvest quota in NSW was fixed at 2.1 million (23 percent of the 1991 population estimate). The mid-winter 1992 kangaroo population in NSW (obtained while the 1992 drought was still ongoing) was estimated at 8.04 million and a 1993 harvest quota of 1.66 million (21 percent of the 1992 population estimate) was established. The 1992 mid-winter survey indicated that statewide the populations of red kangaroos were diminished by about 40 percent (a statistically significant reduction, $P < 0.05$) and gray kangaroo populations were diminished about 8 percent (a statistically non-significant reduction). The 1992 mid-winter survey also indicated that kangaroo populations in central and southern management zones were little-changed from 1991 levels. The NSW National Parks and Wildlife Service, in mid-year, consequently switched some harvest quotas from northern to more southerly harvest management zones. The NSWNPWS also determined in mid-year that 15 percent of the 1992 harvest quota would be held back and not allocated during 1992. The NSW commercial kangaroo harvest during 1992, when a portion of the state was involved in a drought event, totalled about 800,000 kangaroos during a year when the potential harvest quota totalled 2.1 million. The kangaroo harvest strategy was thus to actively adapt and modify management plans as a dry season developed into a drought.

States have additional regulatory mechanisms to reduce actual harvest to levels below the commercial quota. Licenses to take animals may be amended to restrict the numbers taken in a particular area, to limit harvesting to certain species, or to cease hunting altogether. Thus, management may progressively restrict and then cease all harvesting of kangaroos in response to declining populations. Following the 1982–83 drought in New South Wales, a moratorium on harvesting was applied to some of the worst affected areas to enable populations to recover. Should a severe drought occur during the 1990's, States can be expected to respond in an appropriate manner to changes in the kangaroo populations. The ultimate assurance that conservation of the species will be given primary consideration is the approval and review of ongoing operations of State management programs by the Commonwealth Government (ANPWS *in litt.*).

Control over the methods used to kill kangaroos rests with State and Territory management personnel and is determined by relevant State and Territory legislation. Thus, new harvest

technologies that could threaten kangaroo populations can not be introduced without governmental approval.

Summary of Findings

The Service finds that extensive kangaroo habitats remain in mainland Australia, that management for pastoral industries may favor kangaroo production, and that an extensive series of National Parks and Reserves have been established (some of which are important to kangaroos). The Service also finds that adequate kangaroo management plans have been developed and implemented. The application of these management plans has demonstrated their effectiveness in both drought and non-drought conditions. Kangaroo populations are systematically and periodically assessed, and population data, environmental conditions, and public consultation inputs are weighed in the development of harvest quotas. The harvest operation is found to be a licensed action that occurs on individual properties at the request and permission of landholders. Authorities within the States and the Commonwealth government have the responsibilities and capabilities to monitor the harvest so that overutilization will not threaten the substantial kangaroo populations existing within individual States. Disease and/or predation do not threaten these kangaroos species. The management of kangaroos in New South Wales, Queensland, South Australia, and Western Australia is based on legal protection and regulations controlling the kangaroo harvest. The Commonwealth has the capability to approve, disapprove or require modification of kangaroo management programs from those States wishing to export kangaroo products so a consistency in planning and implementing management actions occurs within mainland Australia. The States have the responsibility to regulate all aspects of the kangaroo harvest, to provide adequate law enforcement, to conduct appropriate management and research, to monitor populations especially during drought events, and the States have the ability to modify harvests if environmental or other variables unexpectedly impact kangaroo populations. It is the present sufficiency in kangaroo management in mainland Australia that causes the Service to find that the action to delist the three species of kangaroos is warranted.

The Service's regulations at 50 CFR 424.11(d) allow a species to be delisted by reason of extinction, recovery, or because the original listing data were in error. The Service, with this action, delists these three species of kangaroos on the basis of their successful recovery because the best scientific and commercial information available indicates the species are now not likely to become an endangered species in the foreseeable future throughout all or a significant part of its range.

The Service, with this notice, also dismisses on procedural grounds, the December 20, 1989, petition filed by Greenpeace USA. The Service has no mechanism to reimpose an import ban on these non-endangered, non-threatened species from mainland Australia.

The Monitoring of Recovered Kangaroo Species

Requirements of the Act for the monitoring of recovered species also apply to foreign species. Those requirements include the implementation of a monitoring program to ensure that the species continues to fare well after delisting occurs. The Service is primarily dependent on input from the Commonwealth Government in the monitoring of these recovered species.

Monitoring plans frequently address population parameters, the distribution and well-being of the species, the condition of important habitats for the species, and any new threats identified as relevant to the species. The monitoring plan for the three kangaroos requires that the Commonwealth Government provide an annual report to the Service for each of 5 years. The first annual report is due March 1996. The monitoring plan is listed below. All information provided by the Commonwealth Government will be available for public review. The Service, on January 27, 1994, received a monitoring report which indicated results of the 1993 population surveys, and received additional monitoring information on May 30, 1994. The following presentation lists the monitoring question posed to the Commonwealth Government and the 1994 information on each monitoring question.

1. Provide the most current population estimates for each species within each harvest State using best technologies currently available, and describe the current harvest quotas established for the calendar year following those population estimates.

The 1993 population data for the three species, the commercial kill that was reported in 1993, and the planned harvest quota for 1994 are listed for each species in each state in Tables 1–9. There were no changes in the procedures used to monitor kangaroo numbers in New South Wales and South Australia in 1993. Nine monitoring blocks were identified for ongoing annual helicopter surveys in Queensland. The blocks will form the basis for future population trend analyses. The 1993 aerial survey in Western Australia followed in a general manner the standard survey methodology used in the 1987 and 1990 surveys. About 18 percent fewer degree blocks were surveyed in Western Australia in 1993 compared to 1990. Some consideration is being given to developing a systematic survey plan for conducting some type of annual survey in the commercial utilization area of Western Australia. Queensland continues to strive to standardize a systematic survey procedure utilizing helicopters.

2. Provide details of commercial and non-commercial mortalities, using best technologies currently available. The summary for a calendar year is due in March of the subsequent year. The time lapse is to ensure that summaries will provide data for the entire calendar year.

The extent of the commercial and non-commercial kill in 1993, is summarized in Table 10 (data about the non-commercial kill is not available for Western Australia).

TABLE 10.—COMMERCIAL AND NON-COMMERCIAL KILL IN 1993

State/province	Species	Type	Kill
NSW	Red kangaroos	Commercial	359,820
		Non-commercial	10,689
	Eastern grays	Commercial	284,344
		Non-commercial	85,696
	Western grays	Commercial	129,378
		Non-commercial	6,015

TABLE 10.—COMMERCIAL AND NON-COMMERCIAL KILL IN 1993—Continued

State/province	Species	Type	Kill
WA	Red kangaroos	Commercial	139,833
	Western grays	Commercial	47,077
SA	Red kangaroos	Commercial	227,056
		Non-commercial	1,618
	Western grays	Commercial	32,798
		Non-commercial	6,938
Qld	Red kangaroos	Commercial	595,488
		Non-commercial	8,915
	Eastern grays	Commercial	989,578
		Non-commercial	33,508

3. Describe any change in population or harvest estimation technologies, including, where appropriate, how the Commonwealth's Review Committee would deal with estimates using new technologies resulting in significantly higher standard errors. Such a discussion might include what sampling changes will be instituted to acceptably reduce the standard error, or what ''alpha'' level will be used to test for change in population or harvest, or how harvest quotas have been more conservatively set, or what programs would be instituted to relate estimates from new technologies to estimates using previous technologies.

This point was not included in the proposed rule, and no information was requested or provided in 1994.

4. Describe distribution of the species, using best technologies currently available. The intent of this provision is to note any significant change in the distribution of a species within a State with suggested explanations of causes of change.

No perceived changes in the distribution of the three kangaroo species exist for New South Wales, Western Australia, or Queensland. The distribution of western gray kangaroos in South Australia may now extend northward to approximately 31 degrees of latitude south. Otherwise, there are no perceived changes in the distribution of the species.

5. Describe the extent of lands set-aside for parks and reserves that provide protected and useful habitats for kangaroos.

Minor extensions were made to Parks and Reserves in New South Wales during 1993. Queensland added 6,974 sq km to its National Park System in 1993 and these lands provide protective and useful habitats for kangaroos. Western Australia added 3,394 sq km to its system of Nature Reserves, National Parks and Conservation Parks. Additional arid and semi-arid lands have also been added to the Park system in South Australia and some of these lands are suitable but marginal kangaroo habitats.

6. Describe changes in regulatory programs that impact the well-being of the species.

The basic regulatory programs remained unchanged in 1993 in New South Wales, Western Australia, and South Australia. The Nature Conservation Act 1992 has been implemented for kangaroos in Queensland, and replaces the Faunal Conservation Act 1974, National Parks and Wildlife Act 1975, and Native Plants Protection Act 1930. The 1992 Act provides for the protection of native wildlife and their habitats. A fundamental principle of the legislation requires that the use of protected wildlife must be ecologically sustainable. A draft ''Macropod Harvesting Conservation Plan 1994'' was released for public comment in December 1993. The new legislation provides for a comprehensive approach to the conservation of protected areas and wildlife and will enhance the conservation of all protected areas and species in Queensland.

7. Describe new threats to the species.

No new threats to the kangaroo species were identified during 1993.

8. Describe progress towards the successful implementation of any Total Grazing Management Policy (TGMP) that strives to balance the forage demands of all herbivore consumers with available range resources to enhance the conservation of range ecosystems.

In New South Wales, the concept of Total Grazing Management is being marketed through Landcare Groups, Rural Organizations, and a Commonwealth/State Rural Lands Reconstruction Program. The Department of Agriculture and the Department of Conservation and Land Management in Western Australia are cooperating on programs for rangeland conservation which emphasize the limitation of grazing pressures by commercial herbivores. In South Australia, the Pastoral Land Conservation and Management Act 1990 provides an attempt to enhance the conservation of range ecosystems. The major emphasis, at this time, is on the monitoring of vegetation conditions, modifying sheep and cattle stocking rates on the basis of current land condition, and the control of feral animals to enhance land condition. The Commonwealth Government, in association with State and Territory Governments has initiated the development of a National Rangelands Strategy, which among other things is intended to address the issue of managing total grazing pressure.

The U.S. Fish and Wildlife Service has the responsibility to annually review the monitoring reports, to assess the continued recovery of the species, and to conduct any other reviews it believes may be warranted. The Service can additionally invoke emergency listing procedures at any time in response to a significant threat to the well being of any of the three species. Three alternatives exist after the 5-year monitoring program has been concluded. They are: (1) If the species no longer meet the 5-factor test for recovery then they should be relisted using the emergency listing procedures; (2) if the species continue to fare well but threats are increasing, then the monitoring efforts should continue; and (3) if the species continue to fare well, threats are not increasing, and the 5-factor test is still met, then the monitoring effort can be discontinued.

Effects of This Final Rule

A special regulation was published in 1974 regarding the red, eastern gray, and western gray kangaroos that were listed as Threatened in 1974. The regulation made it unlawful to import these species, or their parts or products, into the United States for commercial purposes until the Australian States could assure the United States that they had effective management plans for the kangaroos, and that taking would not be detrimental to the survival of kangaroos.

As threatened species, individuals could be imported into the United States, with suitable permits, for scientific purposes, enhancement of propagation or survival of the species, educational purposes, zoological exhibition, or special purposes consistent with the purposes of the Act. On April 29, 1981, the Australian States met the conditions for satisfactory management, and a special regulation was published in the **Federal Register** (46 FR 3938) that made it lawful to import the three species of kangaroos for commercial purposes provided the products were tagged or otherwise identified as removed from the wild in accordance with the management plans of the Australian States. The Service published a final rule on August 1, 1983 (48 FR 34757) permitting the commercial importation of kangaroos to continue.

The current action removes the mainland populations of these three kangaroo species from the List of Endangered and Threatened Wildlife. The effect of this delisting action will be negligible because the restrictions associated with the Threatened classification have already been largely relieved by the Special Rule at 50 CFR 17.40 (a). The eastern gray kangaroo (*Macropus giganteus,* all subspecies except *tasmaniensis*), the red kangaroo (*M. rufus*), and the western gray kangaroo (*M. fuliginosus*) are removed from the list of Endangered and Threatened Wildlife as codified in 50 CFR 17.11, with the publication of this final rule. Consequently, none of the restrictions, regulations, or prohibitions of the U.S. Endangered Species Act will apply to these three species in mainland Australia, as is presently the case.

The subspecies *M. g. tasmaniensis* is retained on the list of endangered species in § 17.11. No assessment of this subspecies or of kangaroo management in Tasmania was undertaken in this evaluation.

The special rule in 50 CFR 17.40 (a)(1)(i)(B) which allowed the import of eastern gray, red, and western gray kangaroos, including parts and products of such wildlife which have been tagged or otherwise identified as removed from the wild, in accordance with the management plans of Australian States, into the United States without permits for individual shipments, otherwise required by 50 CFR part 17(a), is hereby rescinded. *M. g. tasmaniensis* is restricted to Tasmania, and Tasmania has not prepared a kangaroo management plan for this subspecies so the Commonwealth Government has not allowed any export of *M. g. tasmaniensis* or their parts and products. The rescinding of § 17.40 (a) will therefore not be relevant to this non-traded but endangered subspecies.

National Environmental Policy Act

The Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act, as amended. A notice outlining the Service's reasons for this determination was published in the **Federal Register** of October 25, 1983 (48 FR 49244).

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List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Regulation Promulgation

Accordingly, part 17, subpart B of chapter I, title 50 of the Code of Federal Regulations, is amended as set forth below:

PART 17—[AMENDED]

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1544; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500; unless otherwise noted.

§ 17.11 [Amended]

2. Section 17.11(h) is amended by removing the three entries for the ''Kangaroo, eastern gray'', ''Kangaroo, red'', and ''Kangaroo, western gray'' under the section ''Mammals'' from the List of Endangered and Threatened Wildlife.

§ 17.40 [Amended]

3. Section 17.40(a) is removed and reserved.

Dated: February 24, 1995.

Mollie H. Beattie,

Director, U.S. Fish and Wildlife Service.

[FR Doc. 95–5823 Filed 3–8–95; 8:45 am]

BILLING CODE 4310–55–P