



DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R2–ES–2013–0002; 4500030114]

RIN 1018-AZ23

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Zuni Bluehead Sucker

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), designate critical habitat for the Zuni bluehead sucker (*Catostomus discobolus yarrowi*) under the Endangered Species Act of 1973, as amended (Act). In total, approximately 55.7 kilometers (km) (34.6 miles (mi)) in McKinley and Cibola Counties, New Mexico, fall within the boundaries of the critical habitat designation.

DATES: This rule is effective on [**INSERT DATE 30 DAYS AFTER DATE OF FEDERAL REGISTER PUBLICATION**].

ADDRESSES: This final rule is available on the Internet at <http://www.regulations.gov> and at the New Mexico Ecological Services Field Office (address below). Comments and materials we received, as well as some supporting documentation we used in preparing this rule, are available for public inspection at <http://www.regulations.gov>. All of the comments, materials, and documentation that we considered in this rulemaking are available by appointment, during normal business hours at: U.S. Fish and Wildlife Service, New Mexico Ecological Services Field Office, 2105 Osuna Road NE,

Albuquerque, NM 87113; telephone 505-346-2525; facsimile 505-346-2542.

The coordinates or plot points or both from which the maps are generated are included in the administrative record for this critical habitat designation and are available at <http://www.regulations.gov> at Docket No. FWS–R2–ES–2013–0002, on the Service’s website at <http://www.fws.gov/southwest/es/newmexico>, and at the New Mexico Ecological Services Field Office. Any additional tools or supporting information that we developed for this critical habitat designation will also be available at the Fish and Wildlife Service website and Field Office set out above, and may also be included in the preamble of this rule and at <http://www.regulations.gov>.

FOR FURTHER INFORMATION CONTACT: Wally “J” Murphy, Field Supervisor, U.S. Fish and Wildlife Service, New Mexico Ecological Services Field Office, 2105 Osuna Road NE, Albuquerque, NM 87113; telephone 505-346-2525; facsimile 505-346-2542. If you use a telecommunications device for the deaf (TDD), call the Federal Information Relay Service (FIRS) at 800-877-8339.

SUPPLEMENTARY INFORMATION:

Executive Summary

Why we need to publish a rule. This final rule designates critical habitat for the Zuni bluehead sucker. Under the Endangered Species Act, any species that is determined to be an endangered or threatened species requires critical habitat to be designated, to the maximum extent prudent and determinable. Designations and revisions of critical habitat can only be completed by issuing a rule.

We listed the Zuni bluehead sucker as an endangered species on July 24, 2014 (79 FR 43132). On January 25, 2013, we published in the **Federal Register** a proposed

critical habitat designation for the Zuni bluehead sucker (78 FR 5351). Section 4(b)(2) of the Act states that the Secretary shall designate critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat.

The critical habitat areas we are designating in this rule constitute our current best assessment of the areas that meet the definition of critical habitat for the Zuni bluehead sucker. We are designating approximately 55.7 km (34.6 mi) of the Zuni River Watershed in one unit in McKinley and Cibola Counties, New Mexico.

We have prepared an economic analysis of the designation of critical habitat. In order to consider economic impacts, we prepared an incremental effects memorandum (IEM) and screening analysis which, together, we consider our draft economic analysis (DEA) of the proposed critical habitat designation and related factors (80 FR 19941; April 14, 2015). The analysis, dated October 22, 2014, was made available for public review from April 14, 2015, through May 14, 2015 (80 FR 19941). The DEA addressed probable economic impacts of critical habitat designation for the Zuni bluehead sucker. Following the close of the comment period, we reviewed and evaluated all information submitted during the comment period that may pertain to our consideration of the probable incremental economic impacts of this critical habitat designation. We have incorporated the comments into this final determination.

Peer review and public comment. We sought comments from independent specialists to ensure that our designation is based on scientifically sound data and analyses. We

obtained opinions from three knowledgeable individuals with scientific expertise to review our technical assumptions and analysis, and whether or not we had used the best available information. These peer reviewers generally concurred with our methods and conclusions and provided additional information, clarifications, and suggestions to improve this final rule. Information we received from peer review is incorporated in this final revised designation. We also considered all comments and information we received from the public during the comment period.

Previous Federal Actions

On January 25, 2013, we published a proposed rule to list the Zuni bluehead sucker as an endangered species and a proposed rule to designate critical habitat for the Zuni bluehead sucker (78 FR 5369 and 78 FR 5351, respectively). We proposed to designate as critical habitat approximately 475.3 km (291.3 mi) in three units in McKinley, Cibola, and San Juan Counties, New Mexico, and Apache County, Arizona.

After the publication of the proposed rules, we found there was substantial scientific disagreement regarding the taxonomic status of some populations that we considered Zuni bluehead sucker in the proposed listing rule. On January 9, 2014, we published in the **Federal Register** a document that reopened the comment period for the proposed listing rule and extended the final determination of listing status for the Zuni bluehead sucker by 6 months due to substantial disagreement regarding the Zuni bluehead sucker's taxonomic status in some locations (79 FR 1615).

On July 24, 2014, we published in the **Federal Register** a final rule to list the Zuni bluehead sucker as an endangered species (79 FR 43132). In this final listing determination, we revised the Zuni bluehead sucker's range to exclude populations from

the previously identified proposed San Juan River critical habitat unit. This change was based on an error in the genetic data evaluated for the proposed listing rule (Schwemm and Dowling 2008, entire); the correct information led to the determination that the bluehead suckers in the Lower San Juan River Watershed (proposed critical habitat Unit 3; San Juan River Unit) were bluehead suckers (*Catostomus discobolus*), not Zuni bluehead suckers (*Catostomus discobolus yarrowi*). Thus, the San Juan River Unit populations were no longer included in the range estimate provided in the final listing rule.

On April 14, 2015, we published in the **Federal Register** our revised proposed critical habitat designation of 228.4 km (141.9 mi) and reopened the public comment period until May 14, 2015 (80 FR 19941). We also announced the availability of the draft economic analysis and a draft environmental assessment prepared pursuant to the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 et seq.) for the proposed critical habitat designation. The draft economic analysis (IEc 2014, entire) was prepared to identify and evaluate the economic impacts of the proposed critical habitat designation.

Summary of Comments and Recommendations

We requested written comments from the public on the proposed designation of critical habitat for the Zuni bluehead sucker during two comment periods. The first comment period, associated with the publication of the proposed rule (78 FR 5351), opened on January 25, 2013, and closed on March 26, 2013. We also requested comments on the revised proposed critical habitat designation and associated draft economic analysis during a comment period that opened April 14, 2015, and closed on May 14, 2015 (80 FR 19941). We did not receive any requests for a public hearing. We

also contacted appropriate Federal, State, Tribal, and local agencies; scientific organizations; and other interested parties and invited them to comment on the proposed rule, draft economic analysis, and draft environmental assessment during these comment periods.

During the first comment period, we received six comment letters directly addressing the proposed critical habitat designation. During the second comment period, we received 13 comment letters addressing the proposed critical habitat designation or the draft economic analysis. All substantive information provided during comment periods is either incorporated directly into this final determination or is addressed below. Comments received are grouped into general issues specifically relating to the proposed critical habitat designation for the Zuni bluehead sucker and are addressed in the following summary and incorporated into the final rule as appropriate.

Peer Review

In accordance with our peer review policy published on July 1, 1994 (59 FR 34270), we solicited expert opinions from six knowledgeable individuals with scientific expertise that included familiarity with the subspecies, the geographic region in which the subspecies occurs, and conservation biology principles. We received responses from four of the peer reviewers.

We reviewed all comments we received from the peer reviewers for substantive issues and new information regarding critical habitat for the Zuni bluehead sucker. The peer reviewers generally concurred with our methods and conclusions, and provided additional information, clarifications, and suggestions to improve the final critical habitat

rule. Peer reviewer comments are addressed in the following summary and incorporated into the final rule as appropriate.

Peer Reviewer Comments

(1) *Comment:* Two peer reviewers suggested postponing critical habitat designations in the Kinlichee and San Juan River Units (proposed critical habitat units 2 and 3) until the taxonomic status of the catostomids (suckers) in these areas is resolved.

Our Response: In the proposed listing rule, we identified populations in the San Juan Unit (proposed critical habitat Unit 3) as Zuni bluehead sucker because previous genetic analysis (Schwemm and Dowling 2008, entire) provided evidence supporting this conclusion. However, as mentioned in the “Taxonomy and Genetics” section of our final listing rule published July 24, 2014 (79 FR 43132), this conclusion was based on inaccurate information. The San Juan River Unit was removed from critical habitat designation due to results from genetics studies, and we made the appropriate changes in this final rule to reflect the updated classifications of populations as bluehead sucker. Kinlichee Creek was retained as a population of Zuni bluehead sucker, based on the morphological evidence and the presence of unique Zuni bluehead sucker genetics in some sites within the watershed; however, we are excluding this unit from final critical habitat designation (see *Exclusions Based on Other Relevant Impacts*, below).

(2) *Comment:* One peer reviewer stated that although Zuni bluehead sucker is closely related to bluehead sucker, caution needs to be taken when assuming bluehead sucker have the same needs or attributes as Zuni bluehead sucker.

Our Response: We agree. We have added language throughout this final rule to

distinguish which species or subspecies we are referencing. We used information specific to Zuni bluehead sucker whenever possible. However, because there are many information gaps (such as habitat needs for specific life stages of Zuni bluehead sucker), we relied on information available for a closely related and more thoroughly studied species, the bluehead sucker.

(3) *Comment:* One peer reviewer noted that vague terms such as “appropriate stream velocity,” “very,” and “recent” should be avoided.

Our Response: We used the most specific characteristics possible when describing the physical and biological features of critical habitat for the Zuni bluehead sucker. Unfortunately, information is not always available to describe these characteristics quantitatively. In these cases, we used qualitative terms to describe the characteristics of critical habitat. We clarified our language where it was appropriate and accurate to do so.

(4) *Comment:* Two peer reviewers noted that 74.2 km (46.1 mi) of proposed critical habitat in the Zuni River Headwaters (Subunit 1a) was stated to be occupied at the time of listing, but the proposed listing stated the subspecies occurs in only 4.8 km (3 mi) of habitat in these headwaters.

Our Response: We have revised this discussion and clarified the description of Subunit 1a. The most recent surveys only included the 4.8-km (3-mi) reach referred to in the proposed listing rule. We used the recent survey information in combination with both historical survey records and Geographical Information System (GIS) information indicating 74.2 km (46.1 mi) of the Zuni River Headwaters (Subunit 1a) contained the physical and biological features essential for the subspecies’ conservation. We conclude

the full reach was occupied based on the presence of suitable habitat and repeated positive survey data since the 1990s; this area has been regularly sampled since 2003 (Propst and Hobbes 1996, p. 13; Carman 2010, pp. 13-15; Gilbert and Carman 2011, p. 23; NMDGF 2013, p. 24).

(5) *Comment:* One peer reviewer was opposed to the exclusion of designated critical habitat of any area that is shown by available scientific information to be important to the conservation and recovery of the subspecies.

Our Response: Section 4(b)(2) of the Act (16 U.S.C. 1531 et seq.) states that the Secretary shall designate and make revisions to critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if she determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless she determines, based on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species. In making that determination, the statute on its face, as well as the legislative history, are clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor. When identifying the benefits of inclusion for an area, we consider the additional regulatory benefits that area would receive from the protection from adverse modification or destruction as a result of actions with a Federal nexus, the educational benefits of mapping essential habitat for recovery of the listed species, and any benefits that may result from a designation due to State or Federal laws that may apply to critical habitat. When identifying the benefits of exclusion, we consider, among

other things, whether exclusion of a specific area is likely to result in conservation; the continuation, strengthening, or encouragement of partnerships; or implementation of a management plan that provides equal to or more conservation than a critical habitat designation would provide.

Lands excluded under section 4(b)(2) of the Act may still be considered essential to the conservation of the Zuni bluehead sucker. Such areas were identified as critical habitat because they either provide the essential physical or biological features, if occupied, or were otherwise determined to be essential, if unoccupied. Exclusion should never be interpreted as meaning that such areas are unimportant to the conservation of the subspecies. Exclusion is based upon a determination by the Secretary that the benefit of excluding an area outweighs the benefit of including an area in critical habitat.

In this case, the Secretary has chosen to exercise her discretion to exclude non-Federal lands from the final designation of critical habitat if an existing conservation agreement or partnership is in place that provides benefits that are greater than the benefits that would be provided by the designation of critical habitat. Such exclusions have only been made following a careful weighing of both the benefits of inclusion and the benefits of exclusion. We wish to emphasize that the exclusion of lands from the critical habitat designation should not be construed as a message that these lands are not important or essential for the conservation of the Zuni bluehead sucker, nor should exclusion be interpreted as some indication that these lands are now somehow subject to habitat degradation or destruction because they are not included in critical habitat. Lands excluded on the basis of conservation agreements and the recognition of conservation partnerships are fully expected to continue to make an important contribution to the

conservation and recovery of the Zuni bluehead sucker absent the designation of critical habitat. Such lands are excluded only if we have evidence that such expectations for future contributions of the habitat on these lands are well-founded, as evidenced by a conservation easement, habitat conservation plan, safe harbor agreement, or other instrument, or by a proven track record of conservation by the partner in question. The details of our considered analyses of each area under consideration for exclusion are provided in the **Consideration of Impacts under Section 4(b)(2) of the Act**, below.

Comments from States

We received three comments from the Arizona Game and Fish Department (AGFD) and New Mexico Department of Game and Fish (NMDGF) supporting the critical habitat designation. In addition, NMDGF provided their most recent Zuni bluehead sucker annual report that was used to update habitat conditions for the Zuni bluehead sucker in the Zuni River Watershed.

(6) *Comment:* Any critical habitat designation for occupied or unoccupied habitats on private lands should be carefully weighed against the private property interests in the watershed.

Our Response: For lands meeting the definition of critical habitat, we have considered each of the potential bases for exclusion from critical habitat designation. In order to do so, we conducted an economic analysis, an environmental assessment to comply with NEPA, and a takings implications assessment. The economic analysis found that no significant economic impacts are likely to result from the designation of critical habitat for the Zuni bluehead sucker. Because the Act's critical habitat protection

requirements apply only to Federal agency actions, few conflicts between critical habitat and private property rights should result from this designation.

The designation of critical habitat does not require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. Critical habitat receives protection under section 7 of the Act through the requirement that Federal agencies ensure, in consultation with the Service, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of critical habitat. In the event of a finding of destruction or adverse modification of critical habitat, the obligation of the Federal action agency is not to restore or recover the species, but to implement reasonable and prudent alternatives to avoid destruction or adverse modification of critical habitat. Where a landowner requests Federal agency funding or authorization for an action that may affect a listed species or critical habitat, the consultation requirements of section 7(a)(2) of the Act would apply. Critical habitat designations do not affect activities by private landowners if there is no Federal nexus—that is, no Federal funding or authorization.

(7) *Comment:* Any exclusion of tribal lands should be supported by sound management plans and sufficient monitoring efforts to track the status of Zuni bluehead sucker in those areas.

Our Response: Each of the exclusions is assessed in greater detail and meets the statutory basis that the benefits of exclusion outweigh the benefits of inclusion and will not result in extinction. Navajo Nation has submitted a final fisheries management plan and the Zuni Tribe has submitted a draft fisheries management plan; the plans are described in detail below (see “Tribal Lands” under the heading *Exclusions Based on*

Other Relevant Impacts, below). In addition, the Service has been assisting Navajo Nation in monitoring Zuni bluehead sucker populations on their lands, and a monitoring component is identified within their Fisheries Management Plan. The Zuni Tribe has also been integral to monitoring Zuni bluehead sucker in the Rio Nutria from the 1960s to early 2000s, and the Zuni Tribe has included a monitoring component within their Fisheries Management Plan that abides by their cultural beliefs. Although the Zuni Fisheries Management Plan is currently draft, its development, and the Tribe's coordination with us, provides evidence of our working relationship with the Zuni Tribe for conservation of the subspecies. We are excluding all tribal lands within Subunits 1a and 1b and Unit 2 from this final designation under section 4(b)(2) of the Act. We have determined that the benefits of exclusion outweigh the benefits of inclusion and are therefore excluding these areas from the final critical habitat designation (see **Consideration of Impacts under Section 4(b)(2) of the Act**, below).

(8) *Comment*: AGFD encourages the Service to work closely with Navajo Nation, the Zuni Tribe, the Cibola National Forest, NMDGF, and private landowners to develop and implement effective conservation and recovery efforts for this subspecies and its habitat.

Our Response: The Service is actively working with our stakeholders in developing fisheries management plans, developing monitoring populations, and identifying recovery streams and refugia locations. The Service recognizes the vital importance of working with our stakeholders in developing and implementing conservation measures in achieving the recovery of endangered and threatened species. However, the designation of critical habitat does not require implementation of

restoration, recovery, or enhancement measures by non-Federal landowners. If there is not a Federal nexus for activities taking place on private or State lands, then critical habitat designation does not restrict any actions that destroy or adversely modify critical habitat.

Tribal Comments

(9) *Comment:* During the public comment period, we met and received comments from Navajo Nation and the Zuni Tribe expressing their opposition to the designation of critical habitat. They stated that exclusion of their lands from critical habitat designation is warranted due to tribal self-governance and would help maintain cooperative working relationships.

Our Response: The portions of Subunits 1a and 1b on the Zuni Reservation and all of Unit 2 on the Navajo Nation are excluded from this final designation under section 4(b)(2) of the Act. We have determined that the benefits of exclusion outweigh the benefits of inclusion and that these exclusions will not result in the extinction of the subspecies. Therefore, we are excluding these areas from the final critical habitat designation (see **Consideration of Impacts under Section 4(b)(2) of the Act**, below).

Public Comments

(10) *Comment:* One commenter stated it is unclear from the information provided that the entire proposed critical habitat area has been recently surveyed to assess whether it should be designated.

Our Response: As required by the Act, we rely upon the best scientific and

commercial data available to assess the current and historical distributions of the Zuni bluehead sucker. We are not required to conduct surveys prior to critical habitat designation. However, much of the designated habitat has been regularly sampled since 2003, by either electrofishing or visual surveys in New Mexico (Propst and Hobbes 1996, p. 13; Carman 2010, pp. 13-15; Gilbert and Carman 2011, p. 23; NMDGF 2013, p. 24) and Arizona (Kitcheyan and Mata 2012, entire; Kitcheyan and Mata 2013, entire). Other sources of information include articles published in peer-reviewed journals and data collected by the Service and NMDGF, and any other data available at the time of the designation. Additional information on our data sources can be found in the final listing rule published in the **Federal Register** on July 24, 2014 (79 FR 43132) under the heading “Range and Distribution.”

(11) *Comment:* One commenter suggested that if Navajo lands are excluded from the final critical habitat designation, the Service should ensure that the tribe follows through on its conservation commitments.

Our Response: We have a productive working relationship with Navajo Nation to promote the conservation of the Zuni bluehead sucker and its habitat. This working relationship provides substantial benefit to the subspecies, as Navajo Nation has submitted a final fisheries management plan, described in detail below (see “Tribal Lands” under *Exclusions Based on Other Relevant Impacts*, below). In addition, the Service has been assisting Navajo Nation in monitoring Zuni bluehead sucker populations on their lands, and a monitoring component is identified within their Fisheries Management Plan. Annual work plans in accordance with the Fisheries Management Plan will be developed with full cooperation of the Navajo Nation

Department of Fish and Wildlife, Bureau of Indian Affairs (BIA), and the Service. The Fisheries Management Plan will be updated as necessary every 5 years.

(12) *Comment:* One commenter stated Tampico Springs is not native habitat for the Zuni bluehead sucker and should not be designated as critical habitat for this subspecies.

Our Response: As mentioned in the “Taxonomy and Genetics” discussion in our final listing rule (79 FR 43132; July 24, 2014), the Tampico Springs population was founded through translocation in the mid-1970s. This population is within the general historical range of the subspecies and has been self-sustaining since its founding. We find the population in Tampico Springs is essential to the conservation of the Zuni bluehead sucker.

In accordance with section 3(5)(A)(i) and 4(b)(1)(A) of the Act and regulations at 50 CFR 424.12, in determining which areas within the geographical area occupied by the species at the time of listing to designate as critical habitat, we considered the physical or biological features essential to the conservation of the species and which may require special management considerations or protection. Under the first part of the Act’s definition of critical habitat, areas within the geographical area occupied by the species at the time it was listed are included in a critical habitat designation if they contain physical or biological features (1) which are essential to the conservation of the species and (2) which may require special management considerations or protection. Tampico Springs was occupied at the time of listing, contains the physical and biological features essential to the conservation of the subspecies, and therefore meets the definition of critical habitat.

(13) *Comment:* Tampico Springs (on private land) should be excluded as a critical habitat for the Zuni bluehead sucker, because exclusion would allow and promote the continuation of strong partnerships with State and Federal agencies, industry, and other entities, resulting in continued habitat protection.

Our Response: The area that the commenter requested that the Service exclude from critical habitat is included in the Silva Forestry Management Plan, which we reviewed for evidence of habitat protections undertaken on this portion of land. The Forestry Management Plan is focused on forest management and not conservation of Zuni bluehead sucker and its habitat in this area. We are aware of no specific conservation actions in the submitted plan that would benefit the Zuni bluehead sucker; therefore the Secretary has chosen not to enter into the discretionary 4(b)(2) exclusion analysis in this particular case.

Summary of Changes from Proposed Rule

In total, we are designating a total of approximately 55.7 km (34.6 mi) of critical habitat for the Zuni bluehead sucker, which is 172.7 km (107.3 mi) less than our proposed critical habitat designation. Our final designation of critical habitat reflects the following changes from the proposed rule:

(1) New information resulted in the removal of a portion of the proposed Zuni River Unit (Unit 1). Based upon further investigation, a section of Cebolla Creek (from Pescado Reservoir upstream on Cebolla Creek to Ramah Reservoir) is a dry wash with no running water or stream channel present except during periods of rain; this reach is unlikely to have perennial or intermittent flows. As a result, 7.9 km (4.9 mi) was

removed because this section of Cebolla Creek is not essential to the conservation of the subspecies and does not meet the definition of critical habitat.

(2) We carefully considered the benefits of inclusion and the benefits of exclusion, under section 4(b)(2) of the Act, of the specific areas identified in the proposed critical habitat rule, particularly in areas where a management plan specific to the Zuni bluehead sucker are in place, and also where the maintenance and fostering of important conservation partnerships are a consideration. Based on the results of our analysis, we are excluding approximately 38.9 km (24.2 mi) of Subunit 1a, 29.4 km (18.3 mi) of Subunit 1b, and all of Unit 2 (96.5 km (60.0 mi)) from our final critical habitat designation for the Zuni bluehead sucker (see **Consideration of Impacts under Section 4(b)(2) of the Act**, below).

Exclusion from critical habitat should not be interpreted as a determination that these areas are unimportant, that they do not provide physical or biological features essential to the conservation of the species (for occupied areas), or are not otherwise essential for conservation (for unoccupied areas); exclusion merely reflects the Secretary's determination that the benefits of excluding those particular areas outweigh the benefits of including them in the designation.

(3) We inadvertently omitted language from the **Proposed Regulation Promulgation** section of the proposed rule, although we discussed it as part of our methodology for designation in the preamble of the proposed rule. Therefore, in this final rule, we add the following language under the **Regulation Promulgation** section: Critical habitat includes the adjacent floodplains within 91.4 lateral meters (m) (300 lateral feet (ft)) on either side of bankfull discharge, except where bounded by canyon

walls. Bankfull discharge is the flow at which water begins to leave the channel and disperse into the floodplain, and generally occurs every 1 to 2 years.

(4) In the proposed rule, we stated that the Zuni bluehead sucker needs clear, cool water with low turbidity and temperatures in the general range of 9.0 to 28.0 degrees Celsius (°C) (48.2 to 82.4 degrees Fahrenheit (°F)). New information has resulted in a change to the temperatures, and in this final rule that primary constituent element is clear, cool water with low turbidity and temperatures in the general range of 2.0 to 23.0 °C (35.6 to 73.4 °F).

(5) We added a general description of the designated critical habitat unit to the **Regulation Promulgation** section of this rule.

Critical Habitat

Background

Critical habitat is defined in section 3 of the Act as:

(1) The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features

(a) Essential to the conservation of the species, and

(b) Which may require special management considerations or protection; and

(2) Specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Conservation, as defined under section 3 of the Act, means to use and the use of all methods and procedures that are necessary to bring an endangered or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and translocation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

Critical habitat receives protection under section 7 of the Act through the requirement that Federal agencies ensure, in consultation with the Service, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation does not allow the government or public to access private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. Where a landowner requests Federal agency funding or authorization for an action that may affect a listed species or critical habitat, the consultation requirements of section 7(a)(2) of the Act apply, but even in the event of a destruction or adverse modification finding, the obligation of the Federal action agency and the landowner is not to restore or recover the species, but to implement reasonable and prudent alternatives to avoid destruction or adverse modification of critical habitat.

Under the first prong of the Act's definition of critical habitat, areas within the geographical area occupied by the species at the time it was listed are included in a

critical habitat designation if they contain physical or biological features (1) which are essential to the conservation of the species and (2) which may require special management considerations or protection. For these areas, critical habitat designations identify, to the extent known using the best scientific and commercial data available, those physical or biological features that are essential to the conservation of the species (such as space, food, cover, and protected habitat). In identifying those physical or biological features within an area, we focus on the principal biological or physical constituent elements (primary constituent elements such as roost sites, nesting grounds, seasonal wetlands, water quality, tide, soil type) that are essential to the conservation of the species. Primary constituent elements (PCEs) are those specific elements of the physical or biological features that provide for a species' life-history processes and are essential to the conservation of the species.

Under the second prong of the Act's definition of critical habitat, we can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. For example, an area currently occupied by the species but that was not occupied at the time of listing may be essential to the conservation of the species and may be included in the critical habitat designation. We designate critical habitat in areas outside the geographical area occupied by a species only when a designation limited to its range would be inadequate to ensure the conservation of the species.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific and commercial data available. Further, our Policy on Information Standards Under the Endangered Species Act (published in the **Federal Register** on July

1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106-554; H.R. 5658)), and our associated Information Quality Guidelines provide criteria, establish procedures, and provide guidance to ensure that our decisions are based on the best scientific data available. They require our biologists, to the extent consistent with the Act and with the use of the best scientific data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat.

When we are determining which areas should be designated as critical habitat, our primary source of information is generally the information developed during the listing process for the species. Additional information sources may include the recovery plan for the species, articles in peer-reviewed journals, conservation plans developed by States and counties, scientific status surveys and studies, biological assessments, other unpublished materials, or experts' opinions or personal knowledge.

Habitat is dynamic, and species may disperse from one area to another over time. We recognize that critical habitat designated at a particular point in time may not include all of the habitat areas that we may later determine are necessary for the recovery of the species. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be needed for recovery of the species. Areas that are important to the conservation of the species, both inside and outside the critical habitat designation, will continue to be subject to: (1) Conservation actions implemented under section 7(a)(1) of the Act, (2) regulatory protections afforded by the requirement in section 7(a)(2) of the Act for Federal agencies to insure their actions are not likely to jeopardize the continued existence of any endangered or

threatened species, and (3) section 9 of the Act's prohibitions on taking any individual of the species, including taking caused by actions that affect habitat. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. These protections and conservation tools will continue to contribute to recovery of this species. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans (HCPs), or other species conservation planning efforts if new information available at the time of these planning efforts calls for a different outcome.

On February 11, 2016, we published a final rule in the **Federal Register** (81 FR 7413) to amend our regulations concerning the procedures and criteria we use to designate and revise critical habitat. That rule became effective on March 14, 2016, but, as stated in that rule, the amendments it sets forth apply to "rules for which a proposed rule was published after March 14, 2016." We published our proposed critical habitat designation for the Zuni bluehead sucker on January 25, 2013 (78 FR 5351); therefore, the amendments set forth in the February 11, 2016, final rule at 81 FR 7413 do not apply to this final designation of critical habitat for the Zuni bluehead sucker.

Physical or Biological Features

In accordance with section 3(5)(A)(i) and 4(b)(1)(A) of the Act and regulations at 50 CFR 424.12, in determining which areas within the geographical area occupied by the species at the time of listing to designate as critical habitat, we consider the physical or biological features essential to the conservation of the species and which may require

special management considerations or protection. These include, but are not limited to:

- (1) Space for individual and population growth and for normal behavior;
- (2) Food, water, air, light, minerals, or other nutritional or physiological requirements;
- (3) Cover or shelter;
- (4) Sites for breeding, reproduction, or rearing (or development) of offspring; and
- (5) Habitats that are protected from disturbance or are representative of the historical, geographical, and ecological distributions of a species.

We derive the specific physical or biological features essential for the Zuni bluehead sucker from studies of this subspecies' habitat, ecology, and life history as described in the proposed rule to designate critical habitat published in the **Federal Register** on January 25, 2013 (78 FR 5351), in the revisions to the proposed critical habitat designation published in the **Federal Register** on April 14, 2015 (80 FR 19941), and as described below. Habitat needs for specific life stages for the Zuni bluehead sucker have not been described; therefore, when necessary we rely on information available for the bluehead sucker, which is closely related to the Zuni bluehead sucker. Additional information can be found in the final listing rule published in the **Federal Register** on July 24, 2014 (79 FR 43132). We have determined that the Zuni bluehead sucker requires the physical or biological features described below.

Space for Individual and Population Growth and for Normal Behavior

The Zuni bluehead sucker occurs in a variety of stream habitats ranging from no shade to habitats with abundant shade from overhanging vegetation and boulders, in

pools, runs, and riffles with water velocities ranging from 0 to 0.35 meters per second (m/sec) (1.15 feet per second (ft/sec)) and average water depths ranging from 0.2–2.0 m (7.9–78.7 inches (in)) (Hanson 1980, pp. 34, 42; Propst and Hobbes 1996, pp. 13, 16; NMDGF 2013, pp. 13–15). Shade provided by the overhanging vegetation buffers water temperature fluctuations in small, headwater streams, such as those occupied by the Zuni bluehead sucker (Whitledge *et al.* 2006, p. 1461). Substrate in Zuni bluehead sucker habitat ranges from silt and pebbles to cobbles, boulders, and bedrock (Hanson 1980, pp. 34, 42; Propst and Hobbes 1996, pp. 13, 16; NMDGF 2013, pp. 13–15; Ulibarri 2015, p. 12). Maddux and Kepner (1988, p. 364), observed that the bluehead sucker needed clean and loosely consolidated substrate, such as gravel, for both spawning and egg development. Similar observations were made for the Zuni bluehead sucker, where females selected spawning sites over loosely consolidated gravel (Service 2015a, entire). Excessive levels of silt can inhibit egg and juvenile fish development through the clogging of the small spaces between substrate particles, which prevents the free flow of oxygenated water. Additionally, siltation can reduce the suitability of the habitat for prey organisms. Juvenile bluehead suckers have been found near shore in slower and shallower habitats, then moving out into deeper water and faster flowing habitat as they age (Childs *et al.* 1998, p. 624).

Water temperatures in occupied habitats in Arizona and New Mexico have ranged from 2.0 to 22.3 °C (35.6 to 72.1 °F) during survey efforts (Propst *et al.* 2001, p. 163; NMDGF 2013, pp. 20–21, Ulibarri 2015, pp. 11–12).

Therefore, based on the information above, we identify the following habitat characteristics as the physical or biological features for the Zuni bluehead sucker:

- A variety of stream habitats, including riffles, runs, and pools, with appropriate flows and substrates, with low to moderate amounts of fine sediment and substrate embeddedness, as maintained by natural, unregulated flow that allows for periodic flooding or, if flows are modified or regulated, flow patterns that allow the river to mimic natural functions, such as flows capable of transporting sediment.

Food, Water, Air, Light, Minerals, or Other Nutritional or Physiological Requirements

Food. The Zuni bluehead sucker is a benthic forager (eats food from the stream bottom) that scrapes algae, insects, and other organic and inorganic material from rock surface (NMDGF 2004, p. 8). Stomach content analysis of Zuni bluehead suckers revealed small particulate organic matter, including detritus (nonliving organic material), filamentous algae, small midge (two-winged fly) larvae, caddisfly larvae, mayfly larvae, flatworms, and occasional small terrestrial insects (Smith and Koehn 1979, p. 38). In addition, Smith and Koehn (1979, p. 38) also found fish scales, snails, and insect eggs in Zuni bluehead sucker stomachs.

The primary food source for Zuni bluehead sucker is periphytic algae (algae attached to rocks), which occurs mainly on cobble, boulder, and bedrock substrates with clean flowing water. Only food found in stomach contents of adult Zuni bluehead suckers has been described. Stomach contents of larval bluehead suckers (<25 millimeters (mm) (~1 in) total length) have been analyzed (Muth and Snyder 1995, entire). Larval bluehead suckers feed on diatoms (a type of algae), zooplankton (small floating or swimming organisms that drift with water currents), and dipteran larvae (true fly larvae) in stream areas with low velocity or in backwater habitats (Muth and Snyder

1995, p. 100). Juvenile and adult bluehead suckers are reported primarily to eat a variety of inorganic material, organic material, and bottom-dwelling insects and other small organisms (Childs *et al.* 1998, p. 625; Osmundson 1999, p. 28; Brooks *et al.* 2000, pp. 66–69).

Aquatic invertebrates are a secondary component of the Zuni bluehead sucker's diet. Aquatic invertebrates have specific habitat requirements of their own. Both caddisflies and mayflies occur primarily in a wide variety of standing and running water habitats with the greatest diversity being found in rocky-bottom streams with an abundance of oxygen (Merritt and Cummins 1996, pp. 126, 309). Caddisflies and mayflies feed on a variety of detritus, algae, diatoms, and macrophytes (aquatic plants) (Merritt and Cummins 1996, pp. 126, 309). Habitat that consists of rocky bottoms with periphytic algal growth is not only important to sustain aquatic invertebrate populations, but also serves as a primary food resource of the Zuni bluehead sucker.

Water. As a purely aquatic subspecies, Zuni bluehead suckers are entirely dependent on stream habitat for all stages of their life cycle. Therefore, perennial flows are an essential feature with appropriate seasonal flows to maintain habitat conditions that remove excess sediments. Areas with intermittent flows may serve as connective corridors between occupied or seasonally occupied habitat through which the subspecies may disperse when the habitat is wetted.

There is little information on water quality requirements for the Zuni bluehead sucker. However, excessive sedimentation is the primary threat to water quality for the Zuni bluehead sucker (as discussed above), primarily due to its effects on reproduction and food resources. Turbidity (sediment suspended in the water column) can inhibit

algae production through reducing sunlight penetration into the water.

Therefore, based on the information above, we identify the following prey base and water quality characteristics as physical or biological features for the Zuni bluehead sucker:

- An abundant source of algae production and an aquatic insect food base consisting of caddisflies, mayflies, midges, and various terrestrial insects;
- Streams with no harmful levels of pollutants;
- Areas with low levels of sediment deposition;
- Perennial flows, or interrupted stream courses that are periodically dewatered but that serve as connective corridors between occupied or seasonally occupied habitat and through which the subspecies may disperse when the habitat is wetted;
- Dynamic flows that allow for periodic changes in channel morphology.

Cover or Shelter

Cover from predation (by nonnative fish and avian predators) may be in the form of deep water or physical structure. Little is known about habitat characteristics specifically relating to cover for the Zuni bluehead sucker. However, during surveys, Zuni bluehead suckers have been found in shaded pools and near boulder outcrops, which may be used for cover (Kitcheyan 2012, pers. comm.). Additionally, mature bluehead suckers are found in deeper water than larvae and in habitats with less woody cover than younger life stages, which are more vulnerable to predation (Childs *et al.* 1998, p. 624). Recent investigations on Navajo Nation have shown that Zuni bluehead suckers use aquatic macrophytes as cover, perhaps due to the lack of riparian vegetation (Ulibarri

2015, p. 12). In contrast, bluehead suckers in an adjacent drainage were found to use branches and woody debris as cover (Ulibarri 2015, p. 12).

Therefore, based on the information above, we identify the following characteristics for cover or shelter as physical or biological features for the Zuni bluehead sucker:

- Streams with large rocks, boulders, undercut banks, woody debris or aquatic macrophytes.

Sites for Breeding, Reproduction, or Rearing (or Development) of Offspring

Zuni bluehead sucker spawn from early April to early June when water temperatures are 6 to 15 °C (43 to 59 °F), peaking around 10 °C (50 °F) (Propst 1999, p. 50; Propst *et al.* 2001, p. 164). The Zuni bluehead sucker may have two spawning periods, with the majority of the spawning effort expended early in the season (Propst *et al.* 2001, p. 158). Females in spawning condition have been found over gravel beds (Sublette *et al.* 1990, p. 210; Propst *et al.* 2001, p. 158). Clean substrates free of excessive sedimentation are essential for successful breeding (see the “Habitat and Life History” discussion in the final listing rule; 79 FR 43132, July 24, 2014). Periodic flooding removes excess silt and fine sand from the stream bottom, breaks up embedded bottom materials, and rearranges sediments in ways that promote algae production and create suitable habitats with silt-free substrates.

Therefore, based on the information above, we identify the following characteristics for breeding, reproduction, or development of offspring as physical or

biological features for the Zuni bluehead sucker:

- Gravel and cobble substrates;
- Pool and run habitats;
- Slower currents along stream margins with appropriate stream velocities for larvae;
- Instream flow velocities that are less than 0.35 m/sec (1.15 ft/sec); and
- Dynamic flows that allow for periodic changes in channel morphology.

Habitats Protected from Disturbance or Representative of the Historical, Geographical, and Ecological Distributions of the Species

The Zuni bluehead sucker has a restricted geographic distribution. Endemic species (species that are exclusively native to a particular location) whose populations exhibit a high degree of isolation are extremely susceptible to extinction from both random and nonrandom catastrophic natural or human-caused events. Therefore, it is essential to maintain both springs and stream systems upon which the Zuni bluehead sucker depends. This means protection from disturbance caused by exposure to land management actions (logging, cattle grazing, and road construction), water contamination, water depletion, or nonnative species. The Zuni bluehead sucker must, at a minimum, sustain its current distribution for the subspecies to continue to persist.

Introduced species are a serious threat to native aquatic species (Miller 1961, pp. 365, 397–398; Lachner *et al.* 1970, p. 21; Ono *et al.* 1983, pp. 90–91; Carlson and Muth 1989, pp. 222, 234; Fuller *et al.* 1999, p. 1; Propst *et al.* 2008, pp. 1246–1251; Pilger *et al.* 2010, pp. 300, 311–312; see both *Factor C: Disease or Predation* and *Factor E:*

Other Natural or Manmade Factors Affecting Its Continued Existence discussions in our final listing rule published July 24, 2014 (79 FR 43132)). Because the distribution of the Zuni bluehead sucker is so isolated and its habitat so restricted, introduction of certain nonnative species into its habitat could be devastating. Potentially harmful nonnative species include green sunfish (*Lepomis cyanellus*), northern crayfish (*Orconectes virilis*), fathead minnow (*Pimephales promelas*), and other nonnative fish-eating fishes.

The Zuni bluehead sucker typically inhabits small desert stream systems including isolated headwater springs, small headwater springs, and mainstem river habitats (Gilbert and Carman 2011, p. 2) with clean, hard substrate; flowing water; and abundant riparian vegetation. Degraded habitat consists of silt-laden substrates; high turbidity; and deep, stagnant water (Gilbert and Carman 2011, p. 6). Therefore, based on the information above, we identify the necessary physical or biological features for the Zuni bluehead sucker:

- Nondegraded habitat devoid of nonnative aquatic species, or habitat in which nonnative aquatic species are at levels that allow persistence of the Zuni bluehead sucker.

Primary Constituent Elements for the Zuni Bluehead Sucker

Under the Act and its implementing regulations, we are required to identify the physical or biological features essential to the conservation of the Zuni bluehead sucker in areas occupied at the time of listing, focusing on the features' primary constituent elements. Primary constituent elements are those specific elements of the physical or biological features that provide for a species' life-history processes and are essential to the conservation of the species.

Based on our current knowledge of the physical or biological features and habitat characteristics required to sustain the subspecies' life-history processes, we determine that the primary constituent elements specific to the Zuni bluehead sucker are:

(1) A riverine system with habitat to support all life stages of the Zuni bluehead sucker (egg, larval, juvenile, and adult), which includes:

a. Dynamic flows that allow for periodic changes in channel morphology and adequate river functions, such as channel reshaping and delivery of coarse sediments;

b. Stream courses with perennial flows or intermittent flows that serve as connective corridors between occupied or seasonally occupied habitat through which the subspecies may disperse when the habitat is wetted;

c. Stream mesohabitat types including runs, riffles, and pools with substrate ranging from gravel, cobble, and bedrock substrates with low or moderate amounts of fine sediment and substrate embeddedness;

d. Streams with depths generally less than 2 m (3.3 ft), and with slow to swift flow velocities less than 0.35 m/sec (1.15 ft/sec);

e. Clear, cool water with low turbidity and temperatures in the general range of 2.0 to 23.0 °C (35.6 to 73.4 °F);

f. No harmful levels of pollutants; and

g. Adequate riparian shading to reduce water temperatures when ambient temperatures are high and provide protective cover from predators.

(2) An abundant aquatic insect food base consisting of fine particulate organic material, filamentous algae, midge larvae, caddisfly larvae, mayfly larvae, flatworms, and

small terrestrial insects.

(3) Areas devoid of nonnative aquatic species or areas that are maintained to keep nonnatives at a level that allows the Zuni bluehead sucker to continue to survive and reproduce.

Special Management Considerations or Protection

When designating critical habitat, we assess whether the specific areas within the geographical area occupied by the species at the time of listing contain features that are essential to the conservation of the species and which may require special management considerations or protection. We believe each area included in these designations requires special management and protections as described in our unit descriptions.

We need to consider special management considerations or protection for the features essential to the conservation of the species within each critical habitat area. The special management considerations or protections will depend on the threats to the essential features in that critical habitat area. For example, threats requiring special management considerations or protection include the continued spread of nonnative fish species into Zuni bluehead sucker habitat or increasing number of beavers that reduce habitat quality and foster expansion of nonnative fish and crayfish. Other threats requiring special management considerations or protection include the threat of wildfire and excessive ash and sediment following fire. Improper livestock grazing can be a threat to the remaining populations of the Zuni bluehead sucker through trampling of habitat and increasing sedimentation. Inadequate water quantity resulting from drought

and water withdrawals affect all life stages of the Zuni bluehead sucker. Additionally, the construction of impoundments and water diversions can cause an increase in water depth behind the structure and a reduction or elimination of stream habitat below.

In our description below for each of the critical habitat areas for the Zuni bluehead sucker, we have included a discussion on the threats occurring in each area and the required special management considerations or protections.

Criteria Used To Identify Critical Habitat

As required by section 4(b)(2) of the Act, we use the best scientific data available to designate critical habitat. In accordance with the Act and our implementing regulations at 50 CFR 424.12(b) we review available information pertaining to the habitat requirements of the species and identify occupied areas at the time of listing that contain the features essential to the conservation of the species. If, after identifying currently occupied areas, we determine that those areas are inadequate to ensure conservation of the species, in accordance with the Act and our implementing regulations at 50 CFR 424.12(e) we then consider whether designating additional areas—outside those currently occupied—are essential for the conservation of the species. We are designating critical habitat in areas within the geographical area occupied by the subspecies at the time of listing in 2014. We also are designating specific areas outside the geographical area occupied by the subspecies at the time of listing that were historically occupied but are presently unoccupied, because we have determined that such areas are essential for the conservation of the subspecies.

Sources of data for this subspecies include multiple databases maintained by universities and State agencies from Arizona and New Mexico, existing State recovery

plans, endangered species reports, and numerous survey reports on streams throughout the subspecies' range (Propst 1999, pp. 49–51; NMDGF 2003, pp. 6–10; NMDGF 2004, pp. 1–40; David 2006, pp. 1–40; NMDGF 2007, pp. 1–27; Douglas *et al.* 2009, p. 67; Navajo Nation Heritage Program 2012, pp. 1–20, NMDGF 2013, entire). We have also reviewed available information that pertains to the habitat requirements of this subspecies. Sources of information on habitat requirements include existing State recovery plans, endangered species reports, studies conducted at occupied sites and published in peer-reviewed articles, agency reports, and data collected during monitoring efforts (Propst *et al.* 2001, pp. 159–161; NMDGF 2003, pp. 1–14; NMDGF 2004, pp. 4–7; Kitcheyan and Mata 2013, pp. 5–12).

The current distribution of the Zuni bluehead sucker is much reduced from its historical distribution. We anticipate that recovery will require continued protection of existing populations and habitat, as well as establishing populations in additional streams that more closely approximate its historic distribution in order to ensure there are adequate numbers of fish in stable populations and that these populations occur over a wide geographic area. This will help to ensure that catastrophic events, such as wildfire, cannot simultaneously affect all known populations.

Areas Occupied at the Time of Listing

The critical habitat designation includes all streams known to have been occupied by the subspecies historically and that have retained the necessary PCEs that will allow for the maintenance and expansion of existing populations. The following streams meet the definition of areas occupied by the subspecies at the time of listing: Agua Remora,

Rio Nutria, Tampico Springs, Tampico Draw, Kinlichee Creek, Black Soil Wash, and Scattered Willow Wash. There are no developed areas within the designation except for barriers constructed on streams or road crossings of streams, which do not remove the suitability of these areas for this subspecies.

Areas Outside the Geographical Area Occupied by the Species at the Time of Listing

The Zuni River, Rio Pescado, Cebolla Creek, and Red Clay Wash are within the historical range of the Zuni bluehead sucker but are not within the geographical range occupied by the subspecies at the time of listing. The Zuni River and Rio Pescado experience a high degree of river intermittency, and the Zuni bluehead sucker has not been seen in these streams in approximately 20 years. Additionally, Zuni bluehead suckers have not been observed in Cebolla Creek and Red Clay Wash in over 30 years. We consider these sites to be extirpated. For areas not occupied by the subspecies at the time of listing, we must demonstrate that these areas are essential to the conservation of the subspecies in order to include them in our critical habitat designation. To determine if these areas are essential for the conservation of the Zuni bluehead sucker, we considered: (1) The importance of the site to the overall status of the subspecies to prevent extinction and contribute to future recovery of the Zuni bluehead sucker; (2) whether special management could cause the site to contain the necessary habitat to support the Zuni bluehead sucker; (3) whether the site provides connectivity between occupied sites for genetic exchange; and (4) whether a population of the subspecies could be reestablished in the area.

Of the unoccupied streams, the Zuni River, Rio Pescado and Cebolla Creek

exhibit varying degrees of intermittency; the Zuni River and Rio Pescado are generally only continuous after heavy flows in the spring (NMDGF 2004, p. 13; New Mexico Environment Department (NMED) 2004, p. 1). However, when the Zuni River, Rio Pescado, and portions of Cebolla Creek do exhibit flow, and if special management were to occur, they could allow for important population expansion in this watershed. These sites include habitat for connectivity and dispersal opportunities between occupied and unoccupied areas. Such opportunities for dispersal assist in maintaining the population structure and distribution of the subspecies. The current amount of habitat that is unoccupied is not sufficient for the recovery of the subspecies. Therefore, the unoccupied areas are essential for the conservation of the Zuni bluehead sucker.

In summary, for areas within the geographic area occupied by the subspecies at the time of listing, we delineated critical habitat unit boundaries by evaluating habitat suitability of stream segments within the geographic area occupied at the time of listing, and retaining those segments that contain some or all of the PCEs to support life-history functions essential for conservation of the subspecies.

For areas outside the geographic area occupied by the subspecies at the time of listing, we delineated critical habitat unit boundaries by evaluating stream segments not known to have been occupied at listing but that are within the historical range of the subspecies (outside of the geographic area occupied by the subspecies) to determine if they are essential to the conservation of the subspecies. Essential areas are those that:

- (1) Are important to the overall status of the subspecies to prevent extinction and contribute to future recovery;
- (2) Expand the geographic distribution within areas not occupied at the time of

listing across the historical range of the subspecies;

(3) Serve as an extension of habitat within the geographic area of an occupied unit; and

(4) Are connected to other occupied areas, which will enhance genetic exchange between populations.

In conclusion, based on the best available information, we determined that the areas within the historical range are essential to provide for the conservation of the Zuni bluehead sucker because they include habitat for all extant populations, and they include habitat for connectivity and dispersal opportunities between the unit and occupied areas. Such opportunities for dispersal assist in maintaining the population structure and distribution of the subspecies. The current amount of habitat that is occupied is not sufficient for the recovery of the subspecies; therefore, we include unoccupied habitat in this critical habitat designation.

As a final step, we evaluated the occupied stream segments and refined the starting and ending points by evaluating the presence or absence of appropriate PCEs. We selected upstream and downstream cutoff points to omit areas that are highly degraded and are not likely to be able to support the Zuni bluehead sucker in the future. For example, permanently dewatered areas, or areas in which there was a change to unsuitable characteristics (*e.g.*, water quality, bedrock substrate), were used to mark the start or endpoint of a stream segment proposed for designation. Critical habitat stream segments were then mapped using ArcMap version 10 (Environmental Systems Research Institute, Inc.), a Geographic Information Systems program.

Areas designated as critical habitat provide sufficient stream and spring habitat

for breeding, nonbreeding, and dispersing adult Zuni bluehead suckers, as well as for the habitat needs for juvenile and larval stages of this fish. In general, the PCEs of critical habitat are contained within the riverine ecosystem formed by the wetted channel and the adjacent floodplains within 91.4 lateral m (300 lateral ft) on either side of bankfull discharge, except where bounded by canyon walls. Bankfull discharge is the flow at which water begins to leave the channel and disperse into the floodplain and generally occurs every 1 to 2 years. Areas within the lateral extent also contribute to the PCEs, including water quality and intermittent areas through which fish may disperse when wetted.

When determining critical habitat boundaries within this final rule, we made every effort to avoid including developed areas such as lands covered by buildings, pavement, and other structures because such lands lack physical or biological features for the Zuni bluehead sucker. The scale of the maps we prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed lands. Any such lands inadvertently left inside critical habitat boundaries shown on the maps of this final rule have been excluded by text in the rule and are not designated as critical habitat. Therefore, a Federal action involving these lands will not trigger section 7 consultations with respect to critical habitat and the requirement of no adverse modification unless the specific action would affect the physical or biological features in the adjacent critical habitat.

The critical habitat designation is defined by the map or maps, as modified by any accompanying regulatory text, presented at the end of this document in the **Regulation Promulgation** section. We include more detailed information on the boundaries of the

critical habitat designation in the preamble of this document. We will make the coordinates or plot points or both on which each map is based available to the public on <http://www.regulations.gov> at Docket No. FWS–R2–ES–2013–0002, on our Internet site at <http://www.fws.gov/southwest/es/NewMexico/>, and at the field office responsible for the designation (see **FOR FURTHER INFORMATION CONTACT**, above).

We are designating as critical habitat lands that we have determined are occupied at the time of listing and contain sufficient physical or biological features to support life-history processes essential to the conservation of the subspecies, and lands outside of the geographical area occupied at the time of listing that we have determined are essential for the conservation of the Zuni bluehead sucker.

Units are designated based on sufficient elements of physical or biological features being present to support the Zuni bluehead sucker's life processes. Some units contain all of the identified elements of physical or biological features and support multiple life processes. Some segments contain only some elements of the physical or biological features necessary to support the Zuni bluehead sucker's particular use of that habitat.

Final Critical Habitat Designation

We are designating one unit, the Zuni River Unit, as critical habitat for the Zuni bluehead sucker. Following our evaluation and analysis under section 4(b)(2) of the Act, Unit 2 (Kinlichee Creek Unit) is excluded in its entirety (see **Consideration of Impacts under Section 4(b)(2) of the Act**, below). The critical habitat areas described below constitute our best assessment at this time of areas that meet the definition of critical

habitat. Table 1 shows the occupied subunits.

Table 1. Designated critical habitat unit for Zuni bluehead sucker.

[Area estimates reflect all land within critical habitat unit boundaries.]

Stream segment	Occupied at the Time of Listing	Land Ownership	Length of Unit in Kilometers (Miles)
Unit 1–Zuni River Unit			
Subunit 1a- Zuni River Headwaters			
Agua Remora	Yes	Forest Service	6.6 (4.1)
		Private	2.4 (1.5)
Rio Nutria	Yes	Forest Service	4.1 (2.6)
		State of New Mexico	1.8 (1.1)
		Private	14.2 (8.8)
Tampico Draw	Yes	Forest Service	2.3 (1.4)
		Private	3.7 (2.3)
Tampico Spring	Yes	Private	0.2 (0.1)
Total			35.4 (22.0)
Subunit 1b- Zuni River Mainstem			
Cebolla Creek	No	State of New Mexico	0.4 (0.2)
		Forest Service	6.4 (4.0)
		Private	13.5 (8.4)
Total			20.3 (12.6)

Note: Area sizes may not sum due to rounding.

Below we present brief descriptions of the unit and reasons why it meets the definition of critical habitat for the Zuni bluehead sucker.

Unit 1: Zuni River Unit

Subunit 1a—Zuni River Headwaters: Subunit 1a consists of 35.4 km (22.0 mi) along Agua Remora, Rio Nutria, Tampico Draw, and Tampico Springs in McKinley County, New Mexico. We exclude approximately 38.9 km (24.2 mi) of Subunit 1a, which was primary along the Rio Nutria on the Zuni Reservation. The land in this subunit is primarily owned by Forest Service, and private landowners with a small amount of State inholdings. At the time of listing, the Zuni bluehead sucker occupied all stream reaches in this subunit, and the subunit contains all of the physical or biological features essential to the conservation of the Zuni bluehead sucker. This unit represents the only remaining headwater spring habitats occupied by Zuni bluehead sucker.

Activities in the watershed include livestock grazing, water withdrawals, and impoundments. Livestock grazing is primarily regulated by the Forest Service in this subunit; however, trespass livestock grazing may occur. Additional special management considerations or protection may be required within Subunit 1a to address low water levels as a result of water withdrawals and drought, predation from nonnative green sunfish (*Lepomis cyanellus*), and the upstream and downstream effects of impoundments. Such special management or protection may include maintaining instream flows, nonnative species removal, and reservoir management that improves upstream and

downstream habitat to benefit the Zuni bluehead sucker.

Subunit 1b—Zuni River Mainstem: Subunit 1b consists of 20.3 km (12.6 mi) of potential Zuni bluehead sucker habitat along Cebolla Creek in McKinley and Cibola Counties, New Mexico. Land within this subunit is primarily owned by private landowners, with a small amount owned by Forest Service and the State of New Mexico. We removed 7.9 km (4.9 mi) of Cebolla Creek that had been included in the proposed designation because it does not meet the definition of critical habitat. Based upon further investigation, a section of Cebolla Creek (from Pescado Reservoir upstream on Cebolla Creek to Ramah Reservoir) lacks certain morphological features of suitable Zuni bluehead sucker habitat with no running water present except during periods of rain; this reach is unlikely to have perennial or intermittent flows due to agricultural practices in the area. This section of Cebolla Creek is not essential to the conservation of the subspecies and does not meet the definition of critical habitat. Therefore, critical habitat in Cebolla Creek is the reach from Ramah Reservoir upstream for approximately 23.2 km (14.4 mi) of stream habitat.

This unit was unoccupied at the time of listing. Zuni bluehead sucker historically occupied streams (Zuni River and Rio Pescado) adjacent to Cebolla Creek but has not been found in the Zuni River or Rio Pescado since the mid-1990s (NMDGF 2004, p. 5). In addition, the Zuni bluehead sucker has been extirpated from Cebolla Creek since at least 1979 (Hanson 1980, pp. 29, 34). Cebolla Creek upstream of Ramah Reservoir has been identified as containing suitable habitat and could provide for significant population expansion. Therefore, this subunit is essential for the conservation of the Zuni bluehead

sucker because it provides growth and expansion of the subspecies in this portion of its historical range.

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7(a)(2) of the Act requires Federal agencies, including the Service, to ensure that any action they fund, authorize, or carry out is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat of such species. In addition, section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any agency action which is likely to jeopardize the continued existence of any species proposed to be listed under the Act or result in the destruction or adverse modification of proposed critical habitat.

We published a final rule that sets forth a new definition of “destruction or adverse modification” on February 11, 2016 (81 FR 7214); that final rule became effective on March 14, 2016. “Destruction or adverse modification” means a direct or indirect alteration that appreciably diminishes the value of critical habitat for the conservation of a listed species. Such alterations may include, but are not limited to, those that alter the physical or biological features essential to the conservation of a species or that preclude or significantly delay development of such features.

If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. Examples of actions that are subject to the section 7 consultation process are actions on State, tribal, local, or

private lands that require a Federal permit (such as a permit from the U.S. Army Corps of Engineers under section 404 of the Clean Water Act (33 U.S.C. 1251 *et seq.*) or a permit from the Service under section 10 of the Act) or that involve some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation Administration, or the Federal Emergency Management Agency). Federal actions not affecting listed species or critical habitat, and actions on State, tribal, local, or private lands that are not federally funded or authorized, do not require section 7 consultation.

As a result of section 7 consultation, we document compliance with the requirements of section 7(a)(2) through our issuance of:

(1) A concurrence letter for Federal actions that may affect, but are not likely to adversely affect, listed species or critical habitat; or

(2) A biological opinion for Federal actions that may affect, and are likely to adversely affect, listed species or critical habitat.

When we issue a biological opinion concluding that a project is likely to jeopardize the continued existence of a listed species and/or destroy or adversely modify critical habitat, we provide reasonable and prudent alternatives to the project, if any are identifiable, that would avoid the likelihood of jeopardy and/or destruction or adverse modification of critical habitat. We define “reasonable and prudent alternatives” (at 50 CFR 402.02) as alternative actions identified during consultation that:

(1) Can be implemented in a manner consistent with the intended purpose of the action,

(2) Can be implemented consistent with the scope of the Federal agency’s legal authority and jurisdiction,

(3) Are economically and technologically feasible, and

(4) Would, in the Director's opinion, avoid the likelihood of jeopardizing the continued existence of the listed species and/or avoid the likelihood of destroying or adversely modifying critical habitat.

Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 require Federal agencies to reinitiate consultation on previously reviewed actions in instances where we have listed a new species or subsequently designated critical habitat that may be affected and the Federal agency has retained discretionary involvement or control over the action (or the agency's discretionary involvement or control is authorized by law). Consequently, Federal agencies sometimes may need to request reinitiation of consultation with us on actions for which formal consultation has been completed, if those actions with discretionary involvement or control may affect subsequently listed species or designated critical habitat.

Application of the "Adverse Modification" Standard

The key factor related to the adverse modification determination is whether, with implementation of the proposed Federal action, the affected critical habitat would continue to serve its intended conservation role for the species. Activities that may destroy or adversely modify critical habitat are those that result in a direct or indirect alteration that appreciably diminishes the value of critical habitat for the conservation of

the Zuni bluehead sucker. Such alterations may include, but are not limited to, those that alter the physical or biological features essential to the conservation of this subspecies or that preclude or significantly delay development of such features. As discussed above, the role of critical habitat is to support physical or biological features essential to the conservation of a listed species and provide for the conservation of the species.

Section 4(b)(8) of the Act requires us to briefly evaluate and describe, in any proposed or final regulation that designates critical habitat, activities involving a Federal action that may destroy or adversely modify such habitat, or that may be affected by such designation.

Activities that may affect critical habitat, when carried out, funded, or authorized by a Federal agency, should result in consultation for the Zuni bluehead sucker. These activities include, but are not limited to:

(1) Actions that could diminish flows within the active stream channel. Such activities could include, but are not limited to: Water diversion, water withdrawal, channelization, construction of any barriers or impediments within the active stream channel, construction of permanent or temporary diversion structures, and groundwater pumping within aquifers associated with the stream or springs. These activities could affect water depth, velocity, and flow patterns, all of which are essential to the different life stages of the Zuni bluehead sucker.

(2) Actions that could significantly increase sediment deposition within a stream channel. Such activities could include, but are not limited to, excessive sedimentation from livestock grazing, road construction, commercial or urban development, channel alteration, timber harvest, or other watershed and floodplain disturbances. These

activities could adversely affect reproduction of the subspecies by preventing hatching of eggs through suffocation, or by eliminating suitable habitat for egg placement by the Zuni bluehead sucker. In addition, excessive levels of sedimentation reduce or eliminate algae production and can make it difficult for the Zuni bluehead sucker to locate prey.

(3) Actions that could result in the introduction, spread, or augmentation of nonnative aquatic species in occupied stream segments, or in stream segments that are hydrologically connected to occupied stream segments, even if those segments are occasionally intermittent, or introduction of other species that compete with or prey on the Zuni bluehead sucker. Possible actions could include, but are not limited to: Stocking of nonnative fishes, stocking of sport fish, or other related actions. These activities can introduce parasites or disease, or affect the growth, reproduction, and survival of the Zuni bluehead sucker.

(4) Actions that could significantly alter channel morphology. Such activities could include, but are not limited to: Channelization, impoundment, road and bridge construction, mining, dredging, and destruction of riparian vegetation. These activities may lead to changes in water flows and levels that would degrade or eliminate the Zuni bluehead, their habitats, or both. These actions can also lead to increased sedimentation and degradation of the water.

(5) Actions that could significantly alter the water chemistry of the active channel. Such activities could include release of chemicals, biological pollutants, or other substances into the surface water or connected groundwater at a point source or by dispersed release (nonpoint source), and storage of chemicals or pollutants that can be transmitted, via surface water, groundwater, or air, into critical habitat. These actions can

affect water chemistry and the prey base of the Zuni bluehead sucker.

Exemptions

Application of Section 4(a)(3) of the Act

Section 4(a)(3)(B)(i) of the Act (16 U.S.C. 1533(a)(3)(B)(i)) provides that: “The Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan [INRMP] prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation.”

There are no Department of Defense lands within the critical habitat designation for the Zuni bluehead sucker; therefore, we are not exempting any areas under section 4(a)(3)(B)(i) of the Act.

Consideration of Impacts under Section 4(b)(2) of the Act

Section 4(b)(2) of the Act states that the Secretary shall designate and make revisions to critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if she determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless she determines, based on the best scientific data available, that the failure to designate such area as

critical habitat will result in the extinction of the species. In making that determination, the statute on its face, as well as the legislative history are clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor.

When identifying the benefits of inclusion for an area, we consider the additional regulatory benefits that area would receive from the protection from adverse modification or destruction as a result of actions with a Federal nexus; the educational benefits of mapping essential habitat for recovery of the listed species; and any benefits that may result from a designation due to State, Tribal, or Federal laws that may apply to critical habitat.

When identifying the benefits of exclusion, we consider, among other things, whether exclusion of a specific area is likely to result in conservation; the continuation, strengthening, or encouragement of partnerships; or implementation of a management plan that provides equal to or more conservation than a critical habitat designation would provide.

In the case of the Zuni bluehead sucker, the benefits of critical habitat include promotion of public awareness of the presence of the Zuni bluehead sucker and the importance of habitat protection, and in cases where a Federal nexus exists, potentially greater habitat protection for the Zuni bluehead sucker due to the protection from adverse modification or destruction of critical habitat.

When we evaluate the existence of a conservation plan when considering the benefits of exclusion, we consider a variety of factors, including but not limited to whether the plan is finalized; how it provides for the conservation of the essential

physical or biological features; whether there is a reasonable expectation that the conservation management strategies and actions contained in a management plan will be implemented into the future; whether the conservation strategies in the plan are likely to be effective; and whether the plan contains a monitoring program or adaptive management to ensure that the conservation measures are effective and can be adapted in the future in response to new information.

After identifying the benefits of inclusion and the benefits of exclusion, we carefully weigh the two sides to evaluate whether the benefits of exclusion outweigh those of inclusion. If our analysis indicates the benefits of exclusion outweigh the benefits of inclusion, we then determine whether exclusion would result in extinction. If exclusion of an area from critical habitat will result in extinction, we will not exclude it from the designation.

Based on the information provided by entities seeking exclusion, as well as any additional public comments we received, we evaluated whether certain lands in the proposed critical habitat were appropriate for exclusion from this final designation pursuant to section 4(b)(2) of the Act. We are excluding the following areas from critical habitat designation for the Zuni bluehead sucker:

Table 3. Areas excluded from critical habitat designation by critical habitat unit.

Subunit	Specific Area	Land Ownership	Areas Meeting the Definition of Critical Habitat, in Kilometers (Miles)	Areas Excluded from Critical Habitat, in Kilometers (Miles)

1a	Rio Nutria	Zuni Tribe	38.9 (24.2)	38.9 (24.2)
1b	Zuni River	Zuni Tribe	7.4 (4.6)	7.4 (4.6)
1b	Rio Pescado	Zuni Tribe	18.3 (11.4)	18.3 (11.4)
1b	Cebolla Creek	Zuni Tribe	3.7 (2.3)	3.7 (2.3)
2a	Black Soil Wash	Navajo Nation	21.6 (13.4)	21.6 (13.4)
2a	Kinlichee Creek	Navajo Nation	47.1 (29.3)	47.1 (29.3)
2a	Scattered Willow Wash	Navajo Nation	18.2 (11.3)	18.2 (11.3)
2b	Red Clay Wash	Navajo Nation	9.6 (6.0)	9.6 (6.0)

Consideration of Economic Impacts

Under section 4(b)(2) of the Act, we consider the economic impacts of specifying any particular area as critical habitat. In order to consider economic impacts, we prepared an incremental effects memorandum (IEM) and screening analysis which together with our narrative and interpretation of effects we consider our draft economic analysis (DEA) of the proposed critical habitat designation and related factors (IEc 2014, entire).

The analysis, dated October 22, 2014, was made available for public review from April 14, 2015, through May 14, 2015 (80 FR 19941). The DEA addressed probable economic impacts of critical habitat designation for the Zuni bluehead sucker. Following

the close of the comment period, we reviewed and evaluated all information submitted during the comment period that may pertain to our consideration of the probable incremental economic impacts of this critical habitat designation. Additional information relevant to the probable incremental economic impacts of critical habitat designation for the Zuni bluehead sucker is summarized below and available in the screening analysis for the Zuni bluehead sucker (IEc 2014, entire), at <http://www.regulations.gov> under Docket No. FWS–R2–ES–2013–0002.

We prepared an incremental effects memorandum (IEM) and screening analysis which, together, we consider our draft economic analysis (DEA) of the proposed critical habitat designation and related factors (IEc 2014, entire). As required by Executive Order 12866, any rule that results in costs that exceed \$100 million is considered a significant regulatory action. The purpose of the economic analysis is to provide us with the information on the potential for the proposed critical habitat rule to result in costs or benefits exceeding \$100 million in any given year. The economic analysis addressed potential economic impacts of critical habitat designation for the Zuni bluehead sucker. The analysis estimates impacts to activities, including Federal lands management, roadway and bridge construction, agriculture, grazing, groundwater pumping, and instream dams and diversions, that may experience the greatest impacts in compliance with section 4(b)(2) of the Act. The economic impacts will most likely be limited to additional administrative effort resulting from a small number of future section 7 consultations, as well as minor costs of conservation efforts. This finding is based on the following information:

1. Approximately 70 percent (161.1 km (100.1 mi)) of proposed critical habitat

stream reaches are considered to be occupied by the subspecies. Critical habitat designation is unlikely to result in incremental changes to conservation actions in currently occupied areas over and above those necessary to avoid jeopardizing of the subspecies. As such, only administrative costs are expected in those areas.

2. In proposed areas that are not occupied by Zuni bluehead sucker (30 percent of proposed critical habitat), few actions are expected to result in section 7 consultation or associated project modifications. In particular, Subunit 2b (9.6 km (6.0 mi)) occurs entirely on Navajo Nation lands. Our outreach efforts to Navajo Nation indicate that there would be no projects that would result in section 7 consultation within the proposed critical habitat areas on these lands. Subunit 1b (57.6 km (35.8 mi)) includes U.S. Forest Service, private, State, and Zuni Pueblo lands. Communications with affected entities indicate that critical habitat designation is unlikely to result in more than just a few consultations in this unit, with minor conservation efforts that would result in relatively low costs.

3. We are excluding 164.8 km (102.4 mi) and removing 7.9 km (4.9 mi) of critical habitat from the final designation; therefore, the economic impacts of critical habitat designation are expected to be less than the economic analysis anticipated.

Entities most likely to incur costs are parties to section 7 consultations, including Federal action agencies and, in some cases, third parties, most frequently State agencies or municipalities. Activities potentially subject to consultations that may involve private entities as third parties are primarily limited to residential and commercial development. The cost to private entities within these sectors is expected to be relatively minor (administrative costs of less than \$10,000 per consultation effort). Therefore, we

conclude that these future costs are unknown, but appear unlikely to exceed \$100 million in any single year. Therefore, we conclude that critical habitat designation for the Zuni bluehead sucker is unlikely to generate costs exceeding \$100 million in a single year.

Exclusions Based on Economic Impacts

The Service considered the economic impacts of the critical habitat designation and the Secretary is not exercising her discretion to exclude any areas from this designation of critical habitat for the Zuni bluehead sucker based on economic impacts.

A copy of the IEM and screening analysis with supporting documents may be obtained by contacting the New Mexico Ecological Services Field Office (see **ADDRESSES**) or by downloading from the Internet at <http://www.regulations.gov>.

Exclusions Based on National Security Impacts

Under section 4(b)(2) of the Act, we consider whether there are lands owned or managed by the Department of Defense where a national security impact might exist. In preparing this final rule, we have determined that there were no lands identified to have a national security impact. Consequently, the Secretary is not exercising her discretion to exclude any areas from this final designation based on impacts on national security or homeland security.

Exclusions Based on Other Relevant Impacts

Under section 4(b)(2) of the Act, we also consider any other relevant impacts resulting from the designation of critical habitat. We consider a number of factors,

including whether the landowners have developed any HCPs or other management plans for the area, or whether there are conservation partnerships that would be encouraged by designation of, or exclusion from, critical habitat. In addition, we consider the government-to-government relationship of the United States with tribal entities. We also consider any social impacts that might occur because of the designation.

Tribal Lands

There are several Executive Orders, Secretarial Orders, and policies that relate to working with Tribes. These guidance documents generally confirm our trust responsibilities to Tribes, recognize that Tribes have sovereign authority to control Tribal lands, emphasize the importance of developing partnerships with Tribal governments, and direct the Service to consult with Tribes on a government-to-government basis.

A joint Secretarial Order that applies to both the Service and the National Marine Fisheries Service (NMFS), Secretarial Order 3206, *American Indian Tribal Rights, Federal–Tribal Trust Responsibilities, and the Endangered Species Act* (June 5, 1997) (S.O. 3206), is the most comprehensive of the various guidance documents related to Tribal relationships and Act implementation, and it provides the most detail directly relevant to the designation of critical habitat. In addition to the general direction discussed above, S.O. 3206 explicitly recognizes the right of Tribes to participate fully in the listing process, including designation of critical habitat. The Order also states: “Critical habitat shall not be designated in such areas unless it is determined essential to conserve a listed species. In designating critical habitat, the Services shall evaluate and document the extent to which the conservation needs of the listed species can be achieved

by limiting the designation to other lands.” In light of this instruction, when we undertake a discretionary section 4(b)(2) exclusion analysis, we will always consider exclusions of Tribal lands under section 4(b)(2) of the Act prior to finalizing a designation of critical habitat, and will give great weight to Tribal concerns in analyzing the benefits of exclusion.

However, S.O. 3206 does not preclude us from designating Tribal lands or waters as critical habitat, nor does it state that Tribal lands or waters cannot meet the Act’s definition of “critical habitat.” We are directed by the Act to identify areas that meet the definition of “critical habitat” (i.e., areas occupied at the time of listing that contain the essential physical or biological features that may require special management or protection and unoccupied areas that are essential to the conservation of a species), without regard to landownership. While S.O. 3206 provides important direction, it expressly states that it does not modify the statutory authority of the Secretary of the Interior and the Secretary of Commerce.

We sometimes exclude specific areas from critical habitat designations based in part on the existence of private or other non-Federal conservation plans or agreements and their attendant partnerships. A conservation plan or agreement describes actions that are designed to provide for the conservation needs of a species and its habitat, and may include actions to reduce or mitigate negative effects on the species caused by activities on or adjacent to the area covered by the plan. Conservation plans or agreements can be developed by private entities with no Service involvement, or in partnership with the Service.

We evaluate a variety of factors to determine how the benefits of any exclusion

and the benefits of inclusion are affected by the existence of private or other non-Federal conservation plans or agreements and their attendant partnerships when we undertake a discretionary section 4(b)(2) exclusion analysis. A non-exhaustive list of factors that we will consider for non-permitted plans or agreements is shown below. These factors are not required elements of plans or agreements, and all items may not apply to every plan or agreement.

(1) The degree to which the plan or agreement provides for the conservation of the species or the essential physical or biological features (if present) for the species;

(2) Whether there is a reasonable expectation that the conservation management strategies and actions contained in a management plan or agreement will be implemented;

(3) The demonstrated implementation and success of the chosen conservation measures;

(4) The degree to which the record of the plan supports a conclusion that a critical habitat designation would impair the realization of benefits expected from the plan, agreement, or partnership;

(5) The extent of public participation in the development of the conservation plan;

(6) The degree to which there has been agency review and required determinations (e.g., State regulatory requirements), as necessary and appropriate;

(7) Whether National Environmental Policy Act (NEPA; 42 U.S.C. 4321 et seq.) compliance was required; and

(8) Whether the plan or agreement contains a monitoring program and adaptive management to ensure that the conservation measures are effective and can be modified in the future in response to new information.

We believe that the Navajo Nation Fisheries Management Plan and Zuni Tribe's draft Fisheries Management Plan fulfill the above criteria, and, as discussed below, are excluding non-Federal lands covered by these plans that provide for the conservation of the Zuni bluehead sucker.

I. Navajo Nation

On Navajo Nation (Unit 2 in the proposed rule), we proposed 96.5 km (60.0 mi) of critical habitat along the stream channels within Apache County, Arizona. Much of the habitat was historically occupied by the subspecies with individuals detected as recently as 2015 (Crabtree and Buth 1987, p. 851; Kitcheyan and Mata 2013, p. 10; Service 2015b, entire). Subunit 2 was considered occupied at the time of listing, except for Subunit 2b (Red Clay Wash).

A. Navajo Nation Fisheries Management Plan

Navajo Nation has developed a Fisheries Management Plan (FMP), which is a joint effort between Navajo Nation Department of Fish and Wildlife (NNDFW), the Service, and the Bureau of Indian Affairs (BIA). The FMP is designed for the purpose of long-term planning and implementation of fisheries-related issues on Navajo Nation and is part of an integrated, interagency cooperative effort to manage its fisheries resources based on sound ecological management practices. The FMP serves as a guide for accomplishing the goals outlined in the management plan for managing, maintaining, enhancing, and conserving the fisheries resources on the Navajo Nation. One objective

in the FMP is to identify and protect existing Zuni bluehead sucker populations and their habitats, and expand their distribution to suitable streams. This would be accomplished by the following actions:

(1) Monitoring populations of Zuni bluehead sucker and their habitat conditions to evaluate population structure, distribution, and dynamics, and to implement adaptive management programs and habitat restoration where needed.

(2) Re-establishing the Zuni bluehead sucker in reclaimed streams using existing Zuni bluehead suckers from Federal hatchery facilities, or from a donor stream.

(3) Reducing or eliminating threats from nonnative fishes and other nonnative aquatic biota (e.g., crayfish), if present within recovery portions of streams using mechanical, chemical, or other effective methods.

(4) When possible, constructing fencing enclosures to minimize and/or prevent domestic livestock overgrazing and encroachment into riparian areas.

(5) Improving and restoring habitat conditions as needed to provide suitable habitat for the Zuni bluehead sucker.

(6) Evaluating the feasibility of constructing and maintaining artificial fish barriers to prevent upstream movement of nonnative fishes into protected areas.

(7) Monitoring for presence of diseases and/or causative agents, parasites, and pathogens through wild fish health surveys.

(8) Identifying facilities or refugium sites (i.e., natural or hatchery) with capacity to maintain isolated populations of Zuni bluehead sucker, and establishing a broodstock program to act as a refugia population.

(9) Developing and implementing fire and drought contingency plans to formalize

rescue and refugia strategy for the protection of temporarily vulnerable populations.

(10) Participating in a Zuni bluehead sucker Recovery Team, if established, or recovery planning, when initiated by the Service.

(11) Coordinating annual meetings to evaluate the subspecies' status, distribution, and potential impacts, and to inform and update agency partners of recovery actions and progress (NNDFW 2015, pp. 26-27).

In addition, NNDFW has authority over endangered and threatened species protection, and all temporary and permanent developments (i.e., draining, dredging, filling, excavating, building, grazing, and pollution) within designated sensitive areas must receive a permit or other formal authorization from NNDFW. Navajo Nation evaluates a project's potential impact on protected fish and wildlife and their habitats by using their Natural Heritage Database and various tribal and Federal wildlife protection regulations (refer to the discussion under *Factor D. The Inadequacy of Existing Regulatory Mechanisms* in our final listing rule published July 24, 2014 (79 FR 43132)). Navajo Nation's regulatory process divides their land into six separate land status categories to manage actions in a way that minimize impacts to sensitive species and habitats.

The Zuni bluehead sucker critical habitat that was proposed within the Kinlichee Creek Watershed falls into areas that Navajo Nation has delineated as a highly sensitive area. Highly Sensitive Areas are areas that are the most protected on Navajo Nation and contain a high degree of habitat or resource importance for one or more protected species; these areas have been relatively undisturbed by development. Permanent development is

not prohibited, but those developments must demonstrate that impacts to protected species will be minimal, and if possible, NNDFW strongly urges relocating projects to less sensitive habitats.

In the FMP, Navajo Nation recognizes that management is needed to address impacts that grazing has on riparian areas near Zuni bluehead sucker habitat. Navajo Nation can withdraw riparian habitat from grazing use and has previously worked with other Navajo agencies to reduce and eliminate grazing in important habitats along the San Juan River. Efforts are underway by Navajo policy makers and agencies to address past grazing impacts on Navajo Nation lands and to improve protection and enforcement of Navajo resources and ecosystems. For example, in 2012, the Navajo Departments of Resource Enforcement and Agriculture conducted roundups to reduce overgrazing by stray, feral, and unpermitted livestock.

Additionally, Navajo Nation and BIA conducted public outreach regarding grazing impacts and the necessity of immediate and proactive steps to be taken to reduce grazing pressure and restore productivity of Navajo Nation rangelands. More recently, Navajo Nation has developed a draft Navajo Rangeland Improvement Act of 2014 to improve the ecological health and productivity of Navajo rangelands in order to protect the interests of present and future generations of Navajo people (Navajo Nation 2014, entire). One purpose is to mandate the implementation of sound grazing management and conservation techniques and practices on Navajo rangelands (Navajo Nation 2014, p. 4). Although the Navajo Rangeland Improvement Act of 2014 is currently draft, it provides evidence of the Navajo Nation's interest in conserving habitat and minimizing impacts of grazing, a result of our positive working relationship..

B. Benefits of Inclusion

As discussed above under *Section 7 Consultation*, Federal agencies, in consultation with the Service, must ensure that their actions are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of any designated critical habitat of such species. The difference in the outcomes of the jeopardy analysis and the adverse modification analysis represents the regulatory benefit and costs of critical habitat.

Unit 2 of the proposed critical habitat for Zuni bluehead sucker is the Kinlichee Creek Unit, which contains Subunits 2a (occupied) and 2b (unoccupied). If there are Federal actions or if Federal permitting occurs in Subunit 2a, these actions would undergo section 7 consultation under the jeopardy standard, because the subunit is occupied by the subspecies. Critical habitat along Subunit 2a (Kinlichee Creek, Black Soil Wash, and Scattered Willow Wash) may not provide an additional regulatory benefit for the Zuni bluehead sucker under section 7 of the Act when there is a Federal nexus present for a project that might adversely modify critical habitat. Because the subspecies is so closely tied to its habitat, the results of consultation under the adverse modification standard are not likely to differ from the results of consultation under the jeopardy standard. It is unlikely that additional project modification would be required above and beyond those to avoid jeopardy in order to avoid adverse modification or destruction of critical habitat. However, Subunit 2b (Red Clay Wash) is unoccupied by the Zuni bluehead sucker; therefore, if a Federal action or permitting occurs, there may not be a consultation under section 7 of the Act unless critical habitat is designated. Our

coordination with the Navajo Nation indicates that it is unlikely that any project will result in section 7 consultation within the areas proposed as critical habitat within Subunit 2b. Our Incremental Effects Memo provides further description of this (Service 2013, entire).

Our economic analysis found that incremental costs would mainly occur in unoccupied areas of critical habitat, specifically Subunit 2b. Based on communications with Navajo Nation, we do not anticipate a significant number of consultations in this subunit, resulting in relatively low cost. We do not anticipate that any formal consultations from urban development or recreation would occur if critical habitat were designated, primarily because there would be no Federal nexus. The types of projects we might anticipate that may have a Federal nexus (riparian habitat restoration, forest management plans, and livestock grazing activities) would all provide long-term benefits to Zuni bluehead sucker habitat, suggesting that effects to the Zuni bluehead sucker from Federal projects would likely result in insignificant and discountable impacts because conservation measures would be focused on habitat improvement and management. Because of how Navajo Nation manages and conserves their lands through establishment of policies, rules, and regulation (such as the Navajo Nation Endangered Species List, Biological Resources Land Use Clearance Policies and Procedures, Navajo Nation Water Quality Standards of 2007, Navajo Nation Aquatic Resources Protection Program, and Navajo Nation's 10-Year Forest Management Plan), and active conservation of the Zuni bluehead sucker and other imperiled species, we do not anticipate that Navajo Nation's actions would considerably change in the future. Therefore, the regulatory benefit of critical habitat designation on these lands is minimized.

Another important benefit of including lands in a critical habitat designation is that the designation can serve to educate landowners, agencies, tribes, and the public regarding the potential conservation value of an area and may help focus conservation efforts on areas of high conservation value for certain species. Any information about the Zuni bluehead sucker that reaches a wide audience, including parties engaged in conservation activities, is valuable. The designation of critical habitat may also strengthen or reinforce some Federal laws such as the Clean Water Act. These laws analyze the potential for projects to significantly affect the environment. Critical habitat may signal the presence of sensitive habitat that could otherwise be missed in the review process for these other environmental laws.

The educational benefits that might follow critical habitat designation, such as providing information to Navajo Nation on areas that are important for the long-term survival and conservation of the subspecies, have already been achieved. Navajo Nation is fully aware of the Zuni bluehead sucker and its habitat needs, and has demonstrated commitment to address management and recovery of other endangered and threatened species (i.e., southwestern willow flycatcher (flycatcher) (*Empidonax traillii extimus*), Colorado pikeminnow (*Ptychocheilus lucius*), and razorback sucker (*Xyrauchen texanus*)). Navajo Nation was an integral partner in identifying which bluehead sucker populations were in fact Zuni bluehead sucker. Since 2013, Navajo Nation has been actively monitoring their Zuni bluehead sucker populations (Kitcheyan and Mata 2012, entire; Kitcheyan and Mata 2013, entire) and have identified additional occupied sites within the proposed critical habitat area, as well as potential new locations for population replication (NNDFW 2015, entire). Navajo Nation is also a partner on a habitat

suitability study on the Zuni bluehead sucker with the University of Arizona and has actively been seeking funds for several fish passage projects on Navajo Nation. Additionally, the NNDFW has authority with regard to endangered and threatened species protection and is in the process of listing the Zuni bluehead sucker as an endangered species for added protection, which is a tribal designation by Navajo Nation different from the endangered designation under the Act. Finally, Navajo Nation has incorporated outreach and educational components regarding native fishes, including the Zuni bluehead sucker, within their FMP. The FMP provides guidance and oversight on the management of both recreational and native fish, including the Zuni bluehead sucker. We find that the Navajo Nation Fisheries Management Plan is complete, and the commitment to implement conservation activities described provides significant conservation benefit to the Zuni bluehead sucker. The FMP specifically provides periodic updates as appropriate. The assurances, protections, and conservation actions for the Zuni bluehead sucker within the Kinlichee Creek watershed on Navajo Nation lands provide extensive benefit to the subspecies. These baseline conservation efforts would minimize any regulatory benefit of critical habitat designation on these lands. For these reasons, we believe there is little educational benefit or support for other laws and regulations attributable to critical habitat beyond those benefits already achieved from listing the Zuni bluehead sucker under the Act on July 24, 2014 (79 FR 43132).

C. Benefits of Exclusion

The benefits of excluding Navajo Nation from designated critical habitat include:

(1) The advancement of our Federal Indian Trust obligations and our deference to tribes

to develop and implement tribal conservation and natural resource management plans for their lands and resources, which includes the Zuni bluehead sucker; and (2) the maintenance of effective collaboration and cooperation to promote the conservation of the Zuni bluehead sucker and its habitat, and other species and their habitats.

We have an effective working relationship with Navajo Nation, which was reinforced when we proposed critical habitat for four endemic Colorado River basin fishes: razorback sucker (*Xyrauchen texanus*), Colorado pikeminnow (*Ptychocheilus lucius*), humpback chub (*Gila cypha*), and bonytail chub (*Gila elegans*) (59 FR 13374; March 21, 1994) and has evolved through consultations on the flycatcher (69 FR 60706; October 12, 2004). The designation of critical habitat on Navajo Nation would be expected to adversely impact our working relationship. During our discussions with Navajo Nation, they informed us that critical habitat would be viewed as an intrusion on their sovereign abilities to manage natural resources in accordance with their own policies, customs, and laws. We believe that continuing our positive working relationships with Navajo Nation would provide more conservation for the Zuni bluehead sucker than the regulatory designation of critical habitat. We view this as a substantial benefit since we have developed a cooperative working relationship with Navajo Nation for the mutual benefit of Zuni bluehead sucker conservation and the conservation of other endangered and threatened species.

During the development of the Zuni bluehead sucker critical habitat proposal, we met with Navajo Nation to discuss how they might be affected by the regulations associated with endangered species management, recovery, the designation of critical habitat, and measures to minimize any impacts from planned projects. As such, we

established cooperative relationships for the management and conservation of endangered species and their habitats. As part of our relationship, we provided technical assistance to develop measures to conserve endangered and threatened species such as the Colorado pikeminnow, razorback sucker, humpback chub, bonytail chub, and flycatcher and their habitats. Navajo Nation has already requested similar assistance for the Zuni bluehead sucker, and we anticipate providing further assistance in their efforts to conserve the subspecies.

All of these proactive actions were conducted in accordance with Secretarial Order 3206, “American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act” (June 5, 1997); the relevant provision of the Departmental Manual of the Department of the Interior (512 DM 2); and Secretarial Order 3317, “Department of Interior Policy on Consultation with Indian Tribes” (December 1, 2011). We believe Navajo Nation should be the governmental entity to manage and promote the Zuni bluehead sucker conservation on their lands.

D. Benefits of Exclusion Outweigh the Benefits of Inclusion

The benefits of including Navajo Nation in the critical habitat designation are limited to educational awareness and projects that may result in section 7 consultation. It is unlikely that many projects will result in section 7 consultation within the proposed critical habitat areas on Navajo Nation based on section 7 consultations for other listed species and lack of a Federal nexus. However, as discussed in detail above, we believe these benefits are minimized because Navajo Nation is familiar with the Zuni bluehead sucker and its habitat needs, and has demonstrated commitment to address management

and recovery for this subspecies and others (e.g., flycatcher, Colorado pikeminnow, and razorback sucker).

The benefits of excluding Navajo Nation from designation as Zuni bluehead sucker critical habitat are: (1) The advancement of our Federal Indian Trust obligations; (2) the conservation benefits to Zuni bluehead sucker, riparian habitats, and other native species from implementation of conservation actions under the FMP; and (3) the maintenance of effective collaboration and cooperation to promote the conservation of the Zuni bluehead sucker and its habitat. Overall, these conservation actions accomplish greater conservation than would be available through the implementation of a designation of critical habitat on a project-by-project basis. Excluding Navajo Nation from critical habitat will allow them to manage their natural resources to benefit the Zuni bluehead sucker without the perception of Federal Government intrusion. This philosophy is also consistent with our published policies on Native American natural resource management. The exclusion of these areas will likely also provide additional benefits to other listed species that would not otherwise be available without the Service's maintenance of a cooperative working relationship. In conclusion, we find that the benefits of excluding Navajo Nation from critical habitat designation outweigh the benefits of including these areas.

E. Exclusion Will Not Result in Extinction of the Species

As noted above, the Secretary, under section 4(b)(2) of the Act, may exclude areas from the critical habitat designation unless it is determined, based on the best scientific and commercial data available, that the failure to designate such area as critical

habitat will result in the extinction of the species concerned. There is a small portion of proposed critical habitat on Navajo Nation that is considered to be unoccupied; Subunit 2b (Red Clay Wash) is approximately 9.6 km (6.0 mi). The remaining 86.9 km (54.0 mi) of critical habitat on Navajo Nation is considered to be occupied. Therefore, Federal activities in these areas that may affect the Zuni bluehead sucker will still require consultation under section 7(a)(2) of the Act. Section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of listed species. Therefore, even without critical habitat designation on these lands, activities that occur on these lands cannot jeopardize the continued existence of the Zuni bluehead sucker. Even so, our record demonstrates that formal section 7 consultations rarely occur on tribal lands, which is likely a result of existing conservation planning by both Navajo Nation and BIA. Second, Navajo Nation has committed to protecting and managing Zuni bluehead sucker habitat according to their management plans and natural resource management objectives. We believe this commitment accomplishes greater conservation than would be available through the implementation of a designation of critical habitat on a project-by-project basis. With the implementation of their natural resource management objectives, based upon strategies developed in the Fisheries management plan, we have concluded that this exclusion from critical habitat will not result in the extinction of the Zuni bluehead sucker. Accordingly, under section 4(b)(2) of the Act, we have determined that the benefit of exclusion of Navajo Nation lands in Unit 2 outweigh the benefits of their inclusion; the exclusion of these lands from the designation will not result in the extinction of the species; and therefore, we are excluding these lands from critical habitat designation for the Zuni

bluehead sucker.

II. Zuni Tribe

The Zuni Tribe is a federally recognized Indian Tribe with reservation lands totaling nearly 463,271 acres. The Zuni Reservation is located in western New Mexico, approximately 150 miles west of Albuquerque in McKinley County. On the Zuni Reservation (within Unit 1 in the proposed rule), we proposed 68.3 km (42.4 mi) of stream habitat. Much of the habitat was historically occupied, with individuals detected as recently as 1990 (Propst and Hobbes 1996, p. 13; Carman 2010, pp. 13-15; Gilbert and Carman 2011, p. 23; NMDGF 2013, p. 26); however, many areas have not been surveyed for Zuni bluehead sucker due to drought conditions or complexity of sampling due to access, variety of habitat, and visibility due to increase turbidity. We consider all portions of Subunit 1a to be occupied.

As analyzed below, we are excluding the Zuni Tribe's lands from critical habitat based on our ongoing conservation partnership where the benefits of exclusion from critical habitat outweigh the benefits of including an area in critical habitat. We believe the Zuni Tribe has demonstrated a productive working relationship on a Government-to-Government basis with us. The designation of critical habitat on the Zuni Reservation would be expected to adversely impact our working relationship with the Tribe.

Zuni Tribe has worked cooperatively with the Service on a draft Fisheries Management Plan (draft FMP), which includes the Zuni bluehead sucker. The draft FMP is a joint effort between Zuni Fish and Wildlife Department, the Service, and BIA. The draft FMP is designed for the purpose of long-term planning and implementation of

fisheries-related issues on Zuni Reservation and is part of an integrated, interagency cooperative effort to manage its fisheries resources based on sound ecological management practices. The draft FMP serves as a guide for accomplishing goals outlined in the Management Plan for managing, maintaining, enhancing, and conserving the fisheries resources on Zuni Reservation. Two objectives in the draft FMP are to identify and protect existing Zuni bluehead sucker populations and their habitats and to expand distribution to suitable streams. These objectives would be accomplished by actions similar to those described in the Navajo Nation FMP. The Zuni Tribe draft FMP was based on the Navajo Nation FMP, with a few differences. The main difference in the Zuni Tribe draft FMP is that consultation is needed with the Zuni Cultural Resource Advisory Team to ensure that implementation of the Fisheries Management Plan does not affect Zuni Tribe's cultural beliefs. In addition, the Zuni Tribe identifies responsible parties that can aid in the improvement of grazing management along streams containing Zuni bluehead sucker habitat. Although this plan is currently in draft, it serves as evidence of our cooperative working relationship with Zuni Tribe.

In addition, Zuni Tribe has established conservation partnerships with the Service, NMDGF, Cibola National Forest, The Nature Conservancy, and private landowners. Zuni Tribe has participated in and implemented conservation and recovery actions for the Zuni bluehead sucker. Zuni Tribe, NMDGF, and the Service continue to work together to monitor, conserve, and protect known occupied Zuni bluehead sucker habitat on Tribal property and upstream habitat on The Nature Conservancy's lands.

A. Benefits of Inclusion

On Zuni Reservation, we proposed as critical habitat 38.9 km (24.2 mi) within Subunit 1a (Zuni River Headwaters), which is occupied by the Zuni bluehead sucker. Therefore, if a Federal action or permitting occurs, there is a section 7 nexus, and the incremental impacts due to critical habitat would be limited to administrative cost. We also proposed as critical habitat 29.4 km (18.3 mi) on Zuni Reservation within Subunit 1b (Zuni River Mainstem), which is unoccupied by the Zuni bluehead sucker; therefore, if a Federal action or permitting occurs, there may not be a consultation under section 7 of the Act unless critical habitat is designated. Our draft economic analysis found that if we designate critical habitat on Zuni Reservation, it is expected that there will be a small number of informal consultations that would incur limited administrative costs only and that no Zuni Tribe activities are expected to result in formal consultation; however, future impacts are possible.

Our section 7 consultation history for another riparian species, the flycatcher, shows that since listing in 1995, we have conducted informal consultations on the flycatcher with agencies implementing actions or providing funding. However, since listing in 1995, no formal section 7 consultations have occurred on Zuni Reservation. Effects to the flycatcher from Federal projects have all resulted in insignificant and discountable impacts because conservation measures have focused on habitat improvement and management for the flycatcher and its habitat. We anticipate a similar scenario for the Zuni bluehead sucker.

If we designate critical habitat on the Zuni Reservation, our previous section 7 consultation history for the flycatcher in riparian habitat indicates that there could be a few regulatory benefits to the Zuni bluehead sucker on Subunit 1b, which is currently

unoccupied.

Formal consultation for Zuni bluehead sucker on the Zuni Reservation is unlikely. There are no projects planned within the proposed critical habitat units, and future projects that we might anticipate (riparian habitat restoration, establishment of refugia populations, construction of fish barriers and livestock exclosure fencing) are actions that provide long-term benefits to the Zuni bluehead sucker and its habitat. Therefore, effects to the Zuni bluehead sucker from Federal projects would likely result in insignificant and discountable impacts because conservation measures would be focused on habitat improvement and management. Because of how Zuni Tribe manages and conserves its lands through establishment of fish regulation, livestock grazing exclosures, and establishment of management plans and active conservation of the Zuni bluehead sucker and other imperiled species, we do not anticipate that Zuni Tribe's actions would considerably change in the future. These baseline conservation efforts would minimize any regulatory benefit of critical habitat designation on these lands. Therefore, the benefits of inclusion of the lands are minimized by the continuing conservation efforts on the Zuni Tribe lands.

Another important benefit of including lands in a critical habitat designation is that the designation can serve to educate landowners, agencies, tribes, and the public regarding the potential conservation value of an area, and may help focus conservation efforts on areas of high conservation value for certain species. Any information about the Zuni bluehead sucker that reaches a wide audience, including parties engaged in conservation activities, is valuable. The designation of critical habitat may also strengthen or reinforce some Federal laws such as the Clean Water Act. These laws

analyze the potential for projects to significantly affect the environment. Critical habitat may signal the presence of sensitive habitat that could otherwise be missed in the review process for these other environmental laws.

The educational benefits that might follow critical habitat designation, such as providing information to Zuni Tribe on areas that are important for the long-term survival and conservation of the subspecies, have already been achieved. Zuni Tribe is familiar with the Zuni bluehead sucker and its habitat needs and has successfully worked with the Service to address Zuni bluehead sucker management and recovery. The Zuni bluehead sucker population has been widely known since the 1960s (Merkel 1979, entire; Hanson 1980, entire; Propst and Hobbes 1996, p. 13; Carman 2010, pp. 13-15; Gilbert and Carman 2011, p. 23; NMDGF 2013, p. 24). Thus, the educational benefits that might follow critical habitat designation, such as providing information to Zuni Tribe on areas that are important for the long-term survival and conservation of the subspecies, have already been provided by decades of partnerships with NMDGF and the Service. For these reasons, we believe there is little educational benefit or support for other laws and regulations attributable to critical habitat beyond those benefits already achieved.

B. Benefits of Exclusion

The benefits of excluding the Zuni Tribe from designated critical habitat include: (1) The advancement of our Federal Indian Trust obligations and our deference to tribes to develop and implement tribal conservation and natural resource management plans for their lands and resources, which includes the Zuni bluehead sucker; and (2) the fostering of our partnership with Zuni Tribe, which results in effective collaboration and

cooperation to promote the conservation of the Zuni bluehead sucker and its habitat, and other species and their habitats.

We have an effective working relationship with Zuni Tribe, which has evolved through consultations on the flycatcher (69 FR 60706; October 12, 2004) and through cooperative fisheries management. As part of our relationship, we have provided technical assistance to develop measures to conserve the Zuni bluehead and its habitat on the Tribe's lands, as well as conducting surveys and research investigations regarding the subspecies' needs (e.g., habitat and spawning). These proactive actions were conducted in accordance with Secretarial Order 3206, "American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act" (June 5, 1997); the relevant provision of the Departmental Manual of the Department of the Interior (512 DM 2); and Secretarial Order 3317, "Department of Interior Policy on Consultation with Indian Tribes" (December 1, 2011). We believe Zuni Tribe should be the governmental entity to manage and promote Zuni bluehead sucker conservation on their lands. During our communication with Zuni Tribe, we recognized and endorsed their fundamental right to provide for tribal resource management activities, including those relating to riparian habitat and fishing regulation restrictions.

During the comment periods, we received input from Zuni Tribe expressing the view that designating Zuni bluehead sucker critical habitat on tribal land would adversely affect our working relationship. They noted that the beneficial cooperative working relationship has assisted in the conservation of listed species and other natural resources. During our discussions with Zuni Tribe, they informed us that critical habitat would be viewed as an intrusion on their sovereign abilities to manage natural resources in

accordance with their own policies, customs, and laws. For this reason, we believe that our working relationships with Zuni Tribe would be better maintained if we exclude their lands from the designation of Zuni bluehead sucker critical habitat. We view this as a substantial benefit since we have developed a cooperative working relationship with Zuni Tribe for the mutual benefit of Zuni bluehead sucker conservation and the conservation of other endangered and threatened species.

We have coordinated and collaborated with Zuni Tribe on the management and recovery of the endangered species and their habitats by establishing conservation partnerships. Many tribes and pueblos recognize that their management of riparian habitat and conservation of the flycatcher and the Zuni bluehead sucker are common goals they share with the Service. Zuni Tribe's management actions are evidence of their commitment toward measures to improve riparian habitat for endangered and threatened species. Some of the common management strategies are maintaining riparian conservation areas, preserving habitat, improving habitat, protecting the species under Zuni Tribe Game and Fish Codes starting in 1968 (Zuni Tribe 1989, entire), and conducting surveys with Service since 1954.

Zuni Tribe will continue to work cooperatively with us and others to benefit other listed species, but only if they view the relationship as mutually beneficial. Consequently, the development of future voluntary management actions for other listed species may be compromised if these lands are designated as critical habitat for the Zuni bluehead sucker.

C. Benefits of Exclusion Outweigh the Benefits of Inclusion

The benefits of including Zuni Tribe in the critical habitat designation are limited to the incremental benefits gained through the regulatory requirement to consult under section 7 and consideration of the need to avoid adverse modification of critical habitat, and educational awareness. However, as discussed in detail above, we believe these benefits are minimized because they are provided for through other mechanisms, such as (1) The advancement of our Federal Indian Trust obligations; (2) the conservation benefits to the Zuni bluehead sucker from implementation of baseline conservation actions through our partnership; and (3) the maintenance of effective collaboration and cooperation to promote the conservation of the Zuni bluehead sucker and its habitat.

The benefits of excluding Zuni Tribe's lands from designation as Zuni bluehead sucker critical habitat are more significant and include encouraging the continued implementation of tribal management and conservation measures such as monitoring, surveying, habitat management and protection, and recovery activities that are planned for the future or are currently being implemented. Overall, these conservation actions and management of the subspecies and its habitat likely accomplish greater conservation than would be available through the implementation of a designation of critical habitat on a project-by-project basis (especially when formal section 7 consultations are rare) and implementation of the draft Zuni Fisheries Management Plan. These programs will allow Zuni Tribe to manage their natural resources to benefit riparian habitat for the Zuni bluehead sucker, without the perception of Federal Government intrusion. This philosophy is also consistent with our published policies on Native American natural resource management. The exclusion of these areas will likely also provide additional benefits to other listed species that would not otherwise be available without the

Service's maintenance of a cooperative working relationship. In conclusion, we find that the benefits of excluding Zuni Tribe's lands from critical habitat designation outweigh the benefits of including these areas.

D. Exclusion Will Not Result in Extinction of the Species

As noted above, the Secretary, under section 4(b)(2) of the Act, may exclude areas from the critical habitat designation unless it is determined, based on the best scientific and commercial data available, that the failure to designate such area as critical habitat will result in the extinction of the species concerned.

First, Federal activities on these areas that may affect the Zuni bluehead sucker will still require consultation under section 7 of the Act. Section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of listed species. Therefore, even without critical habitat designation on these lands, activities that occur on these lands cannot jeopardize the continued existence of the Zuni bluehead sucker. Even so, our record demonstrates that formal section 7 consultations rarely occur on tribal lands, which is likely the result of existing conservation planning. Second, Zuni Tribe is committed to protecting and managing the Zuni bluehead sucker's habitat according to the Tribe's management plans and natural resource management objectives. We believe this commitment accomplishes greater conservation than would be available through the implementation of a designation of critical habitat on a project-by-project basis. With the implementation of their natural resource management objectives, based upon strategies developed in the Fisheries Management Plan, we have concluded that this exclusion from

critical habitat will not result in the extinction of the Zuni bluehead sucker. Accordingly, under section 4(b)(2) of the Act, we have determined the benefits of exclusion of Zuni Tribe lands in Unit 1 outweigh the benefits of their inclusion; the exclusion of these lands from the designation will not result in the extinction of the species; and, therefore, we are excluding these lands from critical habitat designation for the Zuni bluehead sucker.

Required Determinations

Regulatory Planning and Review (Executive Orders 12866 and 13563)

Executive Order 12866 provides that the Office of Information and Regulatory Affairs (OIRA) will review all significant rules. The Office of Information and Regulatory Affairs has determined that this rule is not significant.

Executive Order 13563 reaffirms the principles of E.O. 12866 while calling for improvements in the nation's regulatory system to promote predictability, to reduce uncertainty, and to use the best, most innovative, and least burdensome tools for achieving regulatory ends. The executive order directs agencies to consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public where these approaches are relevant, feasible, and consistent with regulatory objectives. E.O. 13563 emphasizes further that regulations must be based on the best available science and that the rulemaking process must allow for public participation and an open exchange of ideas. We have developed this rule in a manner consistent with these requirements.

Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

Under the Regulatory Flexibility Act (RFA; 5 U.S.C. 601 *et seq.*), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA; 5 U.S.C. 801 *et seq.*), whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (i.e., small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of the agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended the RFA to require Federal agencies to provide a certification statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities.

According to the Small Business Administration, small entities include small organizations such as independent nonprofit organizations; small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents; and small businesses (13 CFR 121.201). Small businesses include manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service businesses with less than \$5 million in annual sales, general and heavy construction businesses with less than \$27.5 million in annual business, special trade contractors doing less than \$11.5 million in annual business, and agricultural businesses with annual sales less than \$750,000. To determine if potential economic impacts to these small entities are significant, we considered the types of activities that might trigger regulatory impacts under this

designation as well as types of project modifications that may result. In general, the term “significant economic impact” is meant to apply to a typical small business firm’s business operations.

The Service’s current understanding of the requirements under the RFA, as amended, and following recent court decisions, is that Federal agencies are only required to evaluate the potential incremental impacts of rulemaking on those entities directly regulated by the rulemaking itself and, therefore, are not required to evaluate the potential impacts to indirectly regulated entities. The regulatory mechanism through which critical habitat protections are realized is section 7 of the Act, which requires Federal agencies, in consultation with the Service, to ensure that any action authorized, funded, or carried by the agency is not likely to destroy or adversely modify critical habitat. Therefore, under section 7 only Federal action agencies are directly subject to the specific regulatory requirement (avoiding destruction and adverse modification) imposed by critical habitat designation. Consequently, it is our position that only Federal action agencies will be directly regulated by this designation. There is no requirement under RFA to evaluate the potential impacts to entities not directly regulated. Moreover, Federal agencies are not small entities. Therefore, because no small entities are directly regulated by this rulemaking, the Service certifies that this final critical habitat designation will not have a significant economic impact on a substantial number of small entities.

During the development of this final rule we reviewed and evaluated all information submitted during the comment period that may pertain to our consideration of the probable incremental economic impacts of this critical habitat designation. Based on this information, we affirm our certification that this final critical habitat designation

will not have a significant economic impact on a substantial number of small entities, and a regulatory flexibility analysis is not required.

Energy Supply, Distribution, or Use—Executive Order 13211

Executive Order 13211 (Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use) requires agencies to prepare Statements of Energy Effects when undertaking certain actions. OMB has provided guidance for implementing this Executive Order that outlines nine outcomes that may constitute “a significant adverse effect” when compared to not taking the regulatory action under consideration.

The economic analysis finds that none of these criteria is relevant to this analysis. Thus, based on information in the economic analysis, energy-related impacts associated with Zuni bluehead sucker conservation activities within critical habitat are not expected. As such, the designation of critical habitat is not expected to significantly affect energy supplies, distribution, or use. Therefore, this action is not a significant energy action, and no Statement of Energy Effects is required.

Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 *et seq.*), we make the following findings:

(1) This rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, or tribal governments, or the private sector, and includes both “Federal

intergovernmental mandates” and “Federal private sector mandates.” These terms are defined in 2 U.S.C. 658(5)–(7). “Federal intergovernmental mandate” includes a regulation that “would impose an enforceable duty upon State, local, or tribal governments” with two exceptions. It excludes “a condition of Federal assistance.” It also excludes “a duty arising from participation in a voluntary Federal program,” unless the regulation “relates to a then-existing Federal program under which \$500,000,000 or more is provided annually to State, local, and tribal governments under entitlement authority,” if the provision would “increase the stringency of conditions of assistance” or “place caps upon, or otherwise decrease, the Federal Government’s responsibility to provide funding,” and the State, local, or tribal governments “lack authority” to adjust accordingly. At the time of enactment, these entitlement programs were: Medicaid; Aid to Families with Dependent Children work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement. “Federal private sector mandate” includes a regulation that “would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance or (ii) a duty arising from participation in a voluntary Federal program.”

The designation of critical habitat does not impose a legally binding duty on non-Federal Government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal

agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply, nor would critical habitat shift the costs of the large entitlement programs listed above onto State governments.

(2) We do not believe that this rule will significantly or uniquely affect small governments because most of the lands within the designated critical habitat do not occur within the jurisdiction of small governments. This rule will not produce a Federal mandate of \$100 million or greater in any year. Therefore, it is not a “significant regulatory action” under the Unfunded Mandates Reform Act. The designation of critical habitat imposes no obligations on State or local governments. Consequently, we do not believe that the critical habitat designation would significantly or uniquely affect small government entities. As such, a Small Government Agency Plan is not required.

Takings—Executive Order 12630

In accordance with Executive Order 12630 (“Government Actions and Interference with Constitutionally Protected Private Property Rights”), we have analyzed the potential takings implications of designating critical habitat for the Zuni bluehead sucker in a takings implications assessment. As discussed above, the designation of critical habitat affects only Federal actions. Although private parties that receive Federal funding or assistance or require approval or authorization from a Federal agency for an

action may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency.

The economic analysis found that no significant economic impacts are likely to result from the designation of critical habitat for the Zuni bluehead sucker. Because the Act's critical habitat protection requirements apply only to Federal agency actions, few conflicts between critical habitat and private property rights should result from this designation. Based on information contained in the economic analysis and described within this document, economic impacts to a property owner are unlikely to be of a sufficient magnitude to support a takings action. Therefore, the takings implications assessment concludes that this designation of critical habitat for the Zuni bluehead sucker does not pose significant takings implications for lands within or affected by the designation. Based on the best available information, the takings implications assessment concludes that this designation of critical habitat for the Zuni bluehead sucker does not pose significant takings implications.

Federalism—Executive Order 13132

In accordance with E.O. 13132 (Federalism), this rule does not have significant Federalism effects. A federalism summary impact statement is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of this critical habitat designation with, appropriate State resource agencies in Arizona and New Mexico. We received comments from Arizona and New Mexico, and have addressed them under **Summary of**

Comments and Recommendations, above. From a federalism perspective, the designation of critical habitat directly affects only the responsibilities of Federal agencies. The Act imposes no other duties with respect to critical habitat, either for States and local governments, or for anyone else. As a result, the rule does not have substantial direct effects either on the States, or on the relationship between the national government and the States, or on the distribution of powers and responsibilities among the various levels of government. The designation may have some benefit to these governments because the areas that contain the features essential to the conservation of the species are more clearly defined, and the physical and biological features of the habitat necessary to the conservation of the species are specifically identified. This information does not alter where and what federally sponsored activities may occur. However, it may assist these local governments in long-range planning (because these local governments no longer have to wait for case-by-case section 7 consultations to occur).

Where State and local governments require approval or authorization from a Federal agency for actions that may affect critical habitat, consultation under section 7(a)(2) of the Act would be required. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency.

Civil Justice Reform—Executive Order 12988

In accordance with Executive Order 12988 (Civil Justice Reform), the Office of the Solicitor has determined that the rule does not unduly burden the judicial system and that it meets the applicable standards set forth in sections 3(a) and 3(b)(2) of the Order. We are designating critical habitat in accordance with the provisions of the Act. To assist the public in understanding the habitat needs of the subspecies, the rule identifies the elements of physical or biological features essential to the conservation of the Zuni bluehead sucker. The designated areas of critical habitat are presented on maps, and the rule provides several options for the interested public to obtain more detailed location information, if desired.

Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)

This rule does not contain any new collections of information that require approval by OMB under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*). This rule will not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act (42 U.S.C. 4321 et seq.)

It is our position that, outside the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit, we do not need to prepare environmental analyses pursuant to the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq.*) in connection with

designating critical habitat under the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This position was upheld by the U.S. Court of Appeals for the Ninth Circuit (*Douglas County v. Babbitt*, 48 F.3d 1495 (9th Cir. 1995), cert. denied 516 U.S. 1042 (1996)). However, when the range of the species includes States within the Tenth Circuit, such as that of the Zuni bluehead sucker, under the Tenth Circuit ruling in *Catron County Board of Commissioners v. U.S. Fish and Wildlife Service*, 75 F.3d 1429 (10th Cir. 1996), we undertake a NEPA analysis for critical habitat designation and notify the public of the availability of the draft environmental assessment for a proposal when it is finished.

We performed the NEPA analysis, and the draft environmental assessment was made available for public comment on April 14, 2015 (80 FR 19941). The final environmental assessment has been completed and is available for review with the publication of this final rule. You may obtain a copy of the final environmental assessment online at <http://www.regulations.gov>, by mail from the New Mexico Ecological Services Field Office (see **ADDRESSES**), or by visiting our Web site at <http://www.fws.gov/southwest/es/newmexico>.

Government-to-Government Relationship with Tribes

In accordance with the President's memorandum of April 29, 1994 (Government-to-Government Relations with Native American Tribal Governments; 59 FR 22951), Executive Order 13175 (Consultation and Coordination With Indian Tribal Governments), and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal

Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with tribes in developing programs for healthy ecosystems, to acknowledge that tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to tribes.

Navajo Nation and the Zuni Tribe are the only tribes affected by this final rule. We sent notification letters in July 2012 to each tribe describing the exclusion process under section 4(b)(2) of the Act, and we have engaged in conversations with both tribes about the proposal to the extent possible without disclosing predecisional information. We sent out notification letters on April 12, 2013, notifying the tribes that the proposed rule had published in the **Federal Register** to allow for the maximum time to submit comments. On April 14, 2015, we also sent letters notifying the tribes that we had made available the draft environmental assessment and draft economic analysis in the **Federal Register**.

We had a government-to-government coordination meeting with Navajo Nation in March 2013. Additionally, we worked closely with the Zuni Tribe to develop a draft fisheries management plan for their respective land. We met on May 7, 2015, to discuss the proposed rule and their draft fisheries management plan. We considered these tribal areas for exclusion from final critical habitat designation to the extent consistent with the requirements of 4(b)(2) of the Act, and, subsequently, excluded the lands of Navajo Nation and the Zuni Tribe from this final designation.

References Cited

A complete list of all references cited is available on the Internet at <http://www.regulations.gov> and upon request from the New Mexico Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this rulemaking are the staff members of the New Mexico Ecological Services Field Office.

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Regulation Promulgation

Accordingly, we amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361–1407; 1531–1544; 4201–4245, unless otherwise noted.

2. Amend § 17.11(h) by revising the entry for “Sucker, Zuni bluehead” under FISHES in the List of Endangered and Threatened Wildlife to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						

FISHES

Sucker, Zuni bluehead	<i>Catostomus discobolus yarrowi</i>	U.S.A. (AZ, NM)	Entire	E	839	17.95(e)	NA
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3. In § 17.95, amend paragraph (e) by adding an entry for “Zuni bluehead sucker (*Catostomus discobolus yarrowi*)” after the entry for “Warner Sucker (*Catostomus warnerensis*)” to read as follows:

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(e) *Fishes.*

* * * * *

Zuni bluehead sucker (*Catostomus discobolus yarrowi*)

(1) Critical habitat unit is depicted for Cibola and McKinley Counties, New Mexico, on the map below.

(2) Critical habitat includes the adjacent floodplains within 91.4 lateral meters (m) (300 lateral feet (ft)) on either side of bankfull discharge, except where bounded by canyon walls. Bankfull discharge is the flow at which water begins to leave the channel and disperse into the floodplain, and generally occurs every 1 to 2 years.

(3) Within these areas, the primary constituent elements of the physical or biological features essential to the conservation of the Zuni bluehead sucker consist of three components:

(i) A riverine system with habitat to support all life stages of the Zuni bluehead sucker, which includes:

(A) Dynamic flows that allow for periodic changes in channel morphology and adequate river functions, such as channel reshaping and delivery of coarse sediments.

(B) Stream courses with perennial flows or intermittent flows that serve as

connective corridors between occupied or seasonally occupied habitat through which the subspecies may disperse when the habitat is wetted.

(C) Stream mesohabitat types including runs, riffles, and pools with substrate ranging from gravel, cobble, and bedrock substrates with low or moderate amounts of fine sediment and substrate embeddedness.

(D) Streams with depths generally less than 2 meters (3.3 feet), and with slow to swift flow velocities less than 0.35 meters per second (1.15 feet per second).

(E) Clear, cool water with low turbidity and temperatures in the general range of 2.0 to 23.0 °C (35.6 to 73.4 °F).

(F) No harmful levels of pollutants.

(G) Adequate riparian shading to reduce water temperatures when ambient temperatures are high and provide protective cover from predators.

(ii) An abundant aquatic insect food base consisting of fine particulate organic material, filamentous algae, midge larvae, caddisfly larvae, mayfly larvae, flatworms, and small terrestrial insects.

(iii) Areas devoid of nonnative aquatic species or areas that are maintained to keep nonnatives at a level that allows the Zuni bluehead sucker to continue to survive and reproduce.

(4) Critical habitat does not include manmade structures (such as buildings, aqueducts, runways, roads, and other paved areas) and the land on which they are located existing within the legal boundaries on [**INSERT DATE 30 DAYS AFTER DATE OF FEDERAL REGISTER PUBLICATION**].

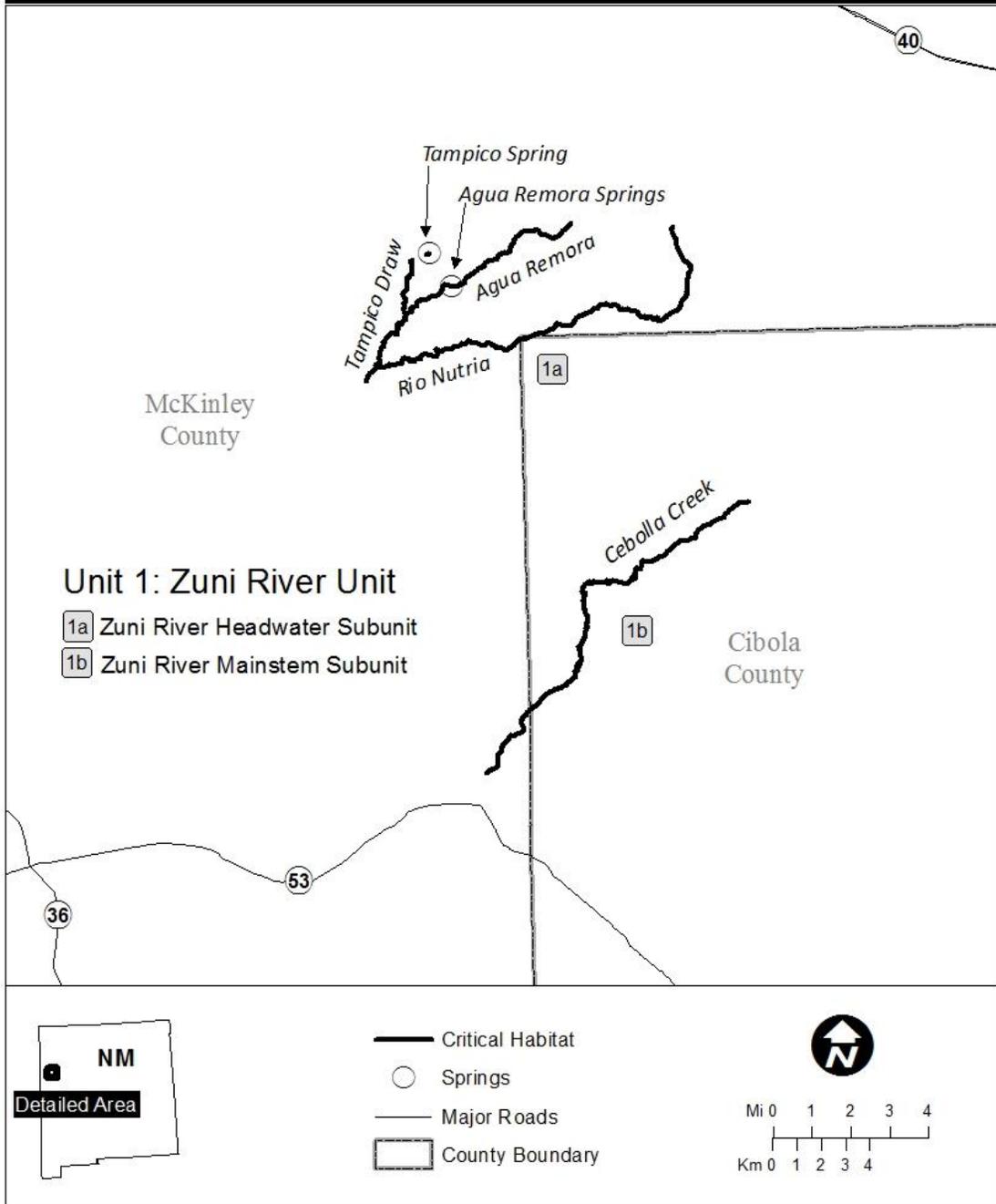
(5) *Critical habitat map units.* Data layers defining map unit were developed using ESRI ArcGIS mapping software along with various spatial layers. Data layers defining map units were created with U.S. Geological Survey National Hydrography Dataset (NHD) Medium Flowline data. ArcGIS was also used to calculate river kilometers and river miles from the NHD dataset, and it was used to determine longitude and latitude coordinates in decimal degrees. Critical habitat upstream limits were delineated based on the upper limits identified in the NHD dataset for each stream. The projection used in mapping and calculating distances and locations within the unit was North American Equidistant Conic, NAD 83. The maps in this entry, as modified by any accompanying regulatory text, establish the boundaries of the critical habitat designation. The coordinates or plot points or both on which each map is based are available to the public at the Service's Internet site (<http://www.fws.gov/southwest/es/newmexico>), at <http://www.regulations.gov> at Docket No. FWS-R2-ES-2013-0002, and at the field office responsible for this designation. You may obtain field office location information by contacting one of the Service regional offices, the addresses of which are listed at 50 CFR 2.2.

(6) Unit 1: Zuni River Unit, McKinley and Cibola Counties, New Mexico.

(i) *General description:* Unit 1 consists of approximately 55.7 kilometers (km) (34.6 miles (mi)) of the Zuni River watershed and the adjacent floodplains within 91.4 lateral meters (300 lateral feet) on either side of bankfull discharge, except where bounded by canyon walls in McKinley and Cibola Counties, and is composed of land ownership by the State (2.1 km (1.3 mi)), Forest Service (19.5 km (12.1 mi)) and private landowners (34.0 km (21.1 mi)).

(ii) Map of Unit 1 follows:

Zuni Bluehead Sucker Critical Habitat Unit 1



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Dated: May 24, 2016

Karen Hyun

Acting Principal Deputy Assistant Secretary for Fish and Wildlife and Parks.

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