

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 Gaul's 1976 population estimate for the Pawnee National Grassland is now considered inaccurate.

Response 19: We discussed this issue with Dr. Gaul in preparing this final determination. The commenter correctly notes that subsequent to Dr. Gaul'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. Gaul 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. Gaul believes that mountain plovers were much more numerous during his