supervision of children, and participation in school and community activities.

Many of the proponents of the status quo argued that the current system works well and causes little confusion. Similarly, most appear to believe that a change would inconvenience them personally and make their lives difficult in some way.

Under the law, we are required to balance all the information in the record. Based on the information presented and the overwhelming community sentiment voiced in the record that a change would not "suit the convenience of commerce," I am hereby denying the petition. The Commission is welcome to file another petition if circumstances change in the future.

Issued in Washington, DC on August 29, 2003.

Rosalind Knapp,

Deputy General Counsel.

[FR Doc. 03–22921 Filed 9–8–03; 8:45 am]

BILLING CODE 4910–62–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AI45

Endangered and Threatened Wildlife and Plants; Withdrawal of the Proposed Rule to List the Mountain Plover as Threatened

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule; withdrawal.

SUMMARY: We, the Fish and Wildlife Service (Service), determine that the action of listing the mountain plover (*Charadrius montanus*) as threatened, pursuant to the Endangered Species Act of 1973, as amended (Act), is not warranted, and we consequently withdraw our proposed rule and our proposed special rule. We make this determination because threats to the species as identified in the proposed rule are not as significant as earlier believed, and current available data do not indicate that the threats to the species and its habitat, as analyzed under the five listing factors described in section 4(a)(1) of the Act, are likely to endanger the species in the foreseeable future throughout all or a significant portion of its range.

ADDRESSES: The supporting documentation for this rulemaking is available for public inspection, by appointment, during normal business hours, at the U.S. Fish and Wildlife Service Field Office, 764 Horizon Drive, Building B, Grand Junction, Colorado 81506–3946, telephone; 970–243–2778, facsimile 970–245–6933, or e-mail *al_pfister@fws.gov*. Pertinent information also is available at the Web site *http://www.r6.fws.gov/mtnplover/*.

FOR FURTHER INFORMATION CONTACT: Allan Pfister, Assistant Field Supervisor, Grand Junction, Colorado (see **ADDRESSES**), telephone 970–243–2778; facsimile 970–245–6933.

SUPPLEMENTARY INFORMATION:

Background

The mountain plover (*Charadrius montanus*) is a small bird averaging 21 centimeters (8 inches) in body length and is similar in size and appearance to a killdeer (*Charadrius vociferus*). It is light brown above with a lighter colored breast, but lacks the contrasting dark breastbelt common to most other plovers, including the killdeer. Mountain plovers are insectivores; beetles, grasshoppers, crickets, and ants are its principal food items (Stoner 1941, Baldwin 1971, Rosenberg *et al.* 1991, Knopf 1998).

The mountain plover is associated with shortgrass and shrub-steppe landscapes throughout its breeding and wintering range. Historically, on the breeding range, the plover occurred on nearly denuded prairie dog colonies (Knowles *et al.* 1982, Olson-Edge and Edge 1987) and in areas of major bison concentrations where vegetation was clipped short (Knopf 1997). Currently, the mountain plover also is found on human-made landscapes (*e.g.*, sod farms and cultivated fields) that may mimic their natural habitat associations, and on other sites with little vegetative cover (*e.g.*, alkali flats). As mountain plovers are usually associated with sites that are modified by grazing and digging mammals (kangaroo rat (*Dipodomys* sp.) precincts and California ground squirrel (*Spermophilus beecheyi*) colonies on wintering grounds in California, as well as prairie dog colonies on the breeding grounds), Knopf and Miller (1994) suggested classifying the mountain plover as a species more closely associated with disturbed prairie sites, rather than pristine prairie landscapes.

Mountain plovers nest in the Rocky Mountain and Great Plains States from Montana south to Nuevo Leon, Mexico. Most mountain plovers breed in Montana, Wyoming, and Colorado, with substantially fewer breeding birds occurring in Arizona, Kansas, Nebraska, New Mexico, Oklahoma, Texas, and Utah. Breeding was confirmed in 1999 in Mexico on a Mexican prairie dog (*Cynomys mexicanus*) colony in the State of Nuevo Leon (Desmond and Ramirez 2002). Nesting habitat in Canada is restricted to southeastern Alberta and southwestern Saskatchewan. Nesting has not been documented in Canada since 1990.

Breeding adults, nests, and chicks have been observed on cultivated lands in Colorado, Kansas, Nebraska, Oklahoma, and Wyoming (Shackford and Leslie 1995; Shackford *et al.* 1999; V. Dreitz, Colorado Natural Heritage Program, in litt. 2003; Young and Good 2000). The majority of mountain plovers winter in California, where they are found mostly on cultivated fields. However, they also can be found on grasslands or landscapes resembling grasslands (Edson and Hunting 1999, Knopf and Rupert 1995, Wunder and Knopf 2003). Wintering mountain plovers also are reported in Arizona, Texas, and Mexico, but fewer have been documented at these locations than in California.

Historically, the mountain plover has been found in a variety of habitats during winter, including grasslands and agricultural fields in California (Belding 1879 in Grinnell *et al.* 1918; Tyler 1916; Grinnell *et al.* 1918; Preston 1981 in Moore *et al.* 1990; Werschkull *et al.* 1984 in Moore *et al.* 1990). Irrigated farmlands—burned Bermuda grass fields and grazed alfalfa fields—in the Imperial Valley of California, where desert scrub has been converted to agriculture within the past 100 years, have become the predominant winter habitat for mountain plovers (Wunder and Knopf 2003, AMEC Earth and Environmental 2003). There, plovers move onto fields for short periods following harvest, especially where the fields are turned over, burned, or grazed by sheep. Insect availability, furrow depth, size of dirt clods, and the vegetation of contiguous land parcels are believed to influence the suitability of individual cultivated fields (E. Marquis-Brong, in litt. 1999). Therefore, while cultivated lands are abundant throughout the Central and Imperial Valleys, not all of them are suitable wintering habitat. Because annual climatic changes in the Central Valley can greatly influence vegetative structure within a given year, mountain plover observations at traditionally occupied sites decline in years when abundant rainfall causes vegetation to become too tall (E. Marquis-Brong, Bureau of Land Management (BLM), in litt. 1999).

Historically, breeding mountain plovers were reported as locally rare to abundant, and widely distributed in the Great Plains region from Canada south

to Texas (Coues 1878, Knight 1902, McCafferty 1930, Bailey and Neidrach 1965). Knopf (1996b) estimated the North American mountain plover population to be between 8,000 to 10,000 birds. His estimate is based on a 1994 count of mountain plovers on their winter habitat in California. Applying the same assumptions using the more recent 1998–2002 winter counts ranging from 1,372 to 4,037 individuals would yield an estimate ranging from 5,000 to 11,000 (Hunting *et al.*, 2001; Shuford *et al.* 2000; Wunder and Knopf 2003, S. Myers, pers. comm. 2002). The search efforts among years are not comparable, but represent the best available information. We believe the estimates provided are a reasonable approximation of mountain plover total abundance, given recent survey efforts directed at mountain plovers on their winter habitat, the dedicated efforts to locate them in California's Central and Imperial valleys, and their winter flocking behavior that enhances detection.

As discussed by Knopf (1996b), the continental breeding range of the mountain plover has been reduced from its historical extent, especially in the eastern portion of the range. The mountain plover was formerly common in western and central Kansas (Goss 1891), and reported as numerous between Fort Supply, Oklahoma, and Dodge City, Kansas (McCauley 1877). The species was historically numerous in Colorado (Bailey and Niedrach 1965) and Wyoming (Knight 1902). Lower numbers of mountain plovers formerly occupied western South Dakota (South Dakota Ornithologist's Union 1991) and Nebraska (Knopf 1996b), and there is one known breeding reference from North Dakota (Roosevelt 1885). There was a single report of breeding mountain plovers in northern Mexico in 1901 (Sanford *et al.* 1924), and breeding was confirmed in the State of Nuevo Leon in 1999 (Desmond and Ramirez 2002).

Colorado—The Colorado Bird Atlas Partnership estimated a population of 7,200 (range from 3,652 to 12,168) mountain plovers in Colorado, with perhaps 22 percent of these in Weld County (H. Kingery, in litt. 1997; Kingery 1998). However, this population estimate should be considered a "first approximation" and used with caution (Kingery 1998). A more recent effort to estimate mountain plover abundance is the Rocky Mountain Bird Observatory's estimate of 4,850 individual mountain plovers in eastern Colorado (S. Gillihan, in litt. 2003).

Mountain plovers have been studied intensively in Weld County, Colorado, from the late 1960s to the present. Graul and Webster (1976) considered Weld County in northeastern Colorado the breeding stronghold for the mountain plover, a conclusion widely referenced by subsequent authors (*e.g.*, Knopf and Rupert 1996). However, inventories completed by the Colorado Bird Atlas Partnership from 1987 through 1995 found mountain plovers more widely distributed than previously known in many other eastern Colorado counties (Kingery 1998). Based on their inventories, the Bird Atlas Partnership concluded that 75 percent of Colorado's mountain plovers occurred south of Weld County (H. Kingery, Colorado Bird Atlas Partnership, pers. comm. 1994, in litt. 1998).

Breeding mountain plovers also have been reported from southeastern Colorado by others (Chase and Loeffler 1978; Nelson 1993; R. Estello, Colorado Bird Observatory, in litt. 1994; M. Scott, BLM, in litt. 2000; K. Giesen, Colorado Division of Wildlife (CDOW), in litt. 2001). During a 1996 inventory, Carter *et al.* (1996) concluded that mountain plovers occur at very low densities in 10 eastern Colorado counties, and are most numerous in Kiowa and Park Counties. Mountain plovers also have been seen in Moffat County in northwestern Colorado (Behrends and Atkinson 2000). The Colorado Natural Heritage Program conducted mountain plover surveys in Park County in central Colorado from 1994 through 2002, and currently estimate 2,300 mountain plovers at this location (Pague and Pague 1994, Sherman *et al.* 1998, Hanson 1997, Granau and Wunder 2001, Wunder *et al.* in prep.). South Park appears to currently be the most productive breeding location in Colorado, and probably throughout the entire breeding range. This is clearly the largest breeding population of mountain plovers in Colorado, and perhaps throughout the breeding range.

In Weld County, 60 to 70 percent of the mountain plover habitat occurs on the Pawnee National Grassland, a historically recognized breeding stronghold (F. Knopf, in litt. 1991). Today, nearly all mountain plovers have abandoned the Pawnee National Grassland. During the late 1960s, Graul and Webster (1976) estimated about 69,000 hectares (171,000 acres) of good habitat on the Pawnee National Grassland, with mountain plover densities of at least 10/kilometer^2 (26/mile^2). Based on these estimates, we calculate that at least 7,000 mountain plovers likely occupied the Pawnee in the early 1970s. Knopf (in litt. 1991) estimated about 1,280 individuals in 1991, while presently the Grassland population is about 78 individuals (F. Knopf, pers. comm. 2002).

Graul (1973) hypothesized that mountain plover productivity on the Pawnee is influenced by drought and its corresponding effects on food supply. In 1995, the Pawnee received above-average spring rainfall resulting in lush vegetation growth not suitable as mountain plover nesting habitat. As a result, few birds were found there during the breeding season; conditions continued through 1996 and 1997, with few adult birds and very little reproduction observed through 2002 (Knopf 1996; F. Knopf, in litt. 2003).

Although mountain plovers nest on cultivated fields in southeast Colorado and adjacent States, 1 study (Shuckford *et al.*1999) found that of 46 nests monitored on cultivated fields, 31 nests failed and the fate of the remaining 15 nests was unknown. Of the 31 failed nests, 22 nests (48 percent of total nests) were destroyed by farm machinery. Giesen (in litt. 2000) reported a higher nest success on agricultural fields than on native rangeland. As a result of these conflicting findings, research was initiated in five eastern Colorado counties to better describe nest success and productivity, and the implications of cultivated field nesting to mountain plover population recruitment (T. McCoy, Colorado Natural Heritage Program, in litt. 2001). In 2001 and 2002 within the study area, nests on croplands numbered 45 and 85, respectively, with the increase due to a 40 percent increase in area surveyed (V. Dreitz, in litt. 2002). Nest success on cropland and rangeland was equal in 2001, but was about 10 percent higher on range in 2002 (V. Dreitz, in litt. 2002). Predation was the major cause of nest failure on rangelands in 2001 and 2002. Predation and tillage losses were the cause of nest failure on cropland, but the combined losses on cropland were fewer than predation losses on rangeland in either year.

Based on the data presented above, we estimate over 7,000 breeding mountain plovers in Colorado.

Montana—The largest known number of breeding mountain plovers in Montana is found on a large complex of black-tailed prairie dog colonies in the contiguous Phillips and Blaine Counties (Knowles and Knowles 2001, Dinsmore 2001). In Phillips County, nearly all mountain plovers are found on active prairie dog colonies that also are grazed by cattle (Dinsmore 2001).

Although Phillips and Blaine Counties contain a major breeding concentration for the species (Knopf and

Miller 1994, Knowles and Knowles 2001, Dinsmore 2001), small numbers of mountain plovers also breed on BLM lands in Valley County (Little Beaver Creek), and on private land in Wheatland and Golden Valley Counties near the Little Belt and Big Snowy Mountains (Knowles and Knowles 1998). Surveys through 2003 also report mountain plovers in Big Horn, Broadwater, Carbon, Fergus, Jefferson, Hill, Madison, Musselshell, Petroleum, Rosebud, and Treasure Counties (L. Hanebury, Service, pers. comm. 2003; Knowles and Knowles 1996, 1998; J. Grensten, BLM, pers. comm. 1998).

The most recent information documents that the mountain plover population in southern Phillips County increased from about 100 individuals in 1995, to 175 individuals in 2001 (Dinsmore 2001). In 2003, over 150 nests were found on the study site (Dinsmore, pers. comm. 2003). This increase is likely due to the recovery of black-tailed prairie dogs from a recent sylvatic plague epizootic. Mountain plovers at the Fort Belknap Indian Reservation increased from 0 to 20 from 1993 to 1998 following an increase in black-tailed prairie dogs and the introduction of bison grazing, and there may presently be as many as 100 individuals, although the change may be due to more rigorous inventory (Knowles and Knowles 2001; S. Dinsmore, pers. comm. 2003). Mountain plover densities on black-tailed prairie dog colonies at the Charles M. Russell National Wildlife Refuge declined by more than half from 1980 to 1996. Prairie dog numbers at Charles M. Russell National Wildlife Refuge have increased since 1996, and plover numbers have gone up slightly. Knowles and Knowles (2001) report that between 1992 and 2000 mountain plovers declined at their Central and Southwestern study areas, but increased slightly at their Northeastern study area.

Dinsmore (2001) concluded that mountain plovers in southern Phillips County are entirely dependent on an active black-tailed prairie dog population, and that the mountain plover abundance at his study site will likely parallel the population trends of black-tailed prairie dogs.

Knowles and Knowles (1996) estimated less than 2,000 mountain plovers in Phillips and Blaine Counties, and less than 800 additional individuals at the other occupied locations in the State. Based on his 6 years of research, Dinsmore (pers. comm. 2002) provided a rough estimate of 700 mountain plovers throughout all of Phillips and Blaine Counties, and noted that Knowles and Knowles (1996) estimate of 800 mountain plovers at other areas is reasonable. Therefore, we believe the best information currently available indicates the total population in Montana is approximately 1,500 mountain plovers (Knowles and Knowles 1996, Knowles and Knowles 1998, Dinsmore 2001, Dinsmore, pers. comm. 2002).

Wyoming—The mountain plover is classified as common in Wyoming, with breeding known or suspected in 20 of 28 latitude/longitude blocks (latilong blocks) occurring across the entire State (Wyoming Game and Fish Department 1997). The latilong records reviewed included sightings from 1969 to 1996, with the highest number of individual records occurring in the Saratoga, Wapiti, Powell, Casper, Bill, and Laramie blocks. Because the search effort among the blocks is not equal, the number of records reported for each block is not a good indicator of mountain plover abundance within each block. Further, while latilong records may note evidence of breeding, they do not provide information regarding nesting success. Based on these latilong records, the Wyoming Game and Fish Department reports the mountain plover as common in the State, but acknowledges that information is lacking to make any estimate of total population or determine whether it is increasing, stable, or declining (Oakleaf *et al.* 1996).

Additional inventories have been conducted in Wyoming that confirm the presence of mountain plovers at many of the previously reported locations. For example, surveys conducted in the Powder River Basin (Campbell, Converse, Sheridan, Crook, and Weston Counties) in 2001, in preparation for the Powder River Basin Oil and Gas Project, found 15 mountain plovers (Good *et al.* 2002, Keinath and Ehle 2002). Most of the Powder River Basin is private land, and the surveys were conducted from public roads only. Consequently, these surveys may not be a good representation of mountain plover abundance in the Powder River Basin. From 1992 to 2002, nesting was confirmed on the Thunder Basin National Grassland (Thunder Basin) (within the Powder River Basin) in northeast Wyoming in most years (Bartosiak 1992; M. Edwards, Forest Service, in litt. 1994; T. Byer, in litt. 1997; T. Thompson, Forest Service, in litt. 2003).

Knopf (in litt. 2001b) reported that mountain plovers may be more common in Wyoming than previously believed, particularly in Carbon County. In 1999 and 2000, a total of 159 and 105 mountain plover adults were reported from Sweetwater and Carbon Counties, respectively, with many fewer individuals reported from Albany, Bighorn, Fremont, Lincoln, Natrona, Park, Sublette, and Washakie Counties (P. Deibert, in litt. 2002). Surveys near Lysite in Fremont County found 39 mountain plovers on about 530 ha (1,300 ac) of suitable habitat (L. Hayden-Wing, Hayden-Wing Associates, in litt. 2003). Surveys for mountain plovers in south-central Wyoming in 2002 found a total of 50 adults and 11 nests (Hayden-Wing Consultants 2002). As many as 51 mountain plovers likely occurred on Foote Creek Rim in Carbon County in 1994, but the number declined to 26 in 2002 (Young and Erickson 2003). Most plovers have vacated habitat near the wind turbines and congregated on a prairie dog colony on the northern end of the Rim (Young and Erickson 2003). Nine nests were located on Foote Creek Rim in 2000 (Young and Good 2000).

The total number of mountain plovers observed on Thunder Basin National Grasslands declined from 53 to 37 from 1993 to 2002, while the area surveyed during this time quadrupled (T. Thompson, in litt 2003). Black-tailed prairie dog colonies in the area were affected by a significant plague event in 2001 and 2002. Mountain plovers on Thunder Basin nest almost entirely on black-tailed prairie dog colonies (Keinath and Ehlen 2002).

From 1979 to 2002, nesting was confirmed on and near the Antelope Coal Mine in the southern Powder River Basin, and breeding densities were reported to range from 0.9 to 2.4 birds/km^2 (2.3 to 6.2/mi^2) (Oelklaus 1989, Thunderbird Wildlife Consulting, Inc. 2003). From 1982 to 1991, a total of 26 broods were reported on mine permit areas, while only 6 broods have been reported on the same permit areas from 1992 to 2002 (Thunderbird Wildlife Consulting, Inc. 2003). Parrish (1988) inventoried mountain plovers over an extensive area of the southern Powder River Basin, and reported an overall density of about 0.1 mountain plover/km^2 (0.3/mi^2). Mountain plovers throughout the southern Powder River Basin are generally thought to be widely scattered at low densities, with a few areas of local concentrations (Oelklaus 1989). Inventories from the Laramie Plains and Cheyenne Plains in the late 1950s report densities ranging from 0.3 to 23.8 mountain plovers/km^2 (0.9 to 61.9/mi^2) (Laun 1957, Finzel 1964). Therefore, densities reported from the southern Powder River Basin in the 1980s are less than those reported from the Laramie and Cheyenne Plains in the 1950s, but it is unknown whether the difference is due to a decline in

mountain plover abundance, inherent differences in habitat quality, or both.

Knopf (in litt. 1991, 2001b) found mountain plovers on the Laramie Plains, in the vicinity of Shirley Basin, on the Chapman Bench (Park County) north of Cody, and on Mexican Flats (Carbon County) northwest of Baggs. Specific surveys of Chapman Bench between 1988 and 1999 found between 7 to 14 adult mountain plovers and some juveniles (P. Deibert, pers. comm. 1999a).

Mountain plovers also breed in shrub-steppe habitat in southwest Wyoming (Oakleaf *et al.* 1982). The BLM estimates 10 to 15 breeding pairs in the Jack Morrow Hills north of Rock Springs in Sweetwater County (L. Keith, BLM, pers. comm. 1999). Mountain plovers reported from Morton Pass in Albany County have declined from about 30 in 1997 to about 5 in 2000 (Young and Erickson 2003).

Based on the best information available from Wyoming, mountain plovers may number from 2,000 to 5,000 individuals (P. Deibert, pers. comm. 2003; F. Knopf, in litt. 2003).

Nebraska—A nesting mountain plover was found in Kimball County in western Nebraska in 1990 (F. Knopf, in litt. 1990), and two mountain plover nests were found in a fallow field in the same vicinity in 1997 (W. Jobman, Service, in litt. 1997). Seventeen mountain plovers were counted on 10 cultivated fields in western Nebraska in 1992 and 1995 (Shackford and Leslie 1995), and 1 nest was found in summer fallow in Kimball County in 1999 (W. Jobman, in litt. 1999).

No mountain plovers were found in 2001, following inventories of 92 sites, including black-tailed prairie dogs colonies, in 8 western Nebraska counties (K. Nelson, Nebraska Game and Parks Commission, in litt. 2003). The lack of mountain plovers may have been due to the survey occurring late in the breeding season. In 2002, a survey occurred in Kimball County exclusively, which is dominated by dry land wheat farming with very little shortgrass prairie. A total of 118 mountain plovers were found at the 66 locations surveyed, and all but 1 individual were in wheat fields. A total of 27 juvenile mountain plovers also were seen, with most of these in tilled, fallow ground. We have no information to assess trends in Nebraska, but the Nebraska Game and Parks Commission is concerned about the bird's viability in the State (K. Nelson, in litt. 2003).

New Mexico—Sager (1996) noted that the mountain plover was reported as "fairly common" in New Mexico in 1928, and recognized that the 152 mountain plovers he surveyed in 1995 would not likely be construed as "fairly common" today. However, he cautioned that mountain plovers may be more numerous than he reports because of their difficulty in detection and clumped distribution. Sager (1996) also reported that New Mexico is likely on the fringe of acceptable mountain plover habitat. We are not aware of a total population estimate or population trend for New Mexico.

Oklahoma—Historic records of mountain plovers east of Cimarron County do not mention breeding behavior, so it is unclear whether the mountain plovers reported were nesting or migrating to other locations. Hence, both the historic and current distribution may be confined to Cimarron County in the panhandle of Oklahoma. In Cimarron County during the nesting seasons of 1986–1990, Shackford (1991) observed 15 mountain plovers in native grassland and 10 in cultivated fields. Ten of the 15 birds observed in native grassland were on prairie dog colonies. The few plovers found, combined with the discovery of one mountain plover nest on a maize field, stimulated searches of cultivated fields in Oklahoma in 1992, 1993, and 1994. Using approximately the same search method and effort each year, 408, 428, and 108 individual mountain plovers were found on cultivated fields in each of these years, respectively, and up to 13 nests were found on the cultivated fields from 1986 through 1995 (Shackford *et al.* 1999, Shackford and Leslie 1995). The plovers reported include both plovers seen during the breeding season as well as mountain plovers in premigratory flocks. The decline in 1994 is attributed to a decline in mountain plovers seen during the nonbreeding season, not necessarily a decline in breeding birds. No other surveys have been completed in Oklahoma, and estimates of the total Statewide population have not been made (S. Harmon, Service, pers. comm. 2002).

Kansas—Counts of breeding mountain plovers on cultivated lands in western Kansas from 1992 through 1995 ranged from 52 (6 counties searched) to 114 (4 counties searched) (Shackford and Leslie 1995). Surveys of cultivated fields and rangelands within the boundary of the Cimarron National Grassland (Cimarron) in Kansas also have been conducted. Counts on the Cimarron in 1994, 1996, and 1997 ranged from 1 to 13, with most of the sightings on plowed fields (J. Chynoweth, Forest Service, in litt. 1997).

Other Breeding Areas—In Utah, the only site known to have breeding mountain plovers is in Duchesne County, south of Myton, in the Uinta Basin. Counts of breeding mountain plovers in this area from 1992 through 2001 ranged from 6 to 29. From 1992 to 2001, broods were found in all years except 1992, 1999, and 2001; six adults and no broods were found in 2001; and no mountain plovers were seen in 2002 (T. Dabbs, BLM, in litt. 1997; F. Knopf, in litt. 1999; B. Stroh, Forest Service, pers. comm. 2002).

Three pairs of nesting mountain plovers were reported near Fort Davis, Texas, in 1992 (K. Brian, Davis Mountain State Park, pers. comm. 1992). More recent breeding in Texas has not been reported due to lack of access to private land (P. Horner, Texas Parks and Wildlife Department, in litt. 1997).

From 1914 to the present, mountain plovers in Arizona have been reported during the breeding season from Apache, LaPaz, Maricopa, and Navajo Counties. A pair was found on Navajo Nation land near Winslow in June 1995, and an adult incubating three eggs was found near Springerville, Apache County, Arizona, in May 1996 (T. Cordery, Service, pers. comm. 1998; D. Shroufe, Arizona Game and Fish Department, in litt. 1999). In May 2002 breeding behavior was observed in three birds west of Springerville, in Apache County (Ted Cordery, BLM, pers. comm. 2003).

The most recent nesting record in Canada was one nest in southeastern Alberta in 1989 (S. Jewell, Service, in litt. 2000). No mountain plovers were found during searches conducted in Alberta and Saskatchewan in 2001 (C. Wershler, Sweetgrass Consultants, pers. comm. 2002).

Mountain plover breeding behavior was observed in 1998 in Nuevo Leon, Mexico, and one nest was found on a Mexican prairie dog colony in 1999 (Knopf and Rupert 1999a, Desmond and Ramirez 2002).

We believe that Montana, Wyoming, and Colorado represent the historic and current core mountain plover breeding range, although additional peripheral locations in Oklahoma and New Mexico may play an important role in the species' conservation.

Historically, mountain plovers have been observed during the winter in California, Arizona, Texas, Nevada, and on the California coastal islands of San Clemente Island, Santa Rosa Island, and the Farallon Islands (Strecker 1912; Swarth 1914; Alcorn 1946; Jurek 1973; Garrett and Dunn 1981; Jorgensen and Ferguson 1984; B. Deuel, American Birds Editor, in litt. 1992; D. Shroufe, in litt. 1999). In Mexico, wintering mountain plovers have been sighted in

Baja California, as well as north-central and north-eastern Mexico, in Sonora, Chihuahua, Coahuila, Durango, Nuevo Leon, and San Luis Potosi (Russell and Lamm 1978; A. Garza de Leon, The Bird Galley, in litt. 1990; L. Stenzel, Point Reyes Bird Observatory, in litt. 1992; Gomez de Silva *et al.*1996; Knopf and Rupert 1999a; Dieni *et al.* 2003, J. Taylor, pers. comm. 2003).

All information we have reviewed indicates that California is the primary wintering ground for mountain plovers, supporting up to 95 percent of the United States' population of mountain plovers (Morey, in litt. 2003). However, recent isotope studies indicate that there may be a disproportionate number of males in the wintering flocks. Seventy-five percent of the feathers sampled from the Imperial Valley in the winter of 2002 were from males, and sixty-two percent were from males in the winter of 2003. This could indicate a slightly higher female mortality, or perhaps differential migration patterns between male and female plovers (*e.g.* females wintering farther south into Mexico). More stable isotope work in the next two years may help answer this question (Knopf, pers. comm. 2003).

Mountain plovers are most frequently reported and found in the greatest numbers in two general locations in California—(1) The western Central Valley from Solano and Yolo Counties to Kern County (primarily the western San Joaquin Valley), and (2) the Imperial Valley in Imperial County. Throughout these areas, sightings occur on agricultural fields and noncultivated sites. Research conducted in the San Joaquin Valley concluded that the noncultivated sites are the preferred habitat there, while cultivated sites are the exclusive habitat in the Imperial Valley (Knopf and Rupert 1995, Wunder and Knopf 2003).

From 1961 to 1968 anywhere from 25 to 10,000 mountain plovers were counted in winter on Kern National Wildlife Refuge in the San Joaquin Valley (J. Engler, Service, in litt. 1992). In January 1994, researchers counted 3,346 mountain plovers during a simultaneous 1-day survey of 25 sites throughout California (B. Barnes, National Audubon Society, in litt. 1994). A similar coordinated survey at 31 sites in the Central and Imperial valleys in January 1998 estimated 2,663 mountain plovers (Hunting *et al.* 2001). In December 1999, two skilled observers were unable to find any mountain plovers in the entire San Joaquin Valley after 2 days searching traditionally occupied sites (Dinsmore, in litt. 2000b), which may have been due to degraded habitat conditions following heavy rains (F. Knopf, pers. comm. 2000). On February 2, 2002, 536 mountain plovers were counted in the entire San Joaquin Valley, which may indicate some recovery of habitat conditions since 1999 (S. Fitton, in litt. 2002). Within the San Joaquin Valley, premigratory flocks of up to 1,100 birds have been seen in Tulare County (Knopf and Rupert 1995). The Carrizo Plain (separated from the San Joaquin Valley by the Tremblor Range) also is recognized as a predictable wintering site, with wintering birds reliably reported from the west side from 1971 to 1998 (S. Fitton, in litt. 1992, *www.birdsource.org* 2000). Solano and Yolo Counties in the Central Valley near Sacramento also provide wintering habitat for mountain plovers, with about 200 being seen in these counties in recent years (K. Hunting, California Department of Fish and Game, in litt. 1998; C. Conard, Sacramento Audubon, in litt. 2003).

Wunder and Knopf (2003) suggested that many mountain plovers have apparently shifted from the Central Valley as a result of habitat loss to southern California and the Imperial Valley. Recent search efforts and records for the Central Valley classify the mountain plover as rare and local, exceedingly rare, or accidental, within individual counties in the San Joaquin Valley (Edson and Hunting 1999; K. Hunting, California Fish and Game, pers. comm. 2003).

In the Imperial Valley, coordinated surveys occurred in February, November, and December 1999. The maximum effort of 26 observers in 15 parties over 2 days located 3,758 mountain plovers in December (Shuford *et al.* 2000). From January 9–19, 2001, 4,037 mountain plovers were counted by 2 observers in the Imperial Valley (Wunder and Knopf 2003), and 3,421 were counted there from January 29 to February 6, 2002, by 4 observers (S. Myers, AMEC Earth and Environmental, pers. comm., 2002). In the 2002 Christmas Bird Count (CBC) for that area only 12 were counted; surveys were abandoned in January 2003 when the birds could not be found following heavy rains (Knopf, pers. comm, 2003).

The only consistently collected information available to judge a population trend are the CBC data. The CBC data from 1955–1999 from all count circles in California reporting mountain plovers indicated a decline in mountain plovers of about 1 percent annually (J. Sauer, U.S. Geological Survey—Biological Resource Division (USGS–BRD), in litt. 2000; Wunder and Knopf 2003). This equates to a 35 percent decline in the population from 1955 to 1999 (J. Sauer, pers. comm. 2003). The CBC numbers fluctuate greatly from year to year based on observer variability, survey intensity, and the spatial and temporal distribution of mountain plovers (AMEC Earth and Environmental 2003).

Arizona, Texas, Nevada, and Mexico—Wintering mountain plovers also are reported from other areas, but in much lower numbers than are reported from California. From 1914 to the present, up to 340 mountain plovers have been reported during the winter from Cochise, Maricopa, Pima, Pinal, and Yuma Counties in Arizona (D. Shroufe, in litt. 1999). In Texas, up to146 mountain plovers were reported from Guadalupe, San Patricio, and Williamson Counties (J. Maresh, no affiliation, pers. comm. 1999; G. Lasley, American Birds, pers. comm. 1992). Mountain plovers also have been sighted throughout the year in Aransas, Concho, Kleberg, Nueces, Schleicher, Tom Green, and Val Verde Counties in Texas (P. Horner, in litt. 1997), and at Laguna Atascosa National Wildlife Refuge on the Texas coast (L. Laack, Service, in litt. 1992). About 400 wintering mountain plovers were reported in west Texas in 2003 (T. Fennell, unaffiliated, in litt. 2003). In Nevada, several mountain plovers were collected in the Lahontan Valley in 1940, and a few have been reported in the Fallon CBC circle in the 1990s (Alcorn 1946, *www.birdsource.org* 2000). In January 1992, researchers counted 148 mountain plovers at the north end of Laguna Figueroa, Baja California, Mexico (L. Stenzel, in litt. 1992). In 1994, mountain plovers were seen on a Mexican prairie dog colony in San Luis Potosi, Mexico (Gomez de Silva *et al.* 1996). In January 2000, 110 mountain plovers were found on black-tailed prairie dog colonies in Chihuahua, Mexico (S. Gillihan, in litt. 2003). Winter surveys for mountain plovers in Mexico completed during the past several years have failed to find any populations that approach the numbers found in California (R. Estelle, pers. comm. 1998).

In summary, with the heightened awareness to wintering mountain plovers during the past decade (including black-footed ferret recovery planning on prairie dog colonies in Mexico), and the mountain plover's winter flocking behavior, we believe it is unlikely that significant numbers of mountain plovers are not being detected. The widespread distribution of the species makes it difficult to obtain comprehensive population counts.

Previous Federal Action

On December 30, 1982, we designated the mountain plover as a category 2 candidate species, meaning that more information was necessary to determine whether the species status was declining, stable, or improving (47 FR 58458). In 1990, we prepared a status report on the mountain plover indicating that Federal listing may be warranted (Leachman and Osmundson 1990). We elevated the mountain plover to a category 1 candidate species in the November 15, 1994, Animal Candidate Notice of Review (59 FR 58982). At that time, category 1 candidate species were defined as those species for which we had sufficient information on biological vulnerability and threats to support issuance of a proposed rule to list. In 1996, we redefined candidate species and eliminated category 2 and 3 candidate designations (61 FR 64481). Candidate species were defined using the old category 1 definition. The mountain plover retained its candidate species designation as reported in the September 19, 1997, Review of Plant and Animal Taxa (62 FR 49398). On July 7, 1997, we received a petition to list the mountain plover as threatened from the Biodiversity Legal Foundation. The Service responded by notifying the petitioner that petitions for candidate species are considered second petitions, because candidate species are species for which we have already decided that listing may be warranted. Therefore, no 90-day finding was required for the Biodiversity Legal Foundation's petition. We published a proposed rule to list the mountain plover as threatened on February 16, 1999 (64 FR 7587), and requested that comments be provided by April 19, 1999. We announced public hearings for the proposal on April 19, 1999, and concurrently extended the comment period to June 21, 1999 (64 FR 19108).

Higher priority listing actions precluded listing work on the mountain plover during Fiscal Years 2000 and 2001. On October 16, 2001, Earthjustice (representing the Biodiversity Legal Foundation, Biodiversity Associates, and Center for Native Ecosystems) submitted a 60-day Notice of Intent to sue to the Secretary of the Department of the Interior and the Service Regional Director for failure to meet listing deadlines for the mountain plover, as required by section 4(b)(6)(A) of the Act. The Service responded to Earthjustice on December 21, 2001, with a commitment to submit an amended listing proposal for the mountain plover by September 30, 2002. On October 7, 2002, we agreed to prepare a document to reopen the public comment period for this listing decision by November 30, 2002; hence, the December 5, 2002, notice to reopen the comment period (67 FR 72396). On February 21, 2003, we extended the comment period to March 21, 2003 (68 FR 8487).

Summary of Comments Received on the Proposed Rules

In both the February 16, 1999, proposed rule (64 FR 7587) and the December 5, 2002, proposed rule (67 FR 72396), all interested parties were requested to submit factual reports or information that might contribute to the development of a final determination. Federal and State agencies, county governments, scientific organizations, and other interested parties were contacted and requested to comment. Several newspaper articles appeared in Montana, Wyoming, and Colorado following our distribution of background materials to print media. We also solicited and received the expert opinions of three independent specialists regarding pertinent scientific or commercial data and issues relating to the biological and ecological information for the mountain plover. We received a total of 194 written comments on the 1999 proposed rule.

We distributed a press release to announce the 2002 proposed rule. We again solicited peer review of independent specialists regarding the listing proposal and special rule. We received a total of 65 written, e-mail, or telephone comments on the 2002 proposed rule.

In response to the 1999 proposed rule, public hearings were requested in Nebraska by the Forest Service; in Montana by the Phillips County Prairie Ecosystem Action Council, the Phillips County Board of County Commissioners, and Erin Crowder; and in Wyoming by the Park County Board of County Commissioners, Wheatland Irrigation District, Wyoming Farm Bureau Federation, Laramie County Conservation District, Platte County Resource District, Antelope Grange, Mountain Valley Livestock, Inc., Ultra Resources, and John and Phyllis Thalken.

Public hearings were held at the following locations and dates:

- Billings, Montana, May 26, 1999.
- Malta, Montana, May 25, 1999.
- Greeley, Colorado, May 25, 1999.
- Lamar, Colorado, May 26, 1999.
- Casper, Wyoming, June 2, 1999.

We received written and verbal comments from State and Federal elected officials, State and Federal agencies, nongovernmental organizations, and private citizens. We received a total of 52 comments at the 5 public hearings. Of the total 246 written and verbal comments received on the 1999 proposed rule, 136 opposed, 41 supported, 53 expressed concern about the proposal, and 16 sought a list of the references or requested public hearings.

Following release of the December 5, 2002, proposed rule, we received requests for public meetings from Congressman Bob Filner representing the 50th District of California, the Oklahoma Farm Bureau, the Kansas Farm Bureau, and the Nebraska Farm Bureau. Following discussions with each of these individuals, we held public meetings at the following locations:

- El Centro, California, January 23, 2003.
- Elkhart, Kansas, February 5, 2003.

The Service distributed news releases announcing the meetings in El Centro, California, and Elkhart, Kansas, on January 16, 2003, and January 29, 2003, respectively. Notification of the Elkhart meeting also appeared on the local access television station within the Elkhart, Kansas, viewing area.

We received a total of 11 verbal comments from the 2 public meetings held in 2003. Of the total of 75 verbal and written comments received on the December 5, 2002, proposed rule, 25 comments opposed the listing proposal, 15 supported the proposal, 24 expressed concern, and 11 requested an extension of time or public hearing.

All written and verbal comments presented at the public hearings and received during the public comment period, including peer review comments, were considered in preparing this final determination. Most of the comments opposing the action criticized the quality of the science used to support the proposal, stated that we did not thoroughly address each listing factor, noted the potential for the Federal listing to restrict activities on both public and private lands, and suggested that listing should be delayed to allow other alternatives to work to conserve the species (*e.g.*, conservation agreements). Some comments also challenged the value of listing the species, and argued that listing the mountain plover will conflict with other species' conservation efforts and the implementation of other Federal programs. Other respondents supported listing because of the decline in the distribution and numbers of mountain plovers and the potential future natural or man-caused actions to result in further decline of the species, and also asked that critical habitat be designated. Each of the five peer reviewers (three in

1999, two in 2002) indicated that the proposed rule contained sufficient scientific information to support proposed listing. We have consolidated similar comments, organized them by central themes, and provide our responses below.

Listing Decision Statute Issues

Comment 1: The Service has violated statutory intent by not complying with 'the best information available' standard, has inappropriately 'piggybacked' a new proposal on the 'stale' 1999 proposal, and has shown deferential treatment to environmental organizations, evidenced by the settlement agreement with Earthjustice.

Response 1: This final determination presents a significant amount of new information that has become available since the 1999 proposed rule, including new information that caused us to discount Breeding Bird Survey (BBS) trends as statistically insignificant, and to reconsider what we earlier proposed as threats on agricultural lands on the breeding grounds. The settlement agreement does not reflect preferential treatment, but rather an appropriate means to resolve litigation where the final determination was overdue.

Comment 2: E-mails, personal communications, and letters do not meet the 'best information available' standard as described in Service policy (59 FR 34271).

Response 2: Our policy, as cited above, requires that we evaluate all scientific and other information available, which may include both published and unpublished materials, in the development of a listing action. We review the information, regardless of origin, and determine whether it is reliable, credible, and represents the best information available regarding the species under review. We must document our evaluation of any information we use in reaching our decision, whether it supports or refutes that decision.

Biased Decision Issues

Comment 3: Several commenters stated that our analysis of the mountain plover population trend data, grassland conversion statistics, oil and gas development projections, prairie dog population data, and other issues, are specific examples of the Service's use of 'selective science.' The commenter believe the Service has 'selected science' to defend a listing position in the proposed rules, while ignoring information that defends the withdrawal of the listing proposal.

Response 3: During the two public comment periods in 2002 and 2003, we received numerous comments from affected States and other interested parties. We have based our decision on our review of all the pertinent information we received. This determination includes new and additional information, including research results, that was not available for the proposed rule.

Comment 4: The multiple-clutch breeding system of the mountain plover influences the annual fluctuation in the population, and prepares the mountain plover for a changing environment.

Response 4: Multiple-clutching is believed to be a strategy that allows the mountain plover to respond to abundant prey (Graul 1973) which can, therefore, result in annual fluctuations in mountain plover numbers at individual breeding locations. We agree that annual fluctuations in mountain plovers may be in response to prey, but the affect of multi-clutching on population trends is unknown.

Comment 5: The Service understated the effects of predation on mountain plovers, did not consider the invasion by red fox *(Vulpes vulpes)*, and did not describe what is going to be done to reduce predation effects on mountain plovers. Predation has a much greater effect on the mountain plover population than losses on croplands.

Response 5: We have revised the section on predation to include red fox as a potential predator, and assess the implications of predation to mountain plover conservation. However, red fox are not typically associated with habitats occupied by mountain plovers.

Comment 6: The Service has not identified or quantified actual threats and, therefore, has not shown that mountain plovers have declined or are at risk.

Response 6: The commenter is correct that we have not quantified the threats to the mountain plover or the number of individuals lost as a result of each threat. We have based our determination to withdraw on the wide distribution of the mountain plover and the relative security of the species from present or foreseeable threats across its current range.

Habitat Characteristics Issues

Comment 7: Mountain plovers are not at risk when nesting on croplands. Current agricultural practices are beneficial to the mountain plover.

Response 7: In the 1999 proposed rule, we stated that agricultural practices on cultivated lands may contribute to the decline of mountain plovers. Research has confirmed that some nests are lost to some cultivation practices (Dreitz and Knopf, in litt. 2003). As reported in this final determination, preliminary research findings from Colorado suggest that nesting success on cultivated lands does not differ significantly from nesting success on grassland nesting sites (Dreitz and Knopf, in litt. 2003). We agree that nesting success on some croplands is similar to that found on grasslands, but the relative influence of each landscape on mountain plover population recruitment has not been determined.

Comment 8: Cultivated lands provide habitat where none existed before.

Response 8: Cultivated lands have replaced grasslands within the historic breeding and wintering range of the mountain plover. Hatching success on cultivated lands and grasslands appears to be similar in the southern portion of the breeding range.

Comment 9: Mountain plovers are an adaptable species, and have effectively shifted from grasslands to cultivated lands in many breeding and wintering areas. Cultivated lands, not grasslands, are now the most important habitat for mountain plovers at both breeding and wintering locales.

Response 9: See response to Comments 7, 8, and 21.

Comment 10: The role of insect availability has not been thoroughly evaluated, particularly given that livestock dung is less abundant than bison dung, and the prevalence of dung influences insect abundance. Also, systemic insecticides are used on cattle, which reduces insect availability.

Response 10: We agree that the role of insect availability has not been thoroughly evaluated. However, no information has been provided to show that insect abundance or diversity have been significantly modified by the replacement of bison with domesticated livestock, or that the use of systemic pesticides influences insect abundance or composition.

Comment 11: Mountain plover habitat is provided by several factors such as low moisture, drought, herbivory, fire, and grazing. In Montana, unique soil types are the key element in defining suitable mountain plover habitat. Prairie dog colonies are not the only suitable habitat.

Response 11: We agree that numerous factors can provide suitable mountain plover habitat. We agree that soils are important to providing the vegetation and bare ground required by nesting mountain plovers. For example, Beauvais and Smith (2003) stated that poor soil, low precipitation, and wind scour help provide the proportion of bare ground needed by nesting mountain plovers in the Jack Morrow

Hills area of southwest Wyoming. However, the literature also is replete with examples documenting the association of mountain plovers with prairie dogs (*e.g.*, Dinsmore 2001, Knowles 1999, Kotliar *et al.* 1999).

Comment 12: Habitat fragmentation and isolation increase the mountain plovers vulnerability to random natural and human-caused events.

Response 12: No scientific information specifically discusses the influence of fragmentation or isolation on the persistence of mountain plovers at currently occupied breeding and wintering sites.

Comment 13: The anticipated growth at South Park will impact mountain plovers and their habitat.

Response 13: Complete development of South Park into private homes would probably adversely impact mountain plover. However, the anticipated growth at South Park will be low-density residential development, and full build-out is not anticipated in the foreseeable future since the current human population in Park County is small (16,000 people). It also is likely that conservation efforts ongoing in South Park will preserve important mountain plover habitat. Consequently, we believe potential threats to mountain plovers that might result with development will be offset by conservation measures implemented at the State and county levels.

Mountain Plover Distribution Issues

Comment 14: All suitable habitat on private and public lands throughout the breeding range of the mountain plover has not been thoroughly inventoried. Additional searching in the breeding range has consistently found more mountain plovers.

Response 14: We have revised the population estimates for individual States based on new information from commenters and literature. We agree that surveys on all private lands in the breeding range could reveal additional birds. For that reason, in addition to the birds' flocking tendencies in winter, and 44 years of CBC data, we base our total population estimate on counts from wintering habitat in California, not on a summation of counts from breeding locales. Mountain plovers occurring at undetected breeding locations would be expected on the winter habitat from October through mid-March. This estimate assumes that most of the birds winter in California.

Comment 15: All wintering areas in the United States or Mexico have not been located. Further searching will yield more wintering sites and more mountain plovers.

Response 15: All historic and current information we have reviewed support California as the key wintering location for mountain plovers, with many fewer numbers occurring elsewhere. Searches for mountain plovers on wintering grounds in Mexico have been ongoing for the past several years. We agree that additional searching is likely to find other sites used by mountain plovers, but we believe that finding large numbers of wintering mountain plovers will be highly unlikely, given the level of effort dedicated in the United States and Mexico over the past decade to locating mountain plovers. We have revised this section of our determination to cite new information provided during the comment period.

Mountain Plover Total Population and Trends Issues

Comment 16: The mountain plover is declining throughout its range, and its current abundance is low compared to other bird species.

Response 16: The CBC data from wintering grounds in California identify a slow decline in mountain plover abundance the last 44 years. However, the numbers vary widely from year to year, and their accuracy cannot be determined with any certainty.

Comment 17: The population estimate in the 1999 and 2002 proposed rules is just "a guess" and is not reliable.

Response 17: The majority of wildlife population numbers are estimates, because it is rarely possible to count all the individuals of a species to develop a precise population number. We have relied on practices accepted in conservation science, using the best information available to us, to provide the public with a total population estimate. The total population estimate of 8,000 to 10,000 individuals was made by Dr. Fritz Knopf, a Senior Scientist with USGS–BRD in Fort Collins, Colorado. Dr. Knopf has been studying mountain plovers since 1986, and has published widely on the mountain plover throughout its range. We believe he is well qualified to make a population estimate. Dr. Stephen Dinsmore, who recently completed his doctoral research on mountain plovers in Montana, agrees with the population estimate. The only other estimates available are those we have developed for individual States in the breeding range based on other sources of information.

The estimate is based on a 1-day coordinated survey on the winter habitat in 1994, which was conducted by 95 observers covering 25 sites in 9 counties. In addition, both planned and incidental searches to locate and report mountain plovers in California have been ongoing for decades.

Many respondents challenged the reliability of the population estimate because of its reliance on a 1-day winter survey, and its failure to include the numerous mountain plovers that they believe occur on private lands throughout the nesting range. Counting animals on their winter habitat is an accepted technique for estimating the abundance of many species, with migratory waterfowl and big game being two examples. The survey coordinated by the National Audubon Society in California was a legitimate approach to monitor a wintering species, and represented a new effort to count mountain plovers.

The commenters are correct in stating that the population estimate alone cannot be used as a basis for listing. We have provided the abundance and distribution information to give the public a better sense of the status of the mountain plover.

Comment 18: How can the Pawnee National Grassland and Charles M. Russell National Wildlife Refuge be important when so few mountain plovers occupy these sites?

Response 18: We emphasized the significance of the Pawnee National Grassland because of its historic importance to the mountain plover, its Federal ownership and management, and its potential contribution to mountain plover conservation. We identified the Charles M. Russell National Wildlife Refuge because of its location in Phillips County, Montana, an area with suitable and potentially suitable habitat and currently one of the largest breeding mountain plover populations. We believe each of these properties, with proper management, can make significant contributions to mountain plover conservation on public lands.

Comment 19: The Service did not acknowledge that Dr. Walter Graul's 1976 population estimate for the Pawnee National Grassland is now considered inaccurate.

Response 19: We discussed this issue with Dr. Graul in preparing this final determination. The commenter correctly notes that subsequent to Dr. Graul's 1976 estimate of 20,000 mountain plovers on the Pawnee National Grassland, he stated that it may have been off by an order of magnitude. Dr. Graul provided the 1976 estimate to satisfy a request of the American Ornithological Union to establish a relative magnitude of abundance for the mountain plover. However, Dr. Graul believes that mountain plovers were much more numerous during his

research than have been noted in recent years by himself or Dr. Fritz Knopf. Consequently, while our use of historic numbers to show a declining trend at the Pawnee National Grassland can be challenged, Dr. Graul and Dr. Knopf both agree that a significant decline has been evident since the late 1960s. We have revised the appropriate section of the final determination.

Comment 20: The present and future change in winter habitat in California is a significant range-wide threat to mountain plovers.

Response 20: As described in this final decision, we do not believe the anticipated conversions of cultivated and noncultivated habitats in California will have an immediate significant impact on wintering mountain plovers throughout California. We discussed this issue with Dr. Fritz Knopf for preparation of this final determination (F. Knopf, pers. comm. 2003). Dr. Knopf agreed that winter habitat does not appear to be limited, but acknowledged that habitat quality may not be similar among all cultivated and noncultivated lands. Mountain plovers are opportunistic foragers while they occupy winter habitat, and have the ability to seek suitable habitats available over a wide area. Knopf and Rupert (1995) determined that mountain plovers prefer noncultivated sites to cultivated lands, and others have observed that mountain plovers appear to select unique characteristics (E. Marquis-Brong, BLM, in litt. 1999). However, given that cultivated habitat is pervasive throughout the Imperial and Central Valleys, we do not believe the current rate of conversion represents an imminent threat to mountain plovers.

Comment 21: Mountain plover numbers are very dynamic, and their current abundance merely reflects a normal fluctuation.

Response 21: We agree that mountain plover abundance at local breeding areas can fluctuate annually based on local environmental conditions.

Comment 22: Population fluctuations due to climatic events should be considered temporary and not a justification for listing.

Response 22: The Service must consider all factors, natural or human-caused, that may contribute to a species' survival and recovery. We agree that climatic events may affect localized populations, either positively or negatively, on a temporary basis. Presently, it is believed that climatic events on the Pawnee National Grassland have negatively influenced mountain plover abundance there.

Comment 23: The BBS data are not reliable. The 2002 proposed rule stated that new BBS information was available, but new BBS information could not be found.

Response 23: The 1999 proposed rule cited literature published by Dr. Fritz Knopf, which used published BBS trend analyses reporting the mountain plover declining throughout its range, and declining more rapidly than other grassland endemic birds. His conclusions were based on the BBS data for the periods from 1966 to 1993. The 1999 proposed rule also cited an analysis by Dr. John Sauer with the USGS–BRD, showing that for the period 1966 to1996, the BBS trend analysis yielded a statistically significant estimated annual rate of decline of 2.7 percent. Because of the numerous comments we received on the 1999 proposed rule regarding the BBS data, we requested a review of the data by the USGS–BRD, which is the Federal agency responsible for administering the BBS program.

According to Sauer (in litt. 1999), the survey-wide trend analysis lacked statistical confidence due to the wide variability in mountain plovers reported from individual routes in each of the years from 1967 to 1998. We concluded that, although the BBS is the only long-term trend information available in the breeding range, it is not a statistically reliable indicator of mountain plover population trends.

Comment 24: A commenter criticized the 30-year-old National Wildlife Refuge records because of a lack of information, the variability in observer experience, and inconsistency in survey routes followed.

Response 24: In 1992, we received a report from the Kern National Wildlife Refuge that consolidated mountain plover observations and discussed their historic and current status on the Kern and Pixley National Wildlife Refuges in California (J. Engler, Service, in litt. 1992). The report included observation records from 1961 to 1991, and lacked data for many years during that period. The records of mountain plover sightings from the refuges were collected during inventories for waterfowl, which included observations of migrating shorebirds and other species. It is common for annual waterfowl surveys to be conducted by different people, given staff turnover and personnel availability. However, refuge biologists are thoroughly trained in bird identification, and, more importantly, because the mountain plover was known as a regular resident of these refuges, we are confident that the biologists completing the survey were able to correctly identify mountain plovers when encountered. We agree that the refuge data provide an approximate estimate rather than a precise number of mountain plovers wintering on the refuge.

Comment 25: The CBC data are unreliable because count circles are not always the same over time, errors have been published by American Birds, the number of individuals reported could be wrong, and the wrong species can be reported.

Response 25: We agree that CBC numbers fluctuate greatly from year to year based on observer variability, survey, intensity, and the spatial and temporal distribution of mountain plovers. We contacted Mr. Geoff LeBaron of the National Audubon Society, who is in charge of the CBC surveys and is responsible for analyzing the data; he is familiar with the suggested limitations (G. LeBaron, National Audubon Society, pers. comm. 1999). Mr. LeBaron agreed that some count circle centers may change over time, due to encroachment of development within the count circle and, therefore, may not be completely "static" over the entire period of record. However, he did not believe this seriously compromises the quality of the data for the geographic area over the long term. He also agreed that the other limitations cited by the commenter can occur when field data are being evaluated for species that occupy similar habitats, or are similar taxonomically. However, because the mountain plover is unique in these respects and, therefore, unlikely to be confused with any other species by experienced observers, he does not believe any of these limitations apply to the mountain plover. The Anadarko Petroleum Corporation retained Dr. Mark Boyce to analyze the CBC data (M. Boyce, University of Alberta, in litt. 2003). Dr. Boyce's analysis did not refute the conclusions of Dr. John Sauer with USGS–BRD (in litt. 2000). We have revised the section in this final determination to report additional information regarding the CBC.

Comment 26: Population trends of the mountain plover at the Pawnee National Grassland are indicative of the total population trend.

Response 26: There is no scientific evidence to support the claim that the precipitous decline documented at the Pawnee National Grassland has influenced the total mountain plover population.

Comment 27: The mountain plover's short lifespan makes the species vulnerable to decline.

Response 27: There is no scientific evidence to support the commenter's claim that the mountain plover's risk of

extinction is exacerbated by a short lifespan.

Grassland Conversion Issues

Comment 28: Grassland conversion has destroyed mountain plover habitat and resulted in a decline in mountain plovers.

Response 28: We are unable to precisely quantify the amount of mountain plover habitat that has been lost due to agricultural conversions and, therefore, are unable to precisely quantify the impact to mountain plovers. We do not believe the present or future conversion of grasslands is an imminent threat to all mountain plover breeding locations, throughout the species' range.

Comment 29: The Service overstated the loss of grasslands as an impact on breeding mountain plovers, because the rangeland loss reported in the 2002 proposed rule is minuscule relative to total rangeland available. This means that the impact to mountain plover habitat is even smaller and, therefore, of no consequence.

Response 29: We agree that most grassland conversion occurred prior to 1982, and that the proportion of rangeland lost to total rangeland from 1992 to 1997 is small. We have revised the section of the final determination addressing grassland conversion.

Comment 30: The Service inappropriately analyzed the National Resource Inventory database in its description of rangeland conversion loss, and the implications to mountain plover habitat.

Response 30: Because we are unable to precisely differentiate mountain plover habitat from among the NRI cover types, the NRI data are of little value in clearly and concisely assessing the degree of threat to mountain plovers or their habitat. We have revised the section of the final determination.

Comment 31: Some commenter stated that the presence of thousands of acres of Conservation Reserve Program (CRP) lands represents a threat to mountain plover habitat. Other commenter complained that the Service has not given credit to the thousands of acres of grassland created by the CRP.

Response 31: The CRP administered by the Department of Agriculture allows producers to retire lands for 10-year periods to remove highly erodible soils from production, thereby benefitting wildlife and other resources. As of 1992, 2,002,000 ha (4,946,000 ac) of land were enrolled in the program in Colorado, Montana, and Wyoming, and most of these lands were planted to grass (Berlinger and Knapp 1991, Lesica 1995). The wildlife that benefit most from these practices (such as ring-necked pheasant, northern bobwhite, and western meadowlarks) are those associated with tall vegetation (Schenck and Williamson 1991), although within each State, the Department of Agriculture has the ability to plant a variety of grass species, including short grasses that benefit mountain plover.

Comment 32: Wintering habitat is becoming a limiting factor. The historic conversion of grassland in California impacted mountain plovers, and future modifications of crop types, agricultural practices, or urbanization will have additional impact.

Response 32: Mountain plovers demonstrate some flexibility on winter habitat. Wunder and Knopf (2003) reported that agricultural practices on croplands in the Imperial Valley are critical to wintering mountain plovers, although Knopf and Rupert (1995) concluded that grasslands were preferred by wintering mountain plovers to agricultural fields in the Central Valley. While not all of the croplands are suitable foraging habitat, and modification of practices on croplands used for foraging could be detrimental to some mountain plovers, we do not believe the rate of conversion occurring now is having a significant influence on the total abundance of mountain plovers throughout California.

Livestock Grazing, Range Management, and Farming Issues

Comment 33: Range management is a factor in the historic decline of mountain plovers, and represents a current threat to existing mountain plover populations. Grazing practices now are very similar to those that were adopted decades ago.

Response 33: The prevailing grazing management standards adopted by Federal agencies and grazing associations tend to maximize forage production and diminish excessive disturbance to grass and soil. Such practices can be detrimental to mountain plovers, although we have no information to indicate this is happening on a broad scale across the species' range.

Comment 34: The Service incorrectly stated that the Forest Service has no schedule for revising grazing management prescriptions on the Pawnee National Grassland.

Response 34: This final determination has been corrected to report our recent coordination with the Forest Service regarding their planned revisions to range allotment management plans on the Pawnee National Grassland, which are designed in part to enhance mountain plover breeding habitat.

Comment 35: Since farming practices have not changed in 50 years how can there be any impact to mountain plovers?

Response 35: We recognize there are numerous small farming and ranching operations that have retained historic practices that may benefit mountain plovers. As a result of a variety of factors, including more advanced technology and more effective agricultural chemicals, the average farm size has increased. As the farms have gotten larger, it is no longer feasible to till and plant a field within a short period of time. Consequently the lands are tilled in early spring when suitable habitat for mountain plover nesting is present. Therefore, some nests are at risk from spring tilling if measures are not taken to avoid nests. This final determination describes the implications of current farming practices to mountain plover conservation.

Issues Related to Prairie Dogs

Comment 36: We received numerous comments on the Service's discussion of mountain plovers and prairie dogs, the abundance and distribution of prairie dogs, and the role of prairie dogs in the historic and current status of the mountain plover.

Response 36: This final determination cites published literature, expert opinion, and other sources of available information to describe the association of mountain plovers and prairie dogs. Of the many comments received addressing prairie dogs, only one provided detailed information to challenge our discussion regarding the distribution of mountain plovers on prairie dog colonies in Montana. Recently, research completed in southern Phillips County, Montana, affirmed a strong association of mountain plovers with prairie dogs (Dinsmore 2001). Therefore, based on our review of the information available, we continue to believe breeding mountain plovers are strongly associated with prairie dogs in Montana. We have revised the section on prairie dogs to report new information.

Comment 37: The Service grossly underestimated the abundance of prairie dogs and, therefore, grossly underestimated the abundance of mountain plovers.

Response 37: The Wyoming Department of Agriculture is correct that the current estimate of black-tailed prairie dogs in Wyoming is greater than earlier Service estimates. However, it does not follow that the mountain plover population is proportionately underestimated. As stated above, we base our total mountain plover

population estimate on winter counts, not availability of breeding habitat. We have revised the final determination to acknowledge the new estimates for prairie dogs, and discuss the implications of prairie dog abundance to mountain plover viability.

Comment 38: Prairie dog poisoning has increased.

Response 38: The Service has new information to suggest that poisoning of black-tailed prairie dogs may have increased in some States in the mountain plover's range (Service 2002.). We have revised this section of the final determination to conclude that while prairie dog poisoning may have increased locally, it does not represent an imminent threat to mountain plovers throughout their breeding range.

Comment 39: Prairie dog shooting is a threat to mountain plovers.

Response 39: We agree that shooting black-tailed prairie dogs has been shown to reduce prairie dog abundance at some locations. However, it has not been shown to be a significant threat to maintenance of black-tailed prairie dog colonies (Service 2002.). While it has the potential to degrade or prevent recovery of habitat and impact mountain plover breeding success, we believe those instances are localized and infrequent. We have no information to indicate that the incidental shooting of mountain plovers is significant.

Mineral Development Issues

Comment 40: Oil and gas development, including coalbed methane, is a potential significant threat to mountain plovers.

Response 40: This final determination provides information describing the potential effects to mountain plovers from oil and gas development. The degree of effect depends on the density of mountain plovers and level of oil and gas development within a project area.

Comment 41: The presence of mountain plovers at the Antelope Coal Mine in Wyoming is evidence that mining does not impact mountain plovers.

Response 41: We have revised the final determination to report new information from the Antelope Coal Mine, including its potential effects on mountain plovers.

Pesticide Issues

Comment 42: Inclusion of grasshopper control as a potential threat is not valid because the rule admits that Federal grasshopper control programs have been abandoned.

Response 42: The Animal and Plant Health Inspection Service (APHIS) has recently authorized rangeland grasshopper control, and control of grasshoppers can occur when they reach economic thresholds. We have revised the final rule to report new information regarding pesticide exposure from grasshopper control and from California wintering habitat.

Regulatory Mechanisms

Comment 43: Existing regulatory mechanisms are inadequate to protect the mountain plover.

Response 43: We have no evidence that the existing regulatory mechanisms have contributed to the decline of the mountain plovers throughout a significant portion of their range. The Forest Service and the BLM routinely include the mountain plover in their planning documents to ensure that activities they authorize do not contribute to the further decline of the species. The NRCS has prepared a fact sheet for the mountain plover to encourage farmland practices beneficial to the mountain plover. The Service is developing a dialogue with all Federal agencies to ensure that measures are included in land management plans to protect and promote the conservation of the mountain plover. Federal listing would not add significant conservation benefit above those efforts presently adopted by Federal agencies.

Peer Review

In compliance with the July 1, 1994, Service Peer Review Policy (59 FR 34270), peer reviews were provided by five specialists. The peer reviewers in 1999 were Dr. Marshall Howe with USGS-Patuxent Wildlife Research Center, Dr. C.R. Preston with the Draper Museum of Natural History in Cody, Wyoming, and Dr. James Dinsmore with Iowa State University in Ames, Iowa. Each of these peer reviewers concluded that there was sufficient information to list the mountain plover as threatened. The reasons cited by the peer reviewers included small population and declining trend of the species, prairie dog distribution and decline, habitat loss to grassland conversion, the influence of cropland nesting efforts on mountain plover conservation, and pesticide exposure.

Two peer reviewers provided comments to the 2002 listing proposal. One peer review was provided by Dr. Peter Paton with the University of Rhode Island in Kingston, and the second peer review was provided by Mr. Steve Forrest with Hyalite Consulting in Bozeman, Montana. Mr. Forrest was selected by Earthjustice following the settlement agreement reached between the Service and Earthjustice to expedite a listing decision for the mountain plover. Both of these peer reviewers also supported the proposal to list the mountain plover. The issues identified by each of them were similar to those received from the peer reviewers in 1999, but also included attention to other specific issues such as declines in Weld County, Colorado, Montana, and Thunder Basin National Grassland in Wyoming, as well as habitat fragmentation, prairie dog shooting, and the proposed special rule.

Since the 1999 listing proposal and following the 2002 re-opening of the comment period, we have acquired additional information regarding the concerns identified by each of the peer reviewers, as disclosed in this final determination.

Summary of Factors Affecting the Species

Section 4 of the Act (16 U.S.C. 1531 *et seq.*) and the regulations (50 CFR part 424) that implement the listing provisions of the Act set forth the procedures for adding species to the Federal list of endangered and threatened species. A species may be determined to be endangered or threatened due to one or more of the five factors described in section 4(a)(1) of the Act. These factors and their application to the mountain plover rangewide are discussed below.

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

Historical and Current Conversion of Grassland in Breeding Range

As described in the 1999 and 2002 proposed rules, the historic conversion of grassland to cropland likely contributed to the decline of mountain plovers and their habitat (*e.g.*, Graul and Webster 1976, FaunaWest 1991, Knopf and Rupert 1999b). To assess more recent grassland conversion, we reviewed information available from the National Resources Inventory (NRI) of the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) between 1982 and 1997. We selected the "rangeland" cover type because "native grassland" is not a type category within the data base specifically, but is represented under the rangeland category. Comprehensive NRI data is only available from 1982 through 1997 (NRCS 1998; K. Musser, NRCS, in litt. 2000; K. Musser, pers. comm 2002). We used only areas occupied by mountain plovers in their breeding range to compare the rangeland conversion statistics (Knowles and Knowles 1998, Shackford and Leslie 1995).

From 1982 to 1997, rangeland decreased in Colorado by 217,200 ha (536,700 ac), in Kansas by 14,852 ha (36,700 ac), in Nebraska by 14,326 ha (35,400 ac), in Oklahoma by 16,512 ha (40,800 ac), in Montana by 59,894 ha (148,000 ac), and in Wyoming by 18,090 ha (44,700 ac). More acres were converted prior to 1992 in all States except Nebraska and Montana, where acres converted after 1992 were about the same or more than doubled, respectively. The total lands converted are a small fraction of the total rangeland. While the best information available does not allow us to quantify the acres of occupied mountain plover habitat converted, using the rate of rangeland conversion, we believe native grassland conversion is small and does not pose a substantial threat to mountain plovers.

The Montana Fish, Wildlife and Parks expressed concern over conversion of native habitat in Montana (P. Graham, Montana Fish, Wildlife and Parks, in litt. 1999). For example, Knowles and Knowles (2001) reported that a total of 13 percent of the land area in their central Montana study area has been converted from native grass from 1991 to 1999, and that mountain plovers have abandoned all but one of the sites that were converted. Mountain plovers in the central Montana study area declined from more than 100 in 1992 to about 70 individuals in 2000, as a result of grassland conversion (Knowles and Knowles 2001; C. Knowles, pers. comm. 2003).

Mountain plovers nest successfully on croplands in Colorado and perhaps contiguous States (V. Dreitz and F. Knopf, in litt. 2003; Shackford *et al.* 1999). While the findings are preliminary and represent a small percentage of total croplands in eastern Colorado, they suggest that existing croplands and grasslands in the southern portion of the breeding range may be of equivalent value to nesting mountain plovers (V. Dreitz and F. Knopf, in litt. 2002). In Montana and northern Wyoming, nesting on cultivated land has not been observed (Knowles and Knowles 2001; Shackford *et al.* 1999). However, since the amount of rangeland converted is small (NRCS 1998), we conclude that the impact to mountain plovers in Montana and northern Wyoming is comparably small, regardless of how cultivated land is used by mountain plovers in those states.

In some areas in the mountain plover breeding range, grasslands are being converted to housing subdivisions. Of some concern is development of nesting habitat in South Park, Park County, Colorado, where the mountain plover population is now estimated to be about 2,300 individuals, which is the largest known remaining concentration of mountain plovers in the breeding range (Wunder *et al.* in prep.). The known breeding sites in South Park are vulnerable to ongoing and proposed future residential development. Full build-out of those sites currently subdivided would be detrimental to mountain plovers (Sherman *et al.* 1996, Granau and Wunder 2001). However, it is unknown how extensive future development will actually be or how fast it will proceed, such that while it is a potential threat we have no reason to believe that it means the species is likely to be in danger of extinction in the foreseeable future. It also is likely that private conservation efforts ongoing in South Park will preserve important mountain plover habitat.

Cultivated Areas in Breeding Range as Potential Population Sinks

In the 1999 proposed rule, we stated that we believed cultivated lands in the southern portion of the breeding range created population sinks for the mountain plover, contributing to species decline. In an effort to better define the implications to mountain plover survival, research was initiated on cultivated fields and rangelands in five counties in eastern Colorado in 2001 (T. McCoy, in litt. 2001). Preliminary data analysis indicates that nest success is comparable between cropland and rangeland (V. Dreitz and F. Knopf, in litt. 2003). Nest failure was attributed principally to tillage and predation on cropland, and to predation on rangeland (V. Dreitz and F. Knopf, in litt. 2002). However, while hatching success on croplands and grasslands is similar in the southern portion of the breeding range, comparable data on juvenile survivorship are not available so mountain plover reproductive success on cropland relative to grasslands is not fully known (V. Dreitz and F. Knopf, in litt. 2002; Knopf, in litt. 2003).

Historical Conversion of Grassland in Wintering Range

Historically, mountain plover habitat in the Central Valley was lost following the decline of grazing elk, pronghorn, burrowing kangaroo rats, ground squirrels, and other mammals. The combined activities of these herbivores maintained suitable habitat conditions for mountain plovers, closely mimicking habitat characteristics found on breeding habitats (Knopf and Rupert 1995). Elk are now extirpated from the Central Valley, and pronghorns, once extirpated, have recently been reintroduced into the Carrizo Plains (BLM *et al.* 1995). The federally-listed giant kangaroo rat (*Dipodomys ingens*) and Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*) have declined to about 2 percent and 1 percent of their former range, respectively, due primarily to conversion of grassland habitat to agriculture and urbanization, and secondarily due to other incidental human activities and control of California ground squirrels (W. White, Service, in litt. 2001a; 52 FR 283; S. Jones, Service, pers. comm. 2003). The occupied range of each of these species in the San Joaquin Valley overlaps the described wintering range of the mountain plover. Currently, it is estimated that giant kangaroo rats may occupy about 11,145 ha (27,540 ac) and the Tipton kangaroo rat may occupy about 25,000 ha (63,000 ac) (Service 1998). While we cannot measure the degree of impact to mountain plovers resulting from the loss of these mammals, we believe any further loss would be detrimental to the species by further reducing natural habitats.

Native grasslands in the San Joaquin Valley have been nearly eliminated. Of nearly 1,800,000 ha (4,400,000 ac) of native grasslands present prior to extensive settlement, no more than 600 ha (1,500 ac) remained in 1972 (Moore *et al.* 1990). This loss of grasslands has been paralleled by a loss of other natural habitats, with the total of all uncultivated lands in the San Joaquin Valley now occupying less than 61,000 ha (150,000 ac) (Service 1998).

Mountain plovers wintering in the San Joaquin Valley prefer native Valley sink scrub and nonnative grasslands over any of the more commonly cultivated land types (Anderson *et al.* 1991; Knopf and Rupert 1995) when the grasslands are grazed or burned (Knopf and Rupert 1995). These preferred habitats occupy less than 26,000 ha (66,000 ac) of the San Joaquin Valley (Anderson *et al.* 1991). Mountain plovers in the San Joaquin Valley depend on these core areas of uncultivated lands in October and November (Engler, in litt. 1992; Knopf and Rupert 1995), and further loss of these areas would be detrimental to the species (Knopf and Rupert 1995).

Mountain plovers use cultivated croplands in the Imperial Valley of California, where in recent years (except the winter of 2002–03 when excessive rain prevented it) greater than 50 percent of all individuals of the species wintered (Wunder and Knopf 2003). Until agricultural development began in the 1940s, this historically desert region was not known to support the species. Here, 37 percent of the mountain

plovers forage and roost on grazed or sprouting alfalfa fields; 34 percent roost on short-term fallowed fields; and 13 percent forage on burned bermuda grass fields, while ungrazed alfalfa, unburned bermuda grass, melon and vegetable fields are rarely or never used (Wunder and Knopf 2003).

Other habitats within the historic wintering range of the mountain plover have been modified by modern livestock grazing practices that maintain grass height that is higher than what mountain plovers can use. This is the situation in the Carrizo Plain, which is recognized as a predictable wintering area and historically may have provided up to 50 percent of suitable plover wintering habitat. No more than 10 percent of the Carrizo Plain's 103,000 ha (254,000 ac) was suitable for mountain plovers in the early 1990s (S. Fitton, in litt. 1992; BLM *et al.* 1995), but that figure has increased in recent years due to lower precipitation (S. Fitton, pers. comm. 2003). Habitat availability there appears to be linked to a combination of livestock grazing management and precipitation.

We were unable to precisely quantify the acres of mountain plover wintering habitat converted to other uses annually because a data base quantifying mountain plover habitat does not exist. However, information from the California Department of Conservation confirms the routine conversion of existing croplands to vineyards, orchards, and other uses. For example, from 1990 to 2000, the acreage of vineyards in California nearly doubled to a total of 230,000 ha (570,000 ac) (M. Penberth, California Department of Conservation, in litt. 2003). In nine counties in the Central Valley where mountain plovers are now reported as "rare and local," the acres in vineyards increased by about 25 percent (31,000 ha (76,000 ac)) from 1990 to 2000 (Edson and Hunting 1999; M. Penberth, California Department of Conservation, in litt. 2003). Conversion to vineyards represents a loss of potential habitat, although the extent of use by plovers prior to conversion is unknown.

Urban development destroyed most noncultivated, historic coastal mountain plover winter habitat (Wunder and Knopf 2003), and anticipated urbanization and water transfers from rural to urban areas may impact the remaining natural habitats, as well as to existing cropland habitats in both the Central and Imperial Valleys. In California, the U.S. Census Bureau (2003) projected a 52 percent (17 million) population increase from 2000 to 2025. Based on past trends, considerable population growth is expected to occur in the Central Valley (American Farmland Trust 2003, Hunting *et al.* 2001). The Imperial County population is expected to nearly double by 2020 (American Farmland Trust 2003). In the Imperial Valley, the North American Free Trade Agreement is expected to generate increased trade growth, and highway projects are now being planned to improve transportation efficiency (California Department of Transportation 2001). As a result of the anticipated population growth, the American Farmland Trust (2003) designated the Imperial and Central Valleys 2 of the top 20 threatened farming regions in the Nation. However, between 1982 and 1992, only 8,000 ha (19,000 ac) of land in Imperial County were converted to urban uses. The present impacts to farm land in Imperial County have had no measurable impact on wintering mountain plovers. For example, the Service completed a draft biological opinion for a proposed transfer of water from the Imperial Valley to southern California coastal communities (P. Sorensen, Service, in litt. 2003). It is presently estimated that if the water transfer occurs, 12,000 to 32,600 ha (30,000 to 80,500 ac) of bermuda grass sod farms and alfalfa could be fallowed each year (C. Roberts, Service, pers. comm. 2002; P. Sorensen, in litt. 2002), which we calculate would be from 15 to 39 percent of the available foraging habitat described by Wunder and Knopf (2003). However, because of the mild winter climate in the Imperial Valley, crops are not fallowed for long periods of time. Land that is fallow 1 month may be tilled the next, presenting a shifting mosaic of foraging habitat for plovers. Because it is unclear whether the water transfer will occur and whether it will reduce foraging habitat for mountain plovers in the Imperial Valley, we cannot conclude that loss of cropland or modification of current practices threatens the species in the foreseeable future.

In summary, although most natural habitat used by mountain plovers in California has been destroyed, some crops that have replaced it provide foraging and roosting habitat (Knopf and Rupert 1995, Wunder and Knopf 2003). Given a high over-wintering survival rate in the San Joaquin Valley and Carrizo Plain and the ability of the plovers to use croplands successfully, Knopf and Rupert (1995) concluded that a loss of a major proportion of native habitats in the wintering range has not limited plover populations.

Mountain plovers have been reported in winter in other States in the United States and Mexico, but in comparison to California their numbers are few, and the threat of habitat destruction, modification, or curtailment is unknown with one exception. In the 1990s, the Ejido San Pedro CBC was initiated on a black-tailed prairie dog complex in northwestern Chihuahua, Mexico (birdsource.org 1992–2002). Mountain plovers have been reported in low numbers in most years, with no birds reported in some years (birdsource.org 1993–2002). Vegetation has been modified by livestock grazing to include woody shrubs, and prairie dog densities are low, which allows for increased vegetation height.

In conclusion, after reviewing the current and anticipated impacts to wintering habitat, we find that they do not pose significant threats to the mountain plover.

Effects of Range Management on Mountain Plover Habitat

Domestic livestock grazing is pervasive throughout the breeding range of the mountain plover. Currently accepted domestic livestock grazing management emphasizes a uniform grass cover to minimize grassland and soil disturbance, whereas the landscape created historically by native herbivores was a mosaic of grasses, forbs, and bare ground that changed frequently in time and location (Knopf 1996a, Knopf and Rupert 1999b). The shift to livestock grazing strategies that favor uniform cover is believed to be partly responsible for the decline of mountain plovers in the peripheral breeding areas of Oklahoma and Canada (Flowers 1985, Wershler 1989), but has only been assessed in limited, localized instances elsewhere within the major portion of the breeding range. Mountain plovers are no longer reported from the Lewis Ranch in central Montana since elimination of grazing there in 1993 (Knowles and Knowles 2001). The decline of mountain plovers on the Pawnee National Grassland in Colorado is due to multiple years of wet spring weather, persistent grazing systems, the apparent difficulty of adjusting domestic livestock stocking rates to accommodate years of increased forage, the lack of infrastructure to modify grazing systems, and the sparse application of grassland burning and mineral block placement to restore nesting habitat (Forest Service 1994; S. Currey, Forest Service, in litt. 2002; F. Knopf, in litt. 2002; R. George, in litt. 2002; E. Humphrey, Forest Service, in litt. 2003). These examples are localized and do not appear to exemplify practices in a substantial portion of the breeding range. If the impacts were significant, we would anticipate being able to detect a declining trend in

abundance on the BBS, which shows a statistically significant decline from 1966 to 2002 only in the extreme southern portion of the breeding range where plover abundance is low and the number of routes detecting the species are few (BBS, *http://www.mbr-pwrc.usgs.gov/bbs/bbs.html*).

Several range management practices conducted throughout the range of the mountain plover enhance the development of taller vegetation, thereby eliminating nesting opportunities (Graul and Webster 1976, Knowles and Knowles 1993). Examples of these practices include "pitting" to increase moisture retention in the soil, introduction of exotic grass species such as crested wheatgrass, watershed improvement projects to retain water, and, in Montana, fire suppression (Graul 1980, FaunaWest 1991, Knowles and Knowles 1993).

Localized range management activities on private and public lands also destroy mountain plover habitat. In 2001, for example, two known mountain plover breeding sites were destroyed in Valley County, Montana, by the construction of stock tanks in an area designated by the BLM as an Area of Critical Environmental Concern for mountain plover (C. Knowles, in litt. 2001).

Although range management activities may adversely affect some habitat for the mountain plover in specific instances, the complete absence of grazing causes mountain plover habitat to deteriorate. Therefore, we see grazing as necessary for the species, and not a threat to the species throughout its range.

Effects of the Decline of Burrowing Mammals on Mountain Plover Habitat

The historic decline in abundance and distribution of prairie dogs likely contributed to the historic decline of the mountain plover (Knowles *et al.* 1982; S. Fitton, in litt. 1992; Knopf 1994). The mountain plover nests on active prairie dog colonies, principally those of the black-tailed prairie dog (*Cynomys ludovicianus*), throughout its breeding range, as prairie dogs maintain their preferred nesting habitat of low vegetation structure and a high percent of bare ground. Preliminary findings from Colorado suggest that mountain plover nesting success is higher on black-tailed prairie dog colonies than sites without prairie dogs (V. Dreitz and F. Knopf, in litt. 2002). Prairie dogs were widespread and numerous throughout the mountain plover's historic breeding range (Service 2002). Mountain plovers presently occupy prairie dog colonies in Colorado, Montana, Wyoming, Oklahoma, and New Mexico (Shackford 1991; Godbey 1992; Nelson 1993; Hawks Aloft 2001b; M. Edwards, in litt. 1994; T. Thompson, in litt. 2003; Dinsmore 2001). Montana, Wyoming, and Colorado likely comprised most of the core mountain plover breeding areas historically, and currently there are more mountain plovers associated with prairie dogs in those States. The suitability of prairie dog colonies as mountain plover habitat appears to be influenced by the individual colony size and prairie dog density (Knowles *et al.* 1982, Olson-Edge and Edge 1987, Dinsmore 2001). Therefore, total prairie dog acres is not a measure of total suitable mountain plover habitat available.

Black-tailed prairie dogs have been reported to currently occupy about 256,000 ha (631,000 ac) in Colorado (Pusateri, CDOW, in litt. 2002), 36,000 ha (90,000 ac) in Montana, and an estimated 50,000 ha (125,000 ac) in Wyoming (Luce 2003). In Phillips County, Montana, 99 percent of the mountain plover nests found on survey transects were located on active prairie dog colonies (Dinsmore 2001). The largest population of mountain plovers in Montana (about 700 individuals) occurs on black-tailed prairie dog colonies in Phillips County, and mountain plover and prairie dog abundance are closely related there (Dinsmore 2001). Mountain plovers seem closely tied to active prairie dog colonies in Wyoming in the Powder River Basin, including Thunder Basin, particularly the Thunder Basin National Grassland. Mountain plovers are associated with black-tailed prairie dog colonies on the Pawnee National Grassland in northern Colorado (Nelson 1993; F. Knopf, in litt. 1999), in the Arkansas River Valley, and on the Comanche National Grassland in southeastern Colorado (K. Geisen, CDOW, in litt 2001). A large population of mountain plovers nest in montane grasslands without prairie dogs in South Park in central Colorado (Wunder *et al.* in prep.). About 50 percent of the black-tailed prairie dog colonies in Colorado occur in nine southeastern counties, which also report numerous mountain plover sightings (Kingery 1998; L. Nelson, CDOW, in litt. 2002).

Mountain plovers sometimes nest on white-tailed prairie dog colonies in Colorado, Wyoming, and Montana (P. Deibert, pers. comm. 2003). Gunnison's prairie dogs occur at the periphery of the mountain plover breeding range in northern New Mexico and southern Colorado, and mountain plovers have been documented to nest on their colonies (5 out of 19 confirmed breeding sites on BLM lands in Taos County were on Gunnison prairie dog colonies (Hawks Aloft 2001b)). The geographic extent of mountain plover use of Gunnison colonies appears to be small, and limited information suggests no close dependence.

Because mountain plovers have no ability to modify their environment to create suitable nesting conditions, the decline of prairie dogs can result in the loss of suitable nesting characteristics in only a few weeks (Dinsmore 2001).

Outbreaks of sylvatic plague occur frequently throughout Montana, Wyoming, and Colorado on prairie dog colonies in the breeding range of the mountain plover. Sylvatic plague is an exotic disease to which prairie dogs have almost no immunity, although recent laboratory research indicates some isolated resistance to plague in black-tailed prairie dogs (Rocke, USGS, pers. comm. 2002). However, recently available population data across a majority of the species' range, that include many smaller populations (which represents the majority of all occupied habitat), indicate that occupied prairie dog habitat is more abundant and more stable than previously thought. The majority of black-tailed prairie dog populations occur in small, isolated complexes where the dynamics of disease appear to be fundamentally different than in larger populations. The reproductive and dispersal capabilities of the species, as indicated by the distribution, abundance, and trends data for the species, may be sufficient to counteract, at least partially, the impacts of a disease that occurs only sporadically in time and space (Service 2002).

Prairie dog control, principally by poisoning, continues to occur on private and public lands throughout the mountain plover's breeding range, although the likelihood of control on public lands is minimized by Federal agency policies (Service 2002). Black-tailed prairie dog populations are capable of recovering rapidly from chemical control efforts that temporarily reduce their numbers (or from other depressant factors such as disease (Knowles 1986) or drought (Hoogland 1995)).

Mountain plovers may vacate prairie dog colonies following plague or poisoning because of the rapid deterioration of habitat conditions (Dinsmore 2001), but we consider plague or prairie dog control to be a temporary impact on mountain plovers. For example, between 1992 and 1996, prairie dog occupation of colonies in Montana's area of greatest prairie dog abundance was reduced by as much as

80 percent as a result of sylvatic plague (J. Grensten, pers. comm. 1998). Mountain plover numbers along prairie dog transects in these colonies declined from 80 in 1991 to 7 in 1999, but have slowly increased since 1996 as prairie dog abundance has increased (S. Dinsmore, in litt. 2000a).

Prairie dog shooting is popular throughout the breeding range of the mountain plover, and intense, persistent shooting of black-tailed prairie dogs has been shown to reduce prairie dog abundance, and perhaps prevent or retard recovery of colonies low in abundance due to sylvatic plague or poisoning (Vosburgh and Irby 1998; Knowles and Vosburgh 2001; L. Hanebury, pers. comm. 2003). We believe prairie dog shooting will continue to occur in areas occupied by mountain plovers. While it has the potential to degrade or prevent recovery of habitat and impact mountain plover breeding success, we believe those instances are localized and infrequent.

New information made available this year from many State and Federal agencies indicates the quantity of occupied black-tailed prairie dog habitat has increased in the last several decades (Luce 2003). Given the above summary of prairie dog habitat abundance, distribution, and threats and the subsequent impact on the mountain plover, we believe modification of prairie dog habitat is not a substantial threat to the mountain plover.

Oil, Gas, and Mineral Development in Mountain Plover Breeding Habitat

The development of oil, gas, coalbed methane, and other mineral resources commonly occurs throughout the breeding range of the mountain plover. Expedited oil and gas development is a national priority, and a new interagency task force has been assembled to assist Federal agencies in their efforts to expedite review and completion of energy-related projects on Federal lands (Executive Order 13212). However, we were able to find little documentation that this mineral resource development poses a current or future threat to mountain plovers.

Numerous current BLM planning documents detail the number of wells, roads, and other facilities required to accommodate development of these mineral resources. A summary of these planning documents for Wyoming shows at least 10 authorized or proposed active natural gas and coalbed methane projects in known or potential mountain plover nesting habitat (*e.g.*, Continental Divide/Wamsutter II Natural Gas Project, Seminoe Road Coal Bed Methane (CBM); Powder River Basin CBM) (P. Deibert, Service, in litt. 2003). Full build-out of these projects would result in over 50,000 individual wells, impacting up to 63,000 ha (155,000 ac), and creating nearly 32,000 km (20,000 mi) of new roads and 37,000 km (23,000 mi) of new pipelines (P. Deibert, in litt. 2002). Of these statistics, development of the Powder River Basin CBM alone will include nearly 40,000 wells and 27,000 km (17,000 mi) of new roads, affecting about 48,000 ha (118,000 ac) of lands (P. Deibert, Service, in litt. 2003). The Powder River Basin CBM project covers much of the black-tailed prairie dog habitat in Wyoming (K. Henke, pers. comm. 2003). In addition, there are about 14,000 coalbed methane wells proposed for the Powder River Basin in Montana (P. Deibert, in litt. 2003). Numerous other projects (*e.g.*, Bighorn Basin bentonite mine, Carbon Basin coal) are proposed or ongoing in Wyoming in areas occupied by mountain plovers (P. Deibert, in litt. 2003). In Wyoming, over 12,000 coalbed methane wells were drilled by 2001, and the current development schedule established will result in nearly 40,000 additional wells by 2011.

Another example of increased energy development is Phase I of the SeaWest Wind Power Project in Wyoming. This wind farm is now operational and has disturbed 30 ha (70 ac) on the Foote Creek Rim Mesa, but final build-out calls for 667 to 1,000 wind turbines, that would permanently occupy 208 ha (515 ac) when complete.

The development of oil, gas, and other energy resources requires construction of individual project pads, access roads, travel corridors, pipelines, power lines, and other facilities (Brockway 1992). The degree of impact on mountain plovers from these activities depends on project size, density, frequency of maintenance and operation, and proximity to mountain plovers. However, the actual impact of this development on mountain plovers is unknown.

Energy development has the potential to modify specific nesting, brood rearing, and foraging habitat characteristics, such as vegetation height, proportion of bare ground, prey density, and predator regimes (S. Dinsmore, Mississippi State University, in litt. 2003). Mountain plovers nest on nearly level ground and often near roads, adults and chicks often feed on or near roads, and roads may be used as travel corridors by mountain plovers, all of which make plovers susceptible to being killed by vehicles (McCafferty 1930, Laun 1957, Godbey 1992, Knowles and Knowles 2001), although we have no evidence that this has had an impact on mountain plover population levels.

Energy development also results in soil disturbance, and because the mountain plover has been described as a "disturbed prairie" species (Knopf and Miller 1994), this disturbance could be inferred as benign or even beneficial to the species. The BLM has standards for revegetation of disturbed sites, and for control of invasive weed species along roads, well pads, and other disturbed sites. In the Powder River Basin of Wyoming, anticipated problems with invasive species induced by coalbed methane mining have not materialized to any significant extent (J. Carroll, pers comm. 2003).

About 150 ha (370 ac) of mountain plover habitat at the Antelope Coal Mine in Converse County, Wyoming, have been affected by mining disturbance since 1982 (P. Deibert, pers. comm. 1999b). Mountain plover inventories conducted from 1982 to 2001 have documented the presence of mountain plovers and broods within and contiguous to the mine permit area. Although the number of broods on the mine permit area has declined since 1993, broods are still reported adjacent to the mine permit area (Thunderbird Wildlife Consulting, Inc. 2003). In Montana, a mountain plover nesting area near the Pryor Mountains in Carbon County was recently lost to bentonite mining (C. Knowles pers. comm. 2003). As many as 51 mountain plovers likely occurred on the Foote Creek Rim wind power project in Carbon County in southeastern Wyoming in 1994. The population there has now declined to about 26 (Johnson *et al.* 2000, Young and Erickson 2003). While we do not believe that mineral resource and wind farm development can be considered beneficial to mountain plovers, their combined impacts do not appear to pose a major threat.

Our consideration of energy development as a listing factor in the proposed rules contributing to the potential decline of the mountain plover was based on the magnitude of anticipated development, as well as on information that existing projects have resulted, or are likely to result, in the modification of habitat required by nesting mountain plovers, and on enhanced opportunities for avian and terrestrial predators. However, because coalbed methane development, although widespread, has not been demonstrated to be detrimental to mountain plovers and because other types of energy development are more limited, we believe the current and anticipated mineral resource development in the

breeding range of the mountain plover is not a major threat to their continued existence.

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

Prior to the passage of the Migratory Bird Treaty Act in 1918, mountain plovers were commercially hunted for food. However, this no longer occurs. Mountain plovers reside on some prairie dog colonies where recreational prairie dog shooting occurs. Although a few mountain plover mortalities have been attributed to shooting, this loss is not thought to be significant. There is no recent evidence that overutilization is a current threat.

Factor C. Disease or Predation

Disease-related factors are not known to be a direct threat to the species. However, plovers that breed on prairie dog colonies are indirectly affected through a modification of habitat when an epidemic of sylvatic plague reduces numbers of prairie dogs in a colony (*see* discussion under Factor A).

Mountain plovers eggs and chicks are the most vulnerable life stages to terrestrial and avian predation. Potential avian and terrestrial predators include the prairie falcon (*Falco mexicanus*), loggerhead shrike (*Lanius ludovicianus*), ravens (*Corvus corax*), swift fox (*Vulpes velox*), red fox, ground squirrels (*Spermophilus spp.*), and coyote (*Canis latrans*) (Graul 1975). Predation influences the productivity of all ground-nesting birds, and nesting success of less than 50 percent is not unusual. Predation on plover nests on the Pawnee National Grassland has ranged between 15 and 74 percent from 1969 to 1994 (Graul 1975, Miller and Knopf 1993, Knopf and Rupert 1996). A high rate of nest predation by swift fox at the Pawnee National Grassland in 1993 and 1994 may have been due to temporarily reduced alternate prey resources (Knopf and Rupert 1996).

From 1994 to 2003, grasslands on the Pawnee National Grassland have been burned each year to enhance mountain plover nesting habitat (E. Humphrey, in litt. 2003). All eight nests monitored on the burn sites in 1996 were destroyed by swift fox (F. Knopf, in litt. 1996). Increased predation following burning, as indicated on the Pawnee National Grasslands, may affect nesting success locally in some years, but is not a persistent factor throughout the species' range. Nest predation also occurs in Phillips County, Montana, but is probably not a significant influence on nesting success at this location (Dinsmore 2001).

On December 17, 2002, we completed conferencing under the Act with the BLM for proposals to develop oil and gas resources in the Powder River Basin (M. Long, Service, in litt. 2003). We concluded that predation by mammalian and avian predators would increase with the development as proposed, and we recommended conservation measures to minimize adverse effects. Predation on the small number of nests in the Powder River Basin will not have an impact on the species rangewide.

There is no evidence to indicate at this time that mountain plovers are affected by West Nile virus (Knopf pers. comm.).

Factor D. The Inadequacy of Existing Regulatory Mechanisms

Protecting the mountain plover and its habitat is complicated by its wide geographic range, which includes private and public land, and numerous State, Federal, and Tribal Land authorities.

Federal Regulations

One regulatory mechanism that currently protects the mountain plover is the Migratory Bird Treaty Act (MBTA), which prohibits direct mortality or the destruction of active nests. Other Federal laws that currently provide for conservation of mountain plovers include the Federal Land Policy and Management Act of 1976; National Forest Management Act of 1976; Federal Onshore Oil and Gas Leasing Reform Act; Federal Insecticide, Fungicide, and Rodenticide Act; and Federal Agriculture Improvement and Reform Act. Some Federal agencies such as the BLM or the Forest Service also have adopted policies to require that their actions not contribute to the declining status of a species.

While Federal land ownership is not a guarantee of species conservation, Federal jurisdiction over surface resources can make application of conservation practices easier to implement. The BLM administers 13 percent of the mountain plover habitat (13,000 ha (27,000 ac)) in South Park, Park County, Colorado, where 20 percent or more of the entire mountain plover breeding population is estimated to occur. The BLM recently produced a conservation assessment to help guide implementation of future conservation measures for the mountain plover, including land exchange and consolidation (Granau and Wunder 2001). In that assessment, the Reinecker Ridge State Wildlife Area in the central part of the county was identified as having excellent mountain plover breeding habitat and good conservation potential. It is already under public ownership, primarily through the BLM and Colorado State Land Board (Granau and Wunder 2001).

The National Forest Management Act requires the Forest Service to manage habitats for native species. The Service has coordinated with the Forest Service for over a decade regarding the conservation needs of the mountain plover on the Pawnee National Grassland in Colorado. Mountain plovers are now nearly extirpated from this historic stronghold due to climatic events and changes in grazing management, and restoration of habitat has not been immediately forthcoming. Recently, the Forest Service initiated efforts to improve nesting habitat conditions on the Pawnee (Bedwell, in litt. 2003), although some recovery plans and recovery objectives will not be fully realized for several years (S. Currey, in litt. 2002).

The Forest Service has closed the shooting season for black-tailed prairie dogs on the Thunder Basin National Grassland in Wyoming. While the reason for the closure was recovery of the endangered black-footed ferret, the mountain plover stands to gain habitat as prairie dogs there recover from an epizootic of sylvatic plague.

Two small National Wildlife Refuges (Kern and Pixley) in The San Joaquin Valley and Carrizo Plain provide some natural and cropland habitat for wintering mountain plovers (J. Engler, in litt. 1992, 2003; Knopf and Rupert 1995), although they are not managed specifically for mountain plovers and some of the former potentially suitable grassland and shrubland on Kern National Wildlife Refuge has been overwhelmed with exotic grasses and saltcedar (J. Engler, in litt. 2003). The BLM, California Department of Fish and Game, and The Nature Conservancy have developed a management plan for the Carrizo Plain Natural Area that calls for grazing a 1,850-ha (4,640-ac) BLM allotment by sheep in a manner that would encourage use by mountain plover (BLM *et al.* 1995). Prescribed burning also is called for in the plan and has been demonstrated to encourage use by mountain plovers (Knopf and Rupert 1995).

International Mechanisms

The mountain plover is designated as a threatened species by Mexico (S. Jewell, Service, in litt. 2000) a designation that has begun to provide some awareness of the need for the species' conservation. Mexico currently has no regulations to protect the habitat of the mountain plover. The species also

was designated as endangered by Canada in 1987, a status that was confirmed in 2000 (Committee on the Status of Endangered Wildlife in Canada 2000).

A Memorandum of Understanding between Canada, Mexico, and the United States was established to enhance coordination and partnerships regarding conservation of wildlife, plants, biological diversity, and ecosystems of mutual interest. The Memorandum of Understanding established the Trilateral Committee for Wildlife and Ecosystem Conservation and Management to develop and implement cooperative conservation projects within the three countries. This Committee has evaluated opportunities for shared conservation efforts on many species, including the mountain plover.

State Regulations

The mountain plover is now classified as threatened in Nebraska, a "species of special interest or concern" in California, Montana, and Oklahoma, a "species in need of conservation" in Kansas, and a "high priority species of concern" in New Mexico (Flath 1984; Sager 1996; E. Hunt, California Department of Fish and Game, in litt. 1990; Nebraska Game and Parks Commission 1992; Oklahoma Department of Wildlife Conservation 1992; Kansas Department of Wildlife and Parks 1992). States other than those identified above have not given the mountain plover any special designation. State listing can encourage State agencies to use existing authorities to conserve species and habitats, stimulate research, and allow redirection of priorities within State natural resource departments.

State agencies within the range of the mountain plover have recently completed "A Multi-State Conservation Strategy for the Black-tailed Prairie Dog in the U.S." (Luce 2003) to pursue conservation of the black-tailed prairie dog through regulations or provision of incentives to landowners for maintaining prairie dog colonies. The sale of rodenticide within the mountain plover's breeding range has increased in recent years and prairie dog shooting also is popular throughout the range of the mountain plover. No State regulations limit prairie dog poisoning, but prairie dog shooting is regulated in some areas. Colorado has banned prairie dog sport shooting on all public lands and under most circumstances on private lands; Montana has adopted a seasonal closure of prairie dog shooting on public lands, and there are no restrictions on shooting prairie dogs in Wyoming, except on the Thunder Basin National Grassland where shooting is banned.

The State of Colorado, in which a majority of the species' breeding range occurs, has initiated a program to conserve the mountain plover and its habitat, by reducing their vulnerability while they occupy cultivated lands, educating the public, and conserving grasslands that are known or potential breeding habitat (T. Blickensderfer, Colorado Department of Natural Resources, in litt. 2003). In 2003, the CDOW spent $263,000 to conduct research and monitoring on public and private lands occupied by mountain plovers, create an educational video, and implement a "1–877–4PLOVER" number to help reduce the "take" of mountain plovers on cultivated lands in Colorado and contiguous States. The CDOW also has created the Colorado Species Conservation Partnership program. The purpose of the program is to implement conservation actions on private and public lands throughout Colorado to ensure that the status of declining and at-risk species is improved to a level that will prevent their listing under the Act. The CDOW is pursuing mountain plover conservation under this program by recommending that $2 million be dedicated to long-term conservation agreements on private lands that may be occupied by mountain plovers. The initial sign-up for this effort resulted in applications for conservation easements for over 60,704 ha (150,000 ac) of private shortgrass prairie in eastern Colorado that would cost $14,600,000. The CDOW is pursuing partnerships to implement these conservation easements, and is optimistic that more funding will be provided in future years (R. George, in litt. 2003).

The Nebraska Game and Parks Commission working with the Rocky Mountain Bird Observatory has initiated a similar landowner incentive program called the Shortgrass Prairie Partnership (Holliday 2003) and funded in 2003 for over $500,000. It is in the first stages of implementation. While both the Colorado and Nebraska programs are voluntary habitat conservation programs, both wildlife agencies have the authority to initiate, fund, and implement them. These conservation efforts are new but have shown some initial successes and are likely to provide a significant level of protection for the mountain plover, especially in eastern Colorado.

In California, the species is listed as a species of special concern. In the following discussion, we describe the regulatory mechanisms in California on a county-level basis.

Three counties in California are drafting Habitat Conservation Plans (HCPs) with the Service to protect listed and declining species, including the mountain plover. With the development of the Western Riverside County Multiple Species HCP (MSHCP), the County of Riverside and other jurisdictions within Riverside County and California have requested an incidental take permit under section 10(a)(1)(B) under the Act for up to 164 covered species, including the mountain plover. The permit is needed to authorize take of listed species during urban and rural development, and agricultural activities in the approximately 509,904-ha (1.26 million-ac) study area in western Riverside County. The county and other jurisdictions propose in their conservation strategy to conserve, monitor, and manage 85 percent of the potential plover wintering habitat (*i.e.*, 2,715 of 3,185 ha (6,710 of 7,870 ac)) in the county. The Service is now assessing the effect of the MSHCP and the associated incidental take permit on the mountain plover and other species proposed for coverage.

Similarly, a San Joaquin County HCP finalized in November 2000 targets the protection of over 40,469 ha (100,000 ac) of habitat for 92 species, including the mountain plover, following adoption of enabling ordinances and/or resolutions by local agencies. A similar HCP for Solano County, which includes protection of potential mountain plover habitat, is being drafted, but is not yet finalized.

In summary, Federal, State, and county agencies and governments have taken significant proactive steps, in the absence of listing, and have shown progress in the conservation of mountain plovers and their habitat.

Factor E. Other Natural or Manmade Factors Affecting Its Continued Existence

Natural Factors

Because mountain plovers congregate in large flocks on the wintering grounds, they may be more vulnerable to local catastrophic events there. For example, winter surveys in the Imperial Valley in February 2003 were cut short when heavy rains fell and the flocks of mountain plovers disappeared. It is speculated that the birds left their wintering grounds early or moved to less suitable habitats in the Central Valley (F. Knopf, in litt., 2003). The former appears more likely since the CBC for the area (Salton Sea South) had a record low number of plovers, while the Panoche Valley count to the north

had far greater numbers than usual (birdsource.org 2003).

Pesticide Application and Exposure

Grasshoppers occur throughout the breeding range of the mountain plover and can reach population levels considered a threat to agriculture. The APHIS (2002) has authorized rangeland grasshopper and Mormon cricket control in areas occupied by mountain plovers. Dimilin, malathion, and carbaryl are the identified chemicals when grasshoppers reach economic thresholds (APHIS 2002). Control on private lands can be undertaken by State agencies or private landowners without participation or oversight by APHIS.

The emphasis of the rangeland grasshopper control program is to reduce rather than eliminate grasshoppers, but effects to nontarget insects also occur. The effects of treatment are immediate, and some treatments can depress insect populations into the second year (APHIS 2003). Grasshoppers and other insects are major prey items of mountain plovers, and control may influence mountain plover productivity (Graul 1973, Knopf 1996b, Knopf and Rupert 1996). In conferring under section 7 of the Act on the effects of treatments on mountain plover, we concluded that the application of rangeland grasshopper control as described by APHIS (2002) on mountain plover breeding habitat could result in reduced prey, greater foraging distances, increased chick predation, and reduced survival (W. Knapp, Service, in litt. 2002; R. Williams, Service, in litt. 2003).

In Montana, grasshopper control is authorized to occur in 2003 on both public and private lands (APHIS 2003). Because APHIS, in conference with the Service, has agreed to treatments that will avoid active black-tailed prairie dog colonies and because mountain plovers in Montana are closely associated with black-tailed prairie dog colonies, we believe that treatments are not likely to threaten the plover there. Similarly, in Wyoming, planning is underway to authorize grasshopper control on BLM lands throughout Wyoming. After conferring with the Service, APHIS has agreed to avoid prairie dog colonies and to avoid known mountain plover nesting sites not associated with prairie dog colonies (K. Dickerson, Service, pers. comm. 2003). Control on private lands can be undertaken by State agencies or private landowners without participation or oversight by APHIS or the Service. While control of grasshoppers and other pests on private lands may pose a threat, we do not believe that it is of a magnitude or immediacy that warrants listing the species.

Mountain plovers may be exposed to pesticides while they occupy winter habitat in California (Knopf 1996). In conferring under section 7 of the Act, we concluded that malathion application to control curly-top virus in the Imperial and San Joaquin Valleys would harass some wintering mountain plovers, but the timing and location of treatment was not likely to result in direct exposure, or significant impacts to mountain plover prey (W. White, Service, in litt. 2001b). More recently, the California Department of Fish and Game conducted an assessment of exposure risk in Imperial County, specifically, by comparing mountain plover presence in the Valley with crop types predominately used by them, and the pesticides typically applied to these crops (B. Hosea, California Department of Fish and Game, in litt. 2003; Wunder and Knopf 2003). This information suggests that direct exposure to mountain plovers is reduced because application of pesticides occurs when plovers are not using the fields. For example, insecticides are usually applied to alfalfa fields when the alfalfa is too high to be attractive to mountain plovers. Also, insecticides are not applied while livestock are grazing fields to minimize pesticide exposure to livestock, and pre-planting herbicides are usually incorporated into the soil as a granular form, thus reducing exposure risk. Potential impacts to the mountain plover prey base on the wintering grounds are not known, but also appear to be minimal for reasons cited above (B. Hosea, in litt. 2003). Pesticide exposure by aerial drift is likely due to mosaic cropping patterns, but effects to mountain plovers are unknown.

A review of exposure to organochlorines, selenium, and heavy metals showed that concentrations in mountain plovers were below thresholds that cause population-level effects (A. Archuleta, Service, in litt. 1997). More recently, the Service analyzed pesticide levels in 20 mountain plover eggs collected from Colorado and 4 from Montana. Dichlorodiphenyldichloroethylene (DDE) levels were detected in all eggs; in four eggs levels were above those known to be detrimental to other bird species (K. Dickerson, Service, in litt. 2002). While the levels detected in the mountain plover eggs may have been influenced by prolonged storage prior to analysis, the results nonetheless suggest that mountain plovers may be at risk from organochlorine pesticide exposure (K. Dickerson, Service, pers. comm. 2003). The DDE is a metabolite of dichlorodiphenyltrichloroethane (DDT), known to be responsible for eggshell thinning, and is extremely persistent in the environment. In addition, a recent investigation found a wide disparity in cholinesterase levels between mountain plovers collected in the Central Valley (pesticide use widespread) compared to those from the Carrizo Plain (pesticide use minimal), but no differences in mountain plover body condition (Iko, *et al.* 2003).

Status Summary

The species was proposed in 1999 and 2002 as threatened because the best information available at that time indicated breeding population declines and loss of habitat due to a variety of factors, including agricultural practices, prairie dog declines, and grassland conversion. Research on some of these issues, reanalysis of old data, and new information obtained in the last year lead us to conclude that the threats to the species are such that listing is not warranted.

There is no information to document that the mountain plover population is declining or will be in danger of extinction in the foreseeable future. The declines apparent in the BBS data turned out to be statistically insignificant. The CBC data in California are tremendously variable, but suggest a slow downward trend, whereas surveys on the wintering grounds by researchers do not demonstrate declines. Although there are many specific instances of grassland conversion destroying plover nesting habitat, nesting habitat does not appear to be limiting. Occupied prairie dog habitat is more abundant and more stable than previously thought, providing breeding and nesting habitat for plovers. Nesting appears to be equally successful on croplands as on native grassland. Distribution of plovers across the wintering range appears to depend more on annual farming practices and weather rather than on permanent habitat destruction.

In the last few years, Federal land management agencies and State and county governments have become more actively involved in mountain plover management. In 1994, the Forest Service developed a "Mountain Plover Management Strategy" for the Pawnee National Grassland in Colorado. We believe formalized conservation efforts by the CDOW will improve the status of the mountain plover in Colorado. Other new conservation efforts within the breeding range include the recently-established Federal, State, and private High Plains Partnership; the Department of Defense's Integrated Natural Resource Management Plan for Fort Carson,

Colorado; the Rocky Mountain Bird Observatory's "Prairie Partners"; The Nature Conservancy's "Prairie Wings"; and private land conservation easement efforts in South Park, Colorado.

Other potential conservation measures for this species include—implementing grazing plans that encourage high grazing intensity in plover nesting areas, revising county bulletins to include specific protective measures for the mountain plover during pesticide application, conducting haying and grazing on existing CRP tracts to manage for the grass height and density required by nesting plovers, providing seeding criteria for new CRP tracts that would encourage establishment of native shortgrass prairie species in preference to taller grasses, and providing incentives to landowners to leave cultivated areas unplanted until plover eggs have hatched and chicks are able to escape from machinery. We have initiated discussions with the NRCS to explore ways, such as through the Conservation Reserve Enhancement Program, that these measures might be implemented on private land.

Following our above analysis and discussion, we have determined that the action of listing the mountain plover as threatened throughout its range as proposed in 1999 and 2002 is not warranted. We have made this determination because the threats to the species, as identified in the previous proposed rules, are not as significant as earlier believed, and current available information does not indicate that the threats to the species and its habitat are likely to endanger the species in the foreseeable future throughout all or a significant portion of its range. Consequently, we withdraw our 1999 and 2002 proposed rules and our 2002 proposed special rule for the mountain plover.

References Cited

You may request a complete list of all references cited in this document, as well as others, from the Assistant Field Supervisor at the Grand Junction, Colorado, Field Office (*see* **ADDRESSES**).

Dated: September 3, 2003.

Marshall P. Jones, Jr.,

Acting Director, Fish and Wildlife Service.

[FR Doc. 03–22860 Filed 9–8–03; 8:45 am]

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 660

[I.D. 090403B]

Western Pacific Fishery Management Council; Public Meeting

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of public meeting/public hearing.

SUMMARY: The original public meeting document was published in the **Federal Register** on August 27, 2003. Due to the U.S. District Court ruling made by Judge Colleen Kollar-Kotelly, on August 31, 2003, the 2002 Biological Opinion, issued on November 15, 2002, is "vacated and remanded to the National Marine Fisheries Service." Further, Judge Kollar-Kotelly ordered that the regulations issued on June 12, 2002, amending the Fishery Management Plan for the Pelagic Fisheries of the Western Pacific Region (Pelagics FMP), are "vacated and remanded to the National Marine Fisheries Service." The Western Pacific Fishery Management Council (Council) meeting document is republished.

DATES: The Western Pacific Fishery Management Council will meet on September 23, 2003, at 12 noon Hawaii Standard Time.

ADDRESSES: The Council meeting will be held via telephone conference call at the Council offices, 1164 Bishop Street, Suite 1400, Honolulu Hawaii 96813; telephone: 808–522–8220; Call in number: 1–808–527–2929 PIN 5785; FAX: 808–522–8226.

FOR FURTHER INFORMATION CONTACT: Kitty M. Simonds, Executive Director; telephone: 808–522–8220.

SUPPLEMENTARY INFORMATION: The agenda during the Council meeting will include the following items:

1. Pelagic Fisheries

A. Discuss the implications of the ruling of U.S. District Court Judge Colleen Kollar-Kotelly, which puts aside the 2002 Biological Opinion and 2002 regulations.

B. Review and discuss sea-turtle take mitigation measures for the U.S. pelagic longline fishery in the Western Pacific Region. Topics may include continued operation of the fishery, regulations, and/or possible emergency actions.

In 2002, the Council developed a regulatory framework adjustment to the Pelagics FMP which was intended to minimize interactions with, and harm to, Pacific sea turtles. These measures stemmed from the non-discretionary Reasonable and Prudent Alternative contained in a Biological Opinion issued in 2001 by NMFS under the Endangered Species Act. Among the various measures implemented were a prohibition on shallow-set longline fishing north of the equator, and a seasonal area closure from 15° N. lat. to the equator, and from 145° W. long. to 180° long. to all fishing by pelagic longline vessels during April and May of each year. These measures have contributed to reductions in sea turtle interactions. However, the southern area closure exacts a significant economic burden on the Hawaii-based longline fleet because it is unable to access these fishing grounds when bigeye and yellowfin tuna stocks are seasonally abundant during April and May. At its 118th meeting in June 2003, the Council took initial action to consider modifying the southern area closure to reduce the economic impact on the longline fishery while continuing to conserve turtles. The Council also directed its staff to continue preparation of a regulatory amendment for potential changes to the Pelagics FMP, including a detailed analysis of a range of modifications to the southern area closure and the impacts of those alternatives on sea turtles, fisheries, and the environment. At its 119th meeting, the Council will discuss the ruling by U.S. District Court Judge Colleen Kollar-Kotelly, and consider the implications of that ruling for proposed amendments to the Pelagics FMP. The Council will also review and discuss sea-turtle take mitigation measures for the U.S. pelagic longline fishery in the Western Pacific Region. These may include continuation of the fishery, developing regulations, and/or possible emergency actions.

2. Other Business

Although non-emergency issues not contained in this agenda may come before the Council for discussion, those issues may not be the subject of formal Council action during this meeting. Council action will be restricted to those issues specifically listed in this document and to any issue arising after publication of this document that requires emergency action under section 305(c) of the Magnuson-Stevens Fishery Conservation and Management Act, provided that the public has been notified of the Council's intent to take final action to address the emergency.