

## I. INTRODUCTION

### *A. Overview*

The Endangered Species Act of 1973 (ESA) calls for preparation of recovery plans for threatened and endangered species likely to benefit from the effort, and authorizes the Secretary of the Interior to appoint recovery teams to prepare the plans. A recovery plan must establish recovery goals and objectives, describe site-specific management actions recommended to achieve those goals, and estimate the time and cost required for recovery. A recovery plan is not self-implementing, but presents a set of recommendations for managers and the general public, which are endorsed by an approving official of the Department of Interior. Recovery plans also serve as a source of information on the overall biology, status, and threats of a species. It is the intent of the U.S. Fish and Wildlife Service (USFWS) to modify this Recovery Plan in response to management, monitoring, and research data, at 5-year intervals.

This Recovery Plan is comprised of the following major sections:

#### *I. Introduction and Background*

This section provides summary background information on the southwestern willow flycatcher's sensitive species status, and the general approach to recovery.

#### *II. Biology, Ecology, and Status*

This section provides background information on the biology, status, and reasons for decline of the southwestern willow flycatcher.

#### *III. Conservation Measures*

This section discusses current programs, measures, and legal mechanisms that contribute, or could contribute to conservation and recovery of the southwestern willow flycatcher and/or its habitat.

#### *IV. Recovery*

This section presents the details of the objectives, approach, criteria, and specific actions for recovering the flycatcher.

#### *V. Implementation Schedule*

This section outlines tasks, assigns responsibility for task implementation, and estimates the cost of the recovery program.

## VI. Literature Cited

Full citations for all literature referenced in this Recovery Plan and associated Issue Papers (see Appendices) are listed.

## VII. Appendices

The 13 Appendices to this Recovery Plan comprise this section. These Appendices include Issue Papers (see Section I.C.; Recovery Team Subgroup and “Issue Paper” Approach, below), data compilations, lists, a summary of comments on the draft plan, and other background information. Appendix B provides a key to all acronyms and abbreviations used in this Recovery Plan.

In this Recovery Plan, unless otherwise noted, the terms ‘southwestern willow flycatcher,’ ‘flycatcher,’ ‘*E. t. extimus*,’ and ‘the bird’ all refer to the endangered southwestern subspecies of the willow flycatcher, *Empidonax traillii extimus*. The term ‘willow flycatcher’ is used to refer to the species level (*E. traillii*), or one or more of the other willow flycatcher subspecies, as noted in each use.

## B. Ecosystem and Watershed Approaches

As directed in the ESA, the purpose of this Recovery Plan, and the ESA’s other provisions, are to conserve the *ecosystems* upon which the southwestern willow flycatcher depends. The southwestern willow flycatcher depends upon one of the most critically endangered habitats in North America: southwestern riparian ecosystems. Southwestern riparian ecosystems have always comprised a very small portion of the landscape. Yet even in their current decimated state they are disproportionately important to wildlife and plants, typically supporting far greater species diversity than the surrounding upland ecosystems. Therefore, in addition to the flycatcher, many other species of birds, mammals, fish, plants, reptiles, amphibians, and invertebrates are imperiled by the destruction of southwestern riparian habitats brought about by regional high levels of human populations.

This Recovery Plan recognizes that not all riparian habitats are potential southwestern willow flycatcher habitat, and that flycatcher habitat may not be the same as, or compatible with, riparian and aquatic habitats for some other plant and wildlife species. Southwestern riparian habitats are by nature diverse, heterogeneous, and dynamic, providing a wide spectrum of habitats for a myriad of species. In addition to general drying of riparian habitats, a major impact of human developments has been elimination or modification of the natural processes that establish and maintain these natural levels of dynamism, diversity, and heterogeneity in riparian ecosystems. This Recovery Plan does not seek to make all riparian habitats into southwestern willow flycatcher habitat at the expense of other species. To do so would be ecologically impossible, and would constitute irresponsible conservation biology. This Recovery Plan seeks in part to protect, re-establish, mimic, and/or mitigate for the loss of the natural processes that establish, maintain, and recycle riparian ecosystems relevant to the flycatcher.

Due to the broad geographic range of the flycatcher, this Recovery Plan uses a watershed approach to organize recovery. Six Recovery Units, further subdivided into Management Units, are designated (see Section IV.A.; Recovery Strategy). These Recovery and Management Units are based on watershed and hydrologic units (Seaber et al. 1994) within the breeding range of the flycatcher. This provides a strategy to characterize flycatcher populations, structure recovery goals, and facilitate effective recovery actions that should closely parallel the physical, biological, and logistical realities on the ground. Further, using Recovery and Management Units assures that populations will be well distributed when recovery criteria are met.

Riparian habitats have high potential for restoration. They are by nature dynamic and fairly resilient, adapted to the dynamism of natural stream systems. Where natural or near-natural conditions of water flow, water chemistry, and sedimentation can be re-established, near-natural riparian ecosystems have a high likelihood of re-establishment. However, restoration ecology is a new science. Until we improve our ability to restore degraded riparian ecosystems, conservation of existing healthy riparian systems should be a high priority (USFWS 1998).

### ***C. Recovery Team Subgroup and “Issue Paper” Approach***

The Southwestern Willow Flycatcher Recovery Team is composed of a Technical Subgroup (pg. ii), six Implementation Subgroups (Appendix A), and a Tribal Working Group. The Technical Subgroup consists of 14 academic scientists, researchers, and resource managers with a wide range of expertise in avian biology and ecology, southwestern willow flycatcher ecology, cowbird ecology, riparian ecology, hydrology, range management, and conservation planning. The Implementation Subgroups consist of more than 200 community representatives across the Southwest including ranchers, environmental representatives, water and power interests, State and Federal land managers, and local governments. Each Implementation Subgroup is associated with a particular recovery unit (see Section IV. Recovery). The Technical Subgroup’s function is to compile and review extensive scientific information and develop recovery goals, strategies and recommended actions. The role of the Implementation Subgroups is to advise the Regional Director and Technical Subgroup on the feasibility of recovery strategies and actions recommended by the Technical Subgroup, and to implement recovery actions in the United States portion of the flycatcher’s geographic range.

The Technical Subgroup met 22 times between March 1998 and September 2000, to assimilate information and develop recovery strategies and goals. As part of that process, an additional five meetings between the Technical and Implementation Subgroups were held. The Tribal Working Group met with the Technical Subgroup on two occasions to discuss potential Tribal involvement and collaboration in the recovery process. Communication between the subgroups was facilitated by a USFWS Recovery Team Liaison, and a mutually-accessible Internet website. For each of the major issues involved in recovering the flycatcher, the Technical Subgroup developed in-depth “Issue Papers”, which were submitted to the Implementation Subgroups for review. The Issue Papers were finalized incorporating feedback from the Implementation Subgroups, and are presented in Appendices D through M. An Issue Paper developed by the Tribal Working Group is presented in Appendix N. In some cases, synthesized information from an appendix has been brought

forward to the body of the Recovery Plan, as it constitutes a crucial link between the biology/ecology of the flycatcher, threats to the flycatcher, and the management actions recommended in the Recovery Plan. In other cases, the appendix contains information that is useful for understanding the context of a threat, but may not be directly applicable to management recommendations. For all aspects of flycatcher recovery discussed in this Recovery Plan, these Issue Papers may be referred to for greater detail. Overall, the Subgroup and Issue Paper approach was used to incorporate the best possible science, and address the major technical and logistical challenges to recovery, before a draft of this Recovery Plan was circulated for full public review. For a conservation and recovery effort of this scope and complexity, this approach proved to be of great value.

On May 3, 2001, the completed draft Recovery Plan was made available to the Implementation Subgroups and Tribal Working Group. On June 6, 2001, the USFWS published in the Federal Register (66 FR 30477) an announcement of the availability of the draft Recovery Plan, and opened a 120-day comment period. The comment period was subsequently reopened for a period of 60 days extending through December 10, 2001 (66 FR 51683). During this period, the Technical Subgroup held an additional five meetings with Implementation Subgroup members, and participated in two official briefings for interested Tribes sponsored by the Bureau of Indian Affairs (BIA) and the Native American Fish and Wildlife Society. All comments received were reviewed by the Technical Subgroup and USFWS, significant and substantive issues identified, and changes to the draft Recovery Plan were made accordingly (see also Appendix O).

#### ***D. Species Description***

The southwestern willow flycatcher (*Empidonax traillii extimus*) is a small Neotropical migratory bird, whose nesting habitat is restricted to relatively dense growths of trees and shrubs in riparian ecosystems in the arid southwestern United States and possibly extreme northwestern Mexico. These riparian habitats are associated with rivers, swamps, and other wetlands, including lakes and reservoirs (Bent 1960). Most of these habitats are classified as wetlands in the legal sense: palustrine and lacustrine forested wetlands and scrub-shrub wetlands (Cowardin et al. 1979). Some are non-wetland riparian forests. Surface water or saturated soil are typically, but not always, present year-round or seasonally and ground water is generally at a depth of less than 2 or 3 meters (6.5 to 9 ft ) within or adjacent to nesting habitat.

The flycatcher is approximately 15 cm (5.75 in) long, and weighs about 12 g (0.42 oz). It has a grayish-green back and wings, whitish throat, light grey-olive breast, and pale yellowish belly. Two wingbars are visible; the eye ring is faint or absent. The upper mandible is dark, the lower is light with a yellowish tone. The song is a sneezy “fitz-bew,” the call a repeated “whitt.” Other vocalizations, usually given by flycatchers in close interactions with one another, include “wheek-a-dee,” “wheeo” and rolling “brrrt” notes. Although males are the primary singers, females also sing occasionally (Seutin 1987, Paxton et al. 1997, Sogge et al. 1997b, SWCA 2000, M. Whitfield unpubl. data.).

### ***E. Listing History***

The USFWS included the southwestern willow flycatcher on its Animal Notice of Review as a category 2 candidate species on January 6, 1989 (USFWS 1989). The candidate category 2 designation has been discontinued, but at that time the designation identified a species for which listing may have been appropriate but additional biological information was needed. After conducting a status review for the flycatcher, the USFWS elevated it to candidate category 1 status on November 21, 1991 (USFWS 1991). A category 1 species is one for which the USFWS has substantial information to support a proposal to list, but publishing a proposal is precluded by other listing activity.

On January 25, 1992, a coalition of conservation organizations petitioned the USFWS under section 4 of the ESA, requesting listing of the flycatcher as an endangered species (Suckling et al. 1992). The USFWS found that the petition presented substantial information, and requested public comments and additional biological data on the prospective listing (USFWS 1992). After reviewing additional information, on July 23, 1993 the USFWS proposed to list the flycatcher as an endangered species, with 1,038 km (643 mi) of riparian habitats proposed for critical habitat designation (USFWS 1993). The USFWS again requested public comments and scientific information, and held six public hearings. After reviewing the additional information received, the USFWS designated the southwestern willow flycatcher as endangered, effective March 29, 1995 (USFWS 1995). Designation of critical habitat was deferred (see below).

### ***F. Critical Habitat Designation History***

When the USFWS listed the southwestern willow flycatcher as endangered, a decision was deferred regarding the 1,038 km (643 mi) of riparian habitats proposed as critical habitat (USFWS 1995). The USFWS determined it was necessary to consider additional comments, reconsider the prudence of designating critical habitat, and reconsider the boundaries of critical habitat. A second period for public comment was opened from February 17 to April 28, 1995. After considering the additional comments and scientific information received, on July 22, 1997 the USFWS finalized critical habitat designation for 964 km (599 mi) of riparian habitats (USFWS 1997a), with a correction made August 20, 1997 (USFWS 1997b). On May 11, 2001, the 10<sup>th</sup> Circuit Court of Appeals set aside the southwestern willow flycatcher critical habitat designation and instructed the USFWS to issue a new critical habitat designation in compliance with the Court's ruling. The USFWS is currently in the process of re-proposing critical habitat for the flycatcher. Unless otherwise instructed by the Court, the USFWS anticipates final designation in June, 2004. For a more detailed discussion of the physical and biological features of southwestern willow flycatcher habitat, see Appendix D.