

Bexar County, Texas, be designated as critical habitat for the nine karst invertebrates (67 FR 55064). The comment period for the proposed rule was originally scheduled to close on November 25, 2002, but was extended until December 23, 2002 (67 FR 70203), to allow for a 30-day comment period on the draft economic analysis. Thus, we accepted comments on the proposed rule and the economic analysis until December 23, 2002.

#### Summary of Comments and Recommendations

In the August 27, 2002, proposed rule, we requested all interested parties to submit comments or information concerning the designation of critical habitat for the nine endangered Bexar County invertebrates (67 FR 55064). During the comment period, we held a public hearing in San Antonio on October 30, 2002. We published a newspaper notice inviting public comment and announcing the public hearing in the San Antonio Express-News. A transcript of the hearing is available for inspection (see ADDRESSES section). The comment period was originally scheduled to close on November 25, 2002.

On November 21, 2002, we announced the availability of the draft economic analysis and requested comments on it and the proposal during an extension of the comment period until December 23, 2002 (67 FR 70203). We contacted all appropriate State and Federal agencies, county governments, scientific organizations, and other interested parties and invited them to comment. We also provided notification of these documents through email, telephone calls, letters, and news releases faxed and/or mailed to affected elected officials, media outlets, local jurisdictions, and interest groups. For the notice of the proposed rule, we mailed over 1,500 letters to interested parties. Later we sent over 1,200 post cards notifying interested parties of the availability of the draft economic analysis and the extension of the comment period. The number of parties on the mailing list fell as we deleted out-of-date and duplicate addresses. We also published all of the associated documents on the Service's regional Internet site following their release.

We solicited 11 independent experts who are familiar with these species and the karst ecosystem to peer-review the proposed critical habitat designation. Only one of the peer reviewers submitted comments, generally in support of the proposed designation (see "Peer Review" section below). We also received a total of 42 written comments,

and 3 oral comments at the public hearing. Of those comments indicating a preference, 10 supported the critical habitat designation and 13 indicated opposition to designation. Many commenters did not express opposition to the designation, but did express opposition to specific areas being included. We reviewed all comments received for substantive issues and new data regarding critical habitat and the draft economic analysis. Here, we address all comments on both documents received during the comment periods, as well as public hearing testimony. We have grouped similar comments and addressed them in the following summary.

#### *Issue 1: Biological Justification and Methodology for Size of Critical Habitat Units*

(1) *Comment:* The Service should designate smaller areas for critical habitat units, including: (1) Surface and subsurface drainage areas; (2) cave cricket foraging areas; and (3) dominant and subdominant woody species, rather than uncommon plant species. The Service focused its methodology on surface plant communities, but little information exists relating particular vegetation communities to the subsurface habitat of the listed species.

*Our Response:* We believe it is well documented that surface flora and fauna communities are an essential energy source for fauna, including the nine endangered invertebrates, in the karst environment. The areas needed to support dominant, subdominant, and "other woody species" common to the Edwards Plateau were included in our proposal to incorporate key components of the native vegetative community that contribute directly to nutrient input, and which also support the animal community that is another source of nutrient input to karst areas. We do not have data from vegetation surveys conducted around occupied caves to determine the importance of rarer plant species. Therefore, in this final designation we have reduced the size of all of the critical habitat units based on the amount of area that we believe, based on the best available information, is needed to support at least 15 of 24 species of vegetation on the Edwards Plateau, including the seven species with the highest dominance values, but not the rarer plant species (see "Criteria Used to Delineate Critical Habitat" section below for further explanation).

(2) *Comment:* The Service should designate larger areas for the critical habitat units to: (1) Include all or most of Karst Zone 1; (2) all or portions of Karst Zone 2; (3) reduce fragmentation

of habitat; (4) consider subsurface karst voids between known caves that may provide habitat for the species; (5) provide better protection against pollution; and (6) provide dispersal corridors for cave crickets.

*Our Response:* We agree that it is likely that all of these concerns have the potential to affect the conservation of the endangered karst invertebrates. Much of the biology and ecology of these karst-adapted listed species is not well understood. Critical habitat was delineated to encompass areas on which are found those components of the karst ecosystem for which sufficient information exists to determine that they are essential to the conservation of the listed species.

We recognize that areas outside of the boundaries of critical habitat may be important for the karst invertebrates for purposes such as providing habitat in interstitial karst voids (beyond the known caves), additional sources of nutrients, or dispersal corridors. However, we did not have sufficient data when we proposed critical habitat, nor were any data provided during the comment period, that would allow us to adequately assess the importance to occupied caves of other areas of Karst Zones 1 or 2, karst voids between known caves, larger buffers, or areas that are needed for dispersal corridors for cave crickets. For instance, members of the Technical Subcommittee of the Karst Invertebrate Recovery Team, who are experts on the species and the karst ecosystems, agree that it is likely the invertebrates spend considerable time, perhaps the majority of time, in the human-inaccessible karst voids (interstitial spaces) associated with the cave (Steve Taylor, Technical Subcommittee chair, pers. comm. 2002). However, the distance that these invertebrates go from the cave into the surrounding karst is unknown. Since protection of the surface and subsurface drainage areas associated with each occupied cave is important to buffer the cave from pollutants, these drainage areas were included, where possible, in the critical habitat designation. Additional scientific discovery may show that larger areas are needed for long-term conservation, and we will continue to incorporate such information into planning and implementing various conservation activities for these species. Given the best available information, we believe the specific areas designated in this rule contain one or more of the physical or biological features that are essential to the conservation of the species and meet the definition of critical habitat as provided in section 3 of the Act.