Service Response: The Service recognizes that populations of *E. t. extimus* are likely to fluctuate naturally in response to various ecological factors. However, the Service believes that declines in habitat availability and increased exposure to cowbird parasitism have caused population reductions beyond the scale of natural fluctuations. Fluctuations in response to nonanthropogenic phenomena are likely to continue, but the current population levels are so low that these natural phenomena may be sufficient to cause local extirpations.

Issue 53: Restrictions associated with listing would be in conflict with Kern County's General Plan.

Service Response: Under section 4 of the Act, the Service considers only scientific and commercial information relating to the five listing factors outlined in section 4(a)(1) and discussed with respect to *E. t. extimus* in this rule. Therefore, conflicts with local plans were not considered in making this determination. However, the Service strives to pursue conservation and recovery of listed species in cooperation with State and local authorities, and seeks to minimize conflicts.

Issue 54: Listing and critical habitat designations will adversely affect flood control measures, some authorized by the Federal Emergency Management Agency and other Federal and State regulations; the proposed rule failed to consider flood accommodation needs, channelization, and clearing vegetation.

Service Response: Flood control measures virtually always involve a Federal agency, through funding, permitting, and/or other action. Therefore, flood control measures that may affect *E. t. extimus* would undergo consultation under section 7 of the Act. Section 7 and its implementing regulations have provisions for emergency consultations, and for actions within presidentially declared disaster areas.

Issue 55: Government agencies are responsible for many impacts to riparian areas; campgrounds, fish hatcheries, and some district offices are located in riparian areas.

Service Response: The Service acknowledges that some Federal actions are in part responsible for the threats facing E. t. extimus. As a result of listing, those Federal actions will be subject to consultation under section 7 of the Act to evaluate and minimize the effects of those actions.

Issue 56: The Service does not acknowledge receipt of comments on listing, and probably does not read them.

Service Response: The Service does not routinely acknowledge receipt of each letter commenting on listing proposals. The number of letters in this case made it logistically and financially impossible to acknowledge each one. However, all letters were read, and their issues addressed either here or elsewhere in this final rule. All comment letters and transcripts of public hearings are retained in the permanent file on this species and are available for public inspection.

Issue 57: Protecting flycatcher habitat may restrict mosquito control, which is important for control of encephalitis and other mosquito-borne diseases.

Service Response: Where such control involves a Federal action, mosquito and disease control actions may be subject to consultation under section 7(a)(2) of the Act, which would evaluate but not necessarily restrict or significantly modify the project. Ultimately, section 7(e) of the Act allows exemptions to the requirements of section 7(a)(2).

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that the southwestern willow flycatcher should be classified as an endangered species. Procedures found at section 4(a)(1) of the Act and regulations implementing the listing provisions of the Act (50 CFR Part 424) were followed. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to the southwestern willow flycatcher (Empidonax traillii extimus) are as follows:

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

Large scale losses of southwestern wetlands have occurred, particularly the cottonwood-willow riparian habitats of the southwestern willow flycatcher (Phillips et al. 1964, Carothers 1977, Rea 1983, Johnson and Haight 1984, Katibah 1984, Johnson et al. 1987, Unitt 1987, General Accounting Office (GAO) 1988, Bowler 1989, Szaro 1989, Dahl 1990, State of Arizona 1990, Howe and Knopf 1991). Changes in riparian plant communities have resulted in the reduction, degradation, and elimination of nesting habitat for the willow flycatcher, curtailing the ranges, distributions, and numbers of western subspecies, including *E. t. extimus* (Gaines 1974, Serena 1982, Cannon and Knopf 1984, Klebenow and Oakleaf

1984, Taylor 1986, Unitt 1987, Schlorff 1990, Ehrlich *et al.* 1992).

Dahl (1990) reviewed estimated losses of wetlands between 1780 and the 1980's in the Southwest: California is estimated to have lost 91 percent, Nevada 52 percent, Utah 30 percent, Arizona 36 percent, New Mexico 33 percent, and Texas 52 percent. As much as 90 percent of major lowland riparian habitat has been lost or modified in Arizona (State of Arizona 1990). Franzreb (1987) noted that "[B]ottomland riparian forests are the most highly modified of natural landscapes in California."

Loss and modification of southwestern riparian habitats have occurred from urban and agricultural development, water diversion and impoundment, channelization, livestock grazing, off-road vehicle and other recreational uses, and hydrological changes resulting from these and other land uses. Rosenberg et al. (1991) noted that "it is the cottonwood-willow plant community that has declined most with modern river management." Loss of the cottonwood-willow riparian forests has had widespread impact on the distribution and abundance of bird species associated with that forest type (Hunter et al. 1987, Hunter et al. 1988, Rosenberg et al. 1991).

Overuse by livestock has been a major factor in the degradation and modification of riparian habitats in the western United States. These effects include changes in plant community structure and species composition, and relative abundance of species and plant density. These changes are often linked to more widespread changes in watershed hydrology (Rea 1983, General Accounting Office 1988) and directly affect the habitat characteristics critical to E. t. extimus. Livestock grazing in riparian habitats typically results in reduction of plant species diversity and density, especially of palatable broadleaf plants like willows and cottonwood saplings, and is one of the most common causes of riparian degradation (Carothers 1977, USDA Forest Service 1979, Rickard and Cushing 1982, Cannon and Knopf 1984, Klebenow and Oakleaf 1984, GAO 1988, Clary and Webster 1989, Schultz and Leininger 1990).

Increases in abundance of riparian bird species have followed reduction, modification, or removal of cattle grazing. Krueper (1993) found the following increases in birds associated with cottonwood-willow habitat on Arizona's San Pedro River four years after the removal of livestock: yellow warbler, 606 percent; common yellow-throat, 2,128 percent; yellow-breasted