

HAZARDOUS MATERIALS; HARMONIZATION WITH THE UNITED NATIONS RECOMMENDATIONS ON THE TRANSPORT OF DANGEROUS GOODS, INTERNATIONAL MARITIME DANGEROUS GOODS CODE, INTERNATIONAL CIVIL AVIATION ORGANIZATION TECHNICAL INSTRUCTIONS FOR THE SAFE TRANSPORT OF DANGEROUS GOODS BY AIR (JANUARY 19, 2011; 76 FR 3308)—Continued

Appeals from	Issue
Sporting Arms & Ammunition Manufacturer's Institute (SAAMI).	Appeal focuses on the international harmonization final rule provisions addressing: <ul style="list-style-type: none"> • The list of prohibited hazardous material and articles. • Exceptions from the air prohibition for Table 3 in 49 CFR 173.27(f) pertaining to limited quantities of Class 1 (explosive) material conforming to 49 CFR 173.63(b) and Class 7 (radioactive) material conforming to 49 CFR 173.421 through 173.425.

PHM-7 (Docket No. PHMSA-2005-22356)

HAZARDOUS MATERIALS: ENHANCED ENFORCEMENT AUTHORITY PROCEDURES (MARCH 2, 2011; 76 FR 11570)

Appeals from	Issue
COSTHA	Appeal focuses on the enhanced enforcement authority procedures final rule provisions addressing: <ul style="list-style-type: none"> • Package opening and reclosing by carrier vs. enforcement personnel. • Removing a package from transportation and ordering carrier personnel to transport the package for testing.
American Trucking Associations (ATA)	Appeal focuses on the enhanced enforcement authority procedures final rule provisions addressing: <ul style="list-style-type: none"> • Implementation of the authority to direct carriers to transport materials suspected of being hazardous materials to a facility for further examination. • Resumption of transportation for a package that violates the HMR, but does not present an imminent safety hazard.
United Parcel Service (UPS)	Appeal focuses on the enhanced enforcement authority procedures final rule provisions addressing: <ul style="list-style-type: none"> • Package opening at facilities vs. road side. • Department of Homeland Security's responsibility to open packages in pursuit of security related issues and possible treats.

II. Notification of Anticipated Delay in Appeal Decisions

49 CFR 106.130(a)(4) provides that if PHMSA does not issue a decision on whether to grant or deny an administrative appeal within 90 days after the date that the final rule is published in the **Federal Register** and that we anticipate a substantial delay in making a decision, PHMSA will notify parties having brought administrative appeals directly and provide an expected decision date. In addition, PHMSA will publish a notice of the delay in the **Federal Register**. Due to the volume of appeals received, as indicated above, we anticipate delays in making administrative appeal decisions. As a result, in accordance with 49 CFR 106.130(a)(4), we are publishing this notice in the **Federal Register** to notify the public, and we anticipate directly contacting parties having brought these administrative appeals shortly.

Issued in Washington, DC on June 21, 2011.

Magdy El-Sibaie,

Associate Administrator for Hazardous Materials Safety.

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Docket No. FWS-R3-ES-2010-0042; MO-92210-0-0009-B4]

RIN 1018-AW90

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for Tumbling Creek Cavesnail

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), designate critical habitat for the Tumbling Creek cavesnail (*Antrobia culveri*) under the Endangered Species Act of 1973, as

amended (Act). In total, approximately 25 acres (10.25 hectares) located in Taney County, Missouri, fall within the boundaries of the critical habitat designation.

DATES: This rule becomes effective on July 28, 2011.

ADDRESSES: This final rule, the associated final economic analysis, comments and materials received, as well as supporting documentation used in preparing this final rule are available on the Internet at <http://www.regulations.gov> at Docket No. FWS-R3-ES-2010-0042. These documents are also available for public inspection, by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Columbia Fish and Wildlife Office, 101 Park DeVille Dr., Suite A., Columbia, MO 65203; telephone: 573-234-2132; facsimile: 573-234-2181.

FOR FURTHER INFORMATION CONTACT: Charles M. Scott, Field Supervisor, Columbia Fish and Wildlife Office, (see **ADDRESSES**). If you use a telecommunications device for the deaf (TDD), call the Federal Information Relay Service (FIRS) at 800-877-8339.

SUPPLEMENTARY INFORMATION:**Background**

It is our intent to discuss only those topics directly relevant to the development and designation of critical habitat for the Tumbling Creek cavesnail in this final rule. For more information on the biology and ecology of the Tumbling Creek cavesnail, refer to the final listing rule published in the **Federal Register** on August 14, 2002 (67 FR 52879), and the Tumbling Creek Cavesnail Recovery Plan, which is available from the Columbia Missouri Ecological Services Field Office (see **ADDRESSES**) and on the Internet at <http://www.regulations.gov>.

The Tumbling Creek cavesnail is a critically imperiled aquatic snail, endemic to a single cave stream and associated springs in Taney County, southwestern Missouri. The species is known only from Tumbling Creek and a few of its small tributaries and associated underground springs within Tumbling Creek Cave, and areas immediately downstream of the cave between the cave's natural exit and the confluence of Tumbling Creek with Big Creek at Schoolhouse Spring. Suitable habitat includes the underside of rocks, small stones, and cobble, and occasionally the upper surface of solid rock bottom within sections of Tumbling Creek that have moderate current (U.S. Fish and Wildlife Service 2003, p. 10). The Tumbling Creek cavesnail is dependent on good water quality and reduced sediment loads in Tumbling Creek (Aley and Ashley 2003, p. 20).

The primary threats are related to the degradation of water quality in Tumbling Creek and include increased siltation from overgrazing, tree removal, and other activities. Nonpoint source pollution within the recharge area of Tumbling Creek cave is also a threat to the species (Aley and Ashley 2003, p. 19; U.S. Fish and Wildlife Service 2003, pp. 14–18). The deposition of silt into Tumbling Creek from aboveground activities within the recharge area of Tumbling Creek Cave has likely contributed to the decline of the species by eliminating the species' habitat, covering egg masses, or adversely impacting the snail in other ways (Tom and Cathy Aley, 2001, pers. comm.; U.S. Fish and Wildlife Service 2001, p. 66806; Aley and Ashley 2003, p. 19; U.S. Fish and Wildlife Service 2003, pp. 14–18).

Previous Federal Actions

The Tumbling Creek cavesnail was emergency listed on December 27, 2001 (66 FR 66803) and subsequently listed

as endangered on August 14, 2002 (67 FR 52879). At the time of listing, we determined that a delay in designating critical habitat would enable us to concentrate our limited resources on other actions that must be addressed and allow us to invoke immediate protections needed for the conservation of the species. We concluded that, if prudent and determinable, we would prepare a critical habitat proposal in the future at such time as our available resources and other listing priorities under the Act would allow. We approved a final recovery plan for the Tumbling Creek cavesnail on September 15, 2003, and announced its availability to the public through a notice published in the **Federal Register** on September 22, 2003 (68 FR 55060).

On August 11, 2008, the Institute for Wildlife Protection and Crystal Grace Rutherford filed a lawsuit against the Secretary of the Interior for our failure to timely designate critical habitat for the Tumbling Creek cavesnail (*Institute for Wildlife Protection et al. v. Kempthorne* (07–CV–01202–CMP)). In a court-approved settlement agreement, we agreed to submit to the **Federal Register** a new prudency determination, and if the designation was found to be prudent, a proposed designation of critical habitat, by June 30, 2010, and a final designation by June 30, 2011. We published the proposed critical habitat designation for the Tumbling Creek cavesnail on June 23, 2010 (75 FR 35751). Publication of the proposed rule opened a 60-day public comment period that closed on August 23, 2010. We reopened the public comment period for an additional 30 days (ending February 11, 2011), in order to announce the availability of and receive comments on a draft economic analysis (DEA) (76 FR 2076).

Summary of Comments and Recommendations

We requested written comments from the public on the proposed designation of critical habitat for the Tumbling Creek cavesnail during two comment periods. The first comment period associated with the publication of the proposed rule (75 FR 35751) opened on June 23, 2010, and closed on August 23, 2010. We also requested comments on the proposed critical habitat designation and associated draft economic analysis during a comment period that opened January 12, 2011, and closed on February 11, 2011 (76 FR 2076). We contacted appropriate Federal, State, and local agencies; scientific organizations; and other interested parties and invited them to comment on

the proposed rule and the associated DEA during these comment periods.

During the first comment period, we received four comment letters directly addressing the proposed critical habitat designation. During the second comment period, we received one comment letter addressing the proposed critical habitat designation and the DEA. We did not receive any requests for a public hearing, so no public hearing was held. All substantive information provided during comment periods has either been incorporated directly into this final determination or addressed below. Comments received, including comments from peer reviewers (see below) were grouped into three general issues specifically relating to the proposed critical habitat designation for the Tumbling Creek cavesnail 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 in the **Federal Register** on July 1, 1994 (59 FR 34270), we solicited expert opinions from three knowledgeable individuals with scientific expertise that included familiarity with the species, the geographic region in which the species occurs, the hydrology and geology associated with karst systems, and conservation biology principles. We received responses from all three of the peer reviewers.

We reviewed all comments received from the peer reviewers for substantive issues and new information regarding critical habitat for the Tumbling Creek cavesnail. All peer reviewers strongly supported the proposed rule and believed that our analysis was based on solid science. Peer reviewers provided additional information and editorial 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

Comment 1: All three peer reviewers noted that there was a typographical error relative to dissolved oxygen concentrations on page 35755 (first column, second paragraph) of the proposed rule (75 FR 35751; June 23, 2010). They identified that we mistakenly stated that “dissolved oxygen levels should not exceed 4.5 milligrams per liter.” The corrected statement should be that dissolved oxygen levels should always equal or exceed 4.5 milligrams per liter.

Our Response: We agree that we had inadvertently reversed the required limit and have corrected it in this final rule.

Comment 2: Critical habitat should include the entire 23.57 square kilometers (9.1 square miles) within the recharge area of Tumbling Creek cave, not just the cave stream.

Our Response: While important to the species, the defined recharge area for Tumbling Creek cave does not meet the Act's definition for critical habitat. For inclusion in a critical habitat designation, the habitat within the geographical area occupied by the species at the time it was listed must contain the physical and biological features essential to the conservation of the species, and may be included only if those features may require special management considerations or protection. Critical habitat designations identify, to the extent known using the best scientific and commercial data available, habitat areas that provide essential life-cycle needs of the species (areas on which are found the physical and biological features laid out in the appropriate quantity and spatial arrangement for the conservation of the species). Because the Tumbling Creek cavesnail is an obligate stream snail, nonaquatic habitats within the recharge area of Tumbling Creek would not meet the Act's definition of critical habitat in that they do not contain the physical and biological features essential to the conservation of the species as described in this rule. Therefore, those areas are not included in the critical habitat designation. Nonetheless, the Service acknowledges that the proper management and maintenance of these areas are important to the long-term recovery of the Tumbling Creek cavesnail, and applicable conservation measures are outlined in the final Recovery Plan for the species.

Comment 3: One peer reviewer stated that there was no evidence that the Tumbling Creek cavesnail currently occupies underground areas between the natural exit of Tumbling Creek cave and the confluence of Tumbling Creek with Bear Cave Hollow upstream of Big Creek.

Our Response: These areas have not been surveyed due to their inaccessibility to humans. Snails could occur in phreatic (cracks and crevices) in the underground karst that provide sufficient aquatic habitat. Therefore, because we believe these areas could reasonably be occupied by the cavesnail, and they contain the physical and biological features essential to the conservation of the species, it is

appropriate to include these areas in the critical habitat designation.

Comment 4: Two peer reviewers thought that the discussion on the importance of energy input from gray bat (*Myotis grisescens*) guano should be expanded to highlight the potential catastrophic impact that White-nose Syndrome (WNS) and the causative fungus, *Geomyces destructans* could have on the Tumbling Creek cavesnail if WNS decimates gray bat populations in Tumbling Creek cave.

Our Response: The Service agrees that such an expanded discussion is warranted and we have incorporated additional information on the potential impact of WNS in this final rule.

Public Comments

Comment 5: One commenter noted that the surface stream upstream of the cave on the map (75 FR 35763; June 23, 2010) was incorrectly labeled and is identified as Bear Cave Hollow. This commenter stated that Tumbling Creek merges with Bear Cave Hollow upstream of Big Creek and that the mistake was due to an error on the U.S. Geological Survey Protem 7.5 minute topographic map that incorrectly lists Tumbling Creek as an alternate name for Bear Cave Hollow.

Our Response: We have made this correction on the map (Figure 1) and have incorporated the change in this final rule. Additionally, we have incorporated changes to note that the area designated as critical habitat is from the emergence of Tumbling Creek within Tumbling Creek cave to its confluence with Bear Cave Hollow upstream of Big Creek. These changes, however, will not affect the area outlined in the critical habitat designation or its total acreage.

Comment 6: While not presenting a position on the Service's proposed critical habitat designation, the Little Rock District of the Army Corps of Engineers (COE) commented that they do not believe that the designation of critical habitat for the Tumbling Creek cavesnail would necessitate further consultation under Section 7(a)(2) of the Act related to the operation of Bull Shoals Reservoir.

Our Response: During discussions with the Corps on February 8, 2011, the Service reiterated its intention to reinstate formal consultation on the project for the cavesnail because of new information regarding the status of the species, its presumed occupied range, the potential threat of white nose syndrome (as it may affect the energy input from the guano of bats that roost in Tumbling Creek Cave), and the designation of critical habitat. That

consultation would also assess whether any actions associated with the operations of Bull Shoals Reservoir would likely jeopardize the continued existence of the cavesnail or adversely modify designated critical habitat.

Comment 7: One commenter also noted that there was a typographical error relative to dissolved oxygen concentrations on page 35755 (first column, second paragraph) of the proposed rule (75 FR 35751; June 23, 2010). They identified that we mistakenly stated that "dissolved oxygen levels should not exceed 4.5 milligrams per liter." The corrected statement should be that dissolved oxygen levels should always equal or exceed 4.5 milligrams per liter.

Our Response: Refer to our response to *Comment 1*.

Comment 8: One commenter also thought that the discussion on the importance of energy input from gray bat (*Myotis grisescens*) guano should be expanded to highlight the potential catastrophic impact that White-nose Syndrome (WNS) and the causative fungus, *Geomyces destructans* could have on the Tumbling Creek cavesnail if WNS decimates gray bat populations in Tumbling Creek cave.

Our Response: Refer to our response to *Comment 4*.

Summary of Changes From Proposed Rule

We thoroughly evaluated all comments received on the proposed designation of critical habitat. As a result of the comments we received on the proposed rule, as well as errors we found, we have made the following changes to our proposed designation.

- Changed a typographical error related to a misstatement regarding the correct dissolved oxygen levels identified as one of the physical and biological features essential to the conservation of the Tumbling Creek cavesnail.

- Relabeled the map to depict the difference between Tumbling Creek and Bear Cave Hollow that was incorrectly labeled on the U.S. Geological Survey Protem 7.5 minute topographic map.

- Changed the relevant portions of the text in this rule to note that the area designated as critical habitat is from the emergence of Tumbling Creek within Tumbling Creek cave to its confluence with Bear Cave Hollow upstream of Big Creek. These changes, however, do not affect the area outlined in the critical habitat designation, or its total acreage.

- In preparing the final rule, the Service noted a typographical error related to the area of the above-ground recharge listed for Tumbling Creek cave.

The area should be listed as 23.57 square kilometers (9 square miles), not 14.5 kilometers (9 miles) as stated in the proposed rule. The appropriate change has been made in this final rule and does not change the total acreage included in the designation.

In preparing the final rule and relabeling the map outlining critical habitat for the Tumbling Creek cavesnail, the Service noticed that the designation does not include Schoolhouse Spring as stated in the proposed rule. The only spring within the designation is Owens Spring. The landowner confirmed that the area depicted in our map only includes Owens Spring and not Schoolhouse Spring. The removal of references to Schoolhouse Spring in the description of the area designated as critical habitat does not change the map or the total acreage included in the designation.

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 under 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 transplantation, 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(a)(2) of the Act through the prohibition against Federal agencies carrying out, funding, or authorizing the destruction or adverse modification of

critical habitat. Section 7(a)(2) requires consultation on Federal actions that may affect 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 seeks or 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) would 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.

For inclusion in a critical habitat designation, the habitat within the geographical area occupied by the species at the time it was listed must contain the physical or biological features that are essential to the conservation of the species and which may require special management considerations or protection. Critical habitat designations identify, to the extent known using the best scientific and commercial data available, those physical and biological features that are essential to the conservation of the species (such as space, food, cover, and protected habitat), focusing on the principal biological or physical constituent elements (primary constituent elements) within an area that are essential to the conservation of the species (such as roost sites, nesting grounds, seasonal wetlands, water quality, tide, soil type). Primary constituent elements are the elements of physical and biological features that, when laid out in the appropriate quantity and spatial arrangement to provide for a species' life-history processes, are essential to the conservation of the species.

Under the Act, 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. 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. When the best available scientific data do not

demonstrate that the conservation needs of the species require such additional areas, we will not designate critical habitat in areas outside the geographical area occupied by the species. An area currently occupied by the species but that was not occupied at the time of listing may, however, be essential to the conservation of the species and may be included in the critical habitat designation.

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 we should designate 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, or other unpublished materials and expert opinion or personal knowledge.

Habitat is dynamic, and species may move from one area to another over time. In particular, we recognize that climate change may cause changes in the arrangement of occupied habitat stream reaches. Climate change may lead to increased frequency and duration of droughts (Rind *et al.* 1990, p. 9983; Seager *et al.* 2007, pp. 1181-1184; Rahel and Olden 2008, p. 526). Climate warming may increase the virulence of nonnative parasites and pathogens to native species (Rahel and Olden 2008, p. 525), decrease groundwater levels (Schindler 2001, p. 22), or significantly reduce annual stream flows (Moore *et al.* 1997, p. 925). Increased drought conditions and prolonged low flows associated with climate change may favor the establishment and spread of nonnative

species (Rahel and Olden 2008, pp. 526, 529–530). In the Missouri Ozarks, it is projected that stream basin discharges may be significantly impacted by synergistic effects of changes in land cover and climate change (Hu *et al.* 2005, p. 9).

The information currently available on the effects of global climate change and increasing temperatures does not make sufficiently precise estimates of the location and magnitude of the effects. Nor are we currently aware of any climate change information specific to the habitat of the Tumbling Creek cavesnail that would indicate what areas may become important to the species in the future. Nonetheless, because the Tumbling Creek cavesnail is an aquatic snail that is totally dependent upon an adequate water supply, adverse effects associated with climate change that could significantly alter the quantity and quality of Tumbling Creek could impact the species in the future. Other than Tumbling Creek, we are currently unaware of any other cave stream inhabited by the Tumbling Creek cavesnail. Therefore, as explained in the proposed rule (75 FR 35751), we are unable to determine which additional areas, if any, may be appropriate to include in the final critical habitat for this species to address the effects of climate change.

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, especially if future surveys are successful in documenting the species' presence in another cave stream. For these reasons, a critical habitat designation does not signal that habitat outside the designated critical habitat area is unimportant or may not be required for recovery of the species.

Areas that are important to the conservation of the species, but are outside the critical habitat designation, will continue to be subject to conservation actions we implement under section 7(a)(1) of the Act. They are also subject to the regulatory protections afforded by the section 7(a)(2) jeopardy standard, as determined based on the best available scientific information at the time of the agency action. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. 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), section 7 consultations, or other species conservation planning efforts if new information available at the time of these planning efforts calls for a different outcome.

Physical and Biological Features

In accordance with sections 3(5)(A)(i) and 4(b)(1)(A) of the Act and the regulations at 50 CFR 424.12, in determining which areas within the geographical area occupied at the time of listing to designate as critical habitat, we consider the physical and biological features that are essential to the conservation of the species, 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 essential physical and biological features for the Tumbling Creek cavesnail from studies on this species' habitat, ecology, and life history as described in the Critical Habitat section of the proposed rule to designate critical habitat published in the **Federal Register** on June 23, 2010 (75 FR 35751), and in the information presented below. Additional information can be found in the Background and Status and Distribution sections of the final listing rule published in the **Federal Register** on August 14, 2002 (67 FR 52879), and the final recovery plan for the species available on the Internet at http://ecos.fws.gov/docs/recovery_plans/2003/030922a.pdf. Unfortunately, little is known of the specific habitat requirements for this species other than that the species requires adequate water quality, water quantity, water flow, a stable stream channel, minimal sedimentation, and energy input from the guano of bats, particularly gray bats (*Myotis grisescens*) that roost in Tumbling Creek Cave. To identify the physical and biological features essential to the Tumbling Creek cavesnail, we have relied on current conditions at locations where the species survives, and the limited information available on this species and its close relatives.

Space for Individual and Population Growth and for Normal Behavior

The specific space requirements for the Tumbling Creek cavesnail are unknown, but given that 15,118 snails were estimated in a 1,016-square-meter (3,333-square-foot) area of Tumbling Creek in 1973 (Greenlee 1974, p. 10), space is not likely a limiting factor for the species. The loss of interstitial habitats for the species, however, likely contributed to the species decline (U.S. Fish and Wildlife Service 2003, p. 14).

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

It is believed that the species feeds on biofilm, the organic coating and bacterial layer associated with the underside of rocks or a bare rock stream bottom (Aley and Ashley 2003, p. 19). This biofilm is directly connected to energy input from the guano of a large colony of roosting bats in Tumbling Creek Cave, particularly the Federally listed gray bat (*Myotis grisescens*) (Aley and Ashley 2003, p. 18; U.S. Fish and Wildlife Service 2003, p. 11). The cavesnail is often found on rocks coated with manganese oxide (Aley and Ashley 2003, p. 18), but it is unlikely, however, that manganese minerals play any role in the growth and survival of the cavesnail (Ashley 2010, pers. comm.).

Cover or Shelter

The Tumbling Creek cavesnail has been found on both the upper and lower surfaces of rocks and gravel (Greenlee 1974, p. 10; Aley and Ashley 2003, p. 18; U.S. Fish and Wildlife Service 2003, p. 12). Flow rates in Tumbling Creek can reach 150 cubic feet per second (cfs) during flash flood events (Aley 2010, pers. comm.), and such events may dislodge cavesnails from the upper surface of substrates. Consequently, it is likely that the underside of larger rocks provides some cover for cavesnails. Rocks and gravel are used by cavesnails for attachment (Greenlee 1974, p. 10; U.S. Fish and Wildlife Service, p. 12). Additionally, it is likely that a stable stream bottom and cave stream banks and riffle, run, and pool habitats are important components of the species' habitat.

In summary, the Tumbling Creek cavesnail depends on stable stream bottoms and banks (stable horizontal dimension and vertical profile) that maintain bottom features (riffles, runs, and pools) and transition zones between bottom features. Furthermore, the species requires bottom substrates consisting of fine gravel with coarse gravel or cobble, or bedrock with sand

and gravel, with low amounts of fine sand and sediments within the interstitial spaces of the substrates.

Sites for Breeding, Reproduction, or Rearing

Like other members of the snail family Hydrobiidae, the Tumbling Creek cavesnail has separate male and female individuals (Aley and Ashley 2003, p. 19), but there is no information on the mating behavior of the species or what role the unknown sex ratio of the species may have on successful reproduction. Eggs are likely deposited in gelatinous egg masses, but to date, the occurrence of such egg masses has yet to be documented (Aley and Ashley 2003, p. 19). Although little is known about the reproductive behavior and development of offspring of the Tumbling Creek cavesnail, it is likely that rock and gravel substrates that are free from silt are important elements necessary for successful propagation, especially for attachment of gelatinous egg masses. Aley and Ashley (2003, p. 19) postulated that silt deposited in Tumbling Creek could smother egg masses, and Ashley (2000, p. 8) suggested that silt could suffocate early developmental stages of the cavesnail. The lifespan of the Tumbling Creek cavesnail is unknown, but, if similar to other surface-dwelling hydrobid snails that have been studied, it is probably between 1 and 5 years (Aley and Ashley 2003, p. 19).

The cavesnail is dependent on good water quality (Aley and Ashley 2003, pp. 19–20; U.S. Fish and Wildlife Service 2003, pp. 13–22). Aley (2001, pers. comm.; U.S. Fish and Wildlife Service 2003, p. 22) noted that oxygen depletion could occur in Tumbling Creek during low flows; therefore, permanent flow of the stream is apparently important to the survival of the cavesnail. Aley (2010, pers. comm.) calculated that an average daily discharge of 0.07–150 cubic feet per second (cfs) was necessary to maintain good water quality for the cavesnail. Aley (2010, pers. comm.) also postulated that, to ensure good water quality for the Tumbling Creek cavesnail, water temperature of the cave stream should be 55–62 °F (12.78–16.67 °C), dissolved oxygen levels should equal or exceed 4.5 milligrams per liter, and turbidity of an average monthly reading should not exceed 200 Nephelometric Units (NTU; units used to measure sediment discharge) and should not persist for a period greater than 4 hours.

In summary, the Tumbling Creek cavesnail depends on an instream flow regime with an average daily discharge

between 0.07 and 150 cubic feet per second (cfs), inclusive of both surface runoff and groundwater sources (springs and seepages), and water quality with temperature 55–62 °F (12.78–16.67 °C), dissolved oxygen 4.5 milligrams or greater per liter, and turbidity of an average monthly reading of no more than 200 NTUs for a duration not to exceed 4 hours.

Primary Constituent Elements for the Tumbling Creek Cavesnail

Under the Act and its implementing regulations, we are required to identify the physical and biological features essential to the conservation of the Tumbling Creek cavesnail in areas occupied at the time of listing and focus on the features' primary constituent elements. We consider primary constituent elements to be the elements of physical and biological features, that, when laid out in the appropriate quantity and spatial arrangement to provide for a species' life-history processes, are essential to the conservation of the species.

Based on our current knowledge of the physical or biological features and habitat characteristics to sustain the species' life-history processes, we determine that the primary constituent elements specific to the Tumbling Creek cavesnail are:

(1) Geomorphically stable stream bottoms and banks (stable horizontal dimension and vertical profile) in order to maintain bottom features (riffles, runs, and pools) and transition zones between bottom features; to continue appropriate habitat to maintain essential riffles, runs, and pools; and to promote connectivity between Tumbling Creek and its tributaries and associated springs to maintain gene flow throughout the population.

(2) Instream flow regime with an average daily discharge between 0.07 and 150 cubic feet per second (cfs), inclusive of both surface runoff and groundwater sources (springs and seepages).

(3) Water quality with temperature 55–62 °F (12.78–16.67 °C), dissolved oxygen 4.5 milligrams or greater per liter, and turbidity of an average monthly reading of no more than 200 Nephelometric Turbidity Units (NTU; units used to measure sediment discharge) for a duration not to exceed 4 hours.

(4) Bottom substrates consisting of fine gravel with coarse gravel or cobble, or bedrock with sand and gravel, with low amounts of fine sand and sediments within the interstitial spaces of the substrates.

(5) Energy input from guano that originates mainly from gray bats that roost in the cave; guano is essential in the development of biofilm (the organic coating and bacterial layer that covers rocks in the cave stream) that cavesnails use for food.

With this designation of critical habitat, we intend to identify the physical and biological features essential to the conservation of the species, through the identification of the appropriate quantity and spatial arrangement of the primary constituent elements sufficient to support the life-history processes of the species. The unit designated as critical habitat is currently occupied by the Tumbling Creek cavesnail and contains the primary constituent elements in the appropriate quantity and spatial arrangement sufficient to support the life-history needs of the species.

Special Management Considerations or Protections

When designating critical habitat, we assess whether the specific areas within the geographical area occupied by the species at the time of listing contain the physical and biological features that are essential to the conservation of the species and that may require special management considerations or protection.

The one unit we are designating as critical habitat will require some level of management to address the current and future threats to the physical and biological features essential to the conservation of the species. Although no portion of the designated critical habitat unit is presently under special management or protection provided by a legally operative plan or agreement for the conservation of the Tumbling Creek cavesnail, the cave owners Tom and Cathy Aley have been actively involved in implementing numerous conservation measures that continue to contribute to the recovery of the species. Various activities in or adjacent to the critical habitat unit described in this final rule may affect one or more of the primary constituent elements. For example, features in the critical habitat designation may require special management due to threats associated with management of water levels on Bull Shoals Reservoir (such as increased sedimentation or bank erosion from backwater flooding); by significant changes in the existing flow regime of Tumbling Creek, its tributaries, or associated springs; by significant alteration of water quality; by significant alteration in the quantity of groundwater and alteration of spring discharge sites; by alterations to septic

systems that could adversely affect the water quality of Tumbling Creek; and by other watershed and floodplain disturbances that release sediments or nutrients into the water.

Energy input in the form of bat guano is identified above as an important primary constituent element for the Tumbling Creek cavesnail. Most of the bat guano in Tumbling Creek cave originates from a large population of gray bats that roost in the cave (Aley and Ashley 2003, p. 18; U.S. Fish and Wildlife Service 2003, p. 11). White-nose Syndrome (WNS) and the causative fungus, *Geomyces destructans* is estimated to be responsible for as much as a 75 percent decline in some bat populations in the eastern United States since WNS was first documented in 2006 (Blehert *et al.* 2009, p. 227; Frick *et al.* 2010, p. 679; Puechmaille *et al.* 2010, p. 290). *Geomyces destructans* has been recently documented on gray bats in Missouri (LeAnn White 2010, pers. comm.; Swezey and Garrity 2011, p. 16). The likely continued spread of WNS to gray bats in Missouri could be catastrophic for the species (U.S. Fish and Wildlife Service 2009, pp. 12–13). The spread of WNS on gray bats in Tumbling Creek cave could eliminate the species from the site and impact all cave-dwelling species, including the cavesnail, due to the loss of energy input from the lack of bat guano.

Other activities that may affect the primary constituent elements in the designated critical habitat unit include those listed in the “Effects of Critical Habitat Designation” section below. The designation of critical habitat does not imply that lands outside of critical habitat do not play an important role in the conservation of the Tumbling Creek cavesnail. Activities with a Federal nexus that may affect areas outside of critical habitat, such as development; road construction and maintenance; oil, gas, and utility easements; forest and pasture management; maintenance of Bull Shoals Reservoir; and effluent discharges, are still subject to review under section 7 of the Act if they may affect the Tumbling Creek cavesnail, because Federal agencies must consider both effects to the species and effects to critical habitat independently. The Service should be consulted regarding disturbances to areas both within the designated critical habitat unit as well as areas within the recharge area of Tumbling Creek cave, including springs and seeps that contribute to the instream flow in the tributaries, especially during times when stream flows are abnormally low (during droughts), because these activities may impact the essential features of the

designated critical habitat. The prohibitions of section 9 of the Act against the take of listed species also continue to apply both inside and outside of designated critical habitat.

Criteria Used To Identify Critical Habitat

As required by section 4(b)(1)(A) of the Act, we used the best scientific and commercial data available to designate critical habitat. We reviewed available information pertaining to the habitat requirements of this species. In accordance with the Act and its implementing regulation at 50 CFR 424.12(e), we considered whether designating additional areas—outside those currently occupied as well as those occupied at the time of listing—are necessary to ensure the conservation of the species. We are not designating any areas outside the geographical area occupied by the species because occupied areas are sufficient for the conservation of the species, adjacent caves surveyed for the cavesnail failed to document the species (U.S. Fish and Wildlife Service 2003, p. 4), and there is no known habitat within a certain radius of Tumbling Creek cave which provides a combination of aquatic substrate and a large source of energy input that is necessary for the conservation of the species. We are designating critical habitat in areas within the geographical area occupied by the species at the time of listing in 2002.

In order to determine which sites were occupied at the time of listing, we used information from surveys conducted by Greenlee (1974, pp. 9–11) and Ashley (2010, pers. comm.), data summarized in the final listing rule (67 FR 52879), the Tumbling Creek Cavesnail Recovery Plan (U.S. Fish and Wildlife Service 2003, pp. 1–13), and personal observations by cave owners Tom and Cathy Aley. Currently, occupied habitat for the species is limited and isolated to Tumbling Creek, from its emergence in Tumbling Creek Cave to its confluence with Bear Cave Hollow and Owens Spring upstream of Big Creek.

Following the identification of the specific locations occupied by the Tumbling Creek cavesnail, we determined the appropriate length of occupied segments of Tumbling Creek by identifying the upstream and downstream limits of these occupied sections necessary for the conservation of the species. Because Tumbling Creek is intricately linked with fractures in chert rock and associated springs and underground portions that are inaccessible to humans, we determined

that currently occupied habitat includes the area from the emergence of Tumbling Creek within Tumbling Creek Cave to its confluence with Bear Cave Hollow and Owens Spring upstream of Big Creek. This determination was made to ensure incorporation of all potential sites of occurrence. These portions of Tumbling Creek and Owens Spring were then digitized using 7.5' topographic maps and ArcGIS to produce the critical habitat map.

We are designating as critical habitat all portions of Tumbling Creek and the underground portions of Owens Spring as occupied habitat. We have defined “occupied habitat” as those stream reaches documented at the time of listing and all portions of Tumbling Creek between its emergence in Tumbling Creek Cave and its confluence with Bear Cave Hollow and Owens Spring upstream of Big Creek. Although there are underground portions of Tumbling Creek that are inaccessible to humans, the entire stream length is believed to be occupied by the Tumbling Creek cavesnail; thus, the entire stream is believed to comprise the entire known range of the Tumbling Creek cavesnail. We are not designating any areas outside of those mentioned above, because the species is believed to be a site endemic, and surveys in other nearby cave streams and springs have failed to find additional populations (U.S. Fish and Wildlife Service 2003, p. 4).

The one unit contains all of the physical and biological features in the appropriate quantity and spatial arrangement essential to the conservation of this species and supports all life processes for the Tumbling Creek cavesnail.

Although the above-ground recharge area of Tumbling Creek Cave (estimated to be 9 square miles (23.57 square kilometers) (U.S. Fish and Wildlife Service 2003, p. 14)) is important to maintain the condition of cavesnail habitat, such areas do not themselves contain the physical and biological features essential to the conservation of the species, and are, therefore, not designated as critical habitat.

To the best of our knowledge, there are no unoccupied areas that are essential to the conservation of the Tumbling Creek cavesnail. All of the areas designated as critical habitat for the Tumbling Creek cavesnail are currently occupied by the species and contain the essential physical and biological features. All of the areas designated as critical habitat are also within the known historical range of the species. Therefore, we are not designating any areas outside the

geographical area occupied by the species at the time of listing. We believe that the occupied areas are sufficient for the conservation of the species.

Final Critical Habitat Designation

We are designating one unit, totaling approximately 25 ac (10.12 ha), as critical habitat for the Tumbling Creek cavesnail. The critical habitat unit described below constitutes our best assessment of areas that currently meet the definition of critical habitat for the Tumbling Creek cavesnail.

We present a brief description for the unit and reasons why it meets the definition of critical habitat below. The designated critical habitat unit includes the stream channel of Tumbling Creek to the confluence with Bear Cave Hollow and Owens Spring upstream of Big Creek. For the one stream reach designated as critical habitat, the upstream and downstream boundaries are described generally below; more precise descriptions are provided in the Regulation Promulgation at the end of this final rule.

Tumbling Creek, Taney County, Missouri

The unit includes the entire length of Tumbling Creek, from its emergence in Tumbling Creek Cave (southeast of the intersection of Routes 160 and 125) downstream to its confluence with Bear Cave Hollow and Owens Spring upstream of Big Creek, encompassing 25 ac (10.12 ha). This section of Tumbling Creek and the associated spring are under private ownership by Tom and Cathy Aley of the Ozark Underground Laboratory and contain all of the essential physical and biological features necessary for the Tumbling Creek cavesnail.

Threats to the essential physical and biological features necessary for the Tumbling Creek cavesnail that may require special management and protection include:

- Actions associated with the management of water levels of Bull Shoals Reservoir (such as increased sedimentation or bank erosion on the terminal portions of Tumbling Creek from backwater flooding);
- Significant changes in the existing flow regime of Tumbling Creek, its tributaries, or associated springs;
- Significant alteration of water quality;
- Significant alteration in the quantity of groundwater and spring discharge sites;
- Alterations to septic systems that could adversely affect the quality of Tumbling Creek;

- Other watershed and floodplain disturbances that release sediments or nutrients into the water;

- The accidental introduction of nonnative aquatic species into the stream due to backwater flooding of Bull Shoals Reservoir into Tumbling Creek; or

- The potential effects of WNS on bats occupying the cave.

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7(a)(2) of the Act requires Federal agencies, including the Service, to ensure that actions they fund, authorize, or carry out are not likely to destroy or adversely modify critical habitat. Decisions by the 5th and 9th Circuits Courts of Appeals have invalidated our definition of “destruction or adverse modification” (50 CFR 402.02) (see *Gifford Pinchot Task Force v. U.S. Fish and Wildlife Service*, 378 F.3d 1059 (9th Cir. 2004) and *Sierra Club v. U.S. Fish and Wildlife Service*, 245 F.3d 434, 442 (5th Cir. 2001)), and we do not rely on this regulatory definition when analyzing whether an action is likely to destroy or adversely modify critical habitat. Under the statutory provisions of the Act, we determine destruction or adverse modification on the basis of whether, with implementation of the proposed Federal action, the affected critical habitat would continue to serve its intended conservation role for the species.

If a species is listed or critical habitat is designated, section 7(a)(2) of the Act requires Federal agencies to insure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. 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. 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, or 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 reinstate 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.

Federal activities that may affect the Tumbling Cave snail or its designated critical habitat require section 7 consultation under the Act. Activities on State, Tribal, local, or private lands requiring 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 involving some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation Administration, or the Federal Emergency Management Agency) are subject to the section 7(a)(2) consultation process. 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 consultations.

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 alter the physical and biological features to an extent that appreciably reduces the conservation value of critical habitat for the Tumbling Creek cavesnail.

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 Tumbling Creek cavesnail. These activities include, but are not limited to:

(1) Actions that would cause an increase in sedimentation to areas of Tumbling Creek, its tributaries, and associated springs occupied by the cavesnail. Such activities could include, but are not limited to, alteration or maintenance of pool levels on Bull Shoals Reservoir that causes backwater flooding of occupied habitat, or any discharge of fill materials. Such activities occurring within the recharge area of Tumbling Creek Cave may also impact the designated critical habitat. These activities could eliminate or reduce habitats necessary for the growth and reproduction of the species by causing excessive sedimentation and burial of the species or their habitats or eliminate interstitial spaces needed by cavesnails.

(2) Actions that would significantly alter the existing flow regime of Tumbling Creek, its tributaries, and associated springs occupied by the cavesnail. Such activities could include, but are not limited to, alteration or maintenance of pool levels on Bull Shoals Reservoir that significantly reduces the movement of water through occupied cavesnail habitat. Such activities occurring within the recharge area of Tumbling Creek Cave may also impact the designated critical habitat.

(3) Actions that would significantly alter water chemistry or water quality (for example, changes to temperature or pH, introduced contaminants, excess

nutrients) in Tumbling Creek, its tributaries, and associated springs. Such activities could include, but are not limited to, the release of chemicals, biological pollutants, or heated effluents that are then introduced into Tumbling Creek, its tributaries, and associated spring occupied by the cavesnail through backwater flooding. Such activities occurring within the recharge area of Tumbling Creek Cave may also impact the designated critical habitat. These activities could alter water conditions that are beyond the tolerances of the species and result in direct or cumulative adverse effects on the species and its life cycle. These activities could eliminate or reduce habitats necessary for the growth and reproduction of the species by causing eutrophication, leading to excessive filamentous algal growth. Excessive filamentous algal growth can cause extreme decreases in nighttime dissolved oxygen levels through vegetation respiration, and cover the bottom substrates and the interstitial spaces needed by cavesnails.

(4) Actions that could accidentally introduce nonnative species into Tumbling Creek, its tributaries, and associated springs occupied by the cavesnail via backwater flooding from Bull Shoals Reservoir. Such activities occurring within the recharge area of Tumbling Creek Cave may also impact the designated critical habitat. These activities could introduce a potential predator or outcompeting aquatic invertebrate (for example, another species of cavesnail or trogloditic invertebrate) or aquatic parasite.

(5) Actions that could significantly alter the prey base of bats. Energy input from bat guano is essential to the Tumbling Creek cavesnail, such that adverse impacts to gray bat populations in Tumbling Creek Cave could indirectly impact the cavesnail. Such activities could include, but are not limited to, alteration or maintenance of pool levels on Bull Shoals Reservoir that significantly reduces the life cycles of the aquatic insects that are needed by gray bats for food and the potential use of insecticides for mosquito control.

Exemptions

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

The Sikes Act Improvement Act of 1997 (Sikes Act) (16 U.S.C. 670a) required each military installation that includes land and water suitable for the conservation and management of natural resources to complete an integrated natural resource management plan (INRMP) by November 17, 2001. An INRMP integrates implementation of

the military mission of the installation with stewardship of the natural resources found on the base. Each INRMP includes:

(1) An assessment of the ecological needs on the installation, including the need to provide for the conservation of listed species;

(2) A statement of goals and priorities;

(3) A detailed description of management actions to be implemented to provide for these ecological needs; and

(4) A monitoring and adaptive management plan.

Among other things, each INRMP must, to the extent appropriate and applicable, provide for fish and wildlife management; fish and wildlife habitat enhancement or modification; wetland protection, enhancement, and restoration where necessary to support fish and wildlife; and enforcement of applicable natural resource laws.

The National Defense Authorization Act for Fiscal Year 2004 (Pub. L. 108–136) amended the Act to limit areas eligible for designation as critical habitat. Specifically, section 4(a)(3)(B)(i) of the Act (16 U.S.C. 1533(a)(3)(B)(i)) now provides: "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 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 Tumbling Creek cavesnail. Therefore, we are not exempting any lands owned or managed by the Department of Defense from this designation of critical habitat for the Tumbling Creek cavesnail pursuant to section 4(a)(3)(B)(i) of the Act.

Exclusions

Application of Section 4(b)(2) of the Act

Section 4(b)(2) of the Act states that the Secretary shall designate or 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 impacts of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, 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. 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.

Under section 4(b)(2) of the Act, we may exclude an area from designated critical habitat based on economic impacts, impacts on national security, or any other relevant impacts. In considering whether to exclude a particular area from the designation, we identify the benefits of including the area in the designation, identify the benefits of excluding the area from the designation, and evaluate whether the benefits of exclusion outweigh the benefits of inclusion. If the analysis indicates that the benefits of exclusion outweigh the benefits of inclusion, the Secretary may exercise his discretion to exclude the area only if such exclusion would not result in the extinction of the species.

Exclusions Based on 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 a draft economic analysis of the proposed critical habitat designation and related factors (Industrial Economics Incorporated 2010). The draft analysis, dated December 6, 2010, was made available for public review from January 12, 2011, through February 11, 2011 (76 FR 2076). Following the close of the comment period, a final analysis, dated March 11, 2011, of the potential economic effects of the designation was developed, taking into consideration the public comments and any new information (Industrial Economics Incorporated 2011).

The intent of the final economic analysis (FEA) is to quantify the economic impacts of all potential conservation efforts for the Tumbling Creek cavesnail; some of these costs will likely be incurred regardless of whether we designate critical habitat (baseline). The economic impact of the final critical habitat designation is analyzed by comparing scenarios both “with critical habitat” and “without critical habitat.” The “without critical habitat” scenario represents the baseline for the analysis, considering protections already in place for the species (e.g., under the Federal listing and other Federal, State, and local regulations). The baseline, therefore, represents the costs incurred regardless of whether

critical habitat is designated. The “with critical habitat” scenario describes the incremental impacts associated specifically with the designation of critical habitat for the species. The incremental conservation efforts and associated impacts are those not expected to occur absent the designation of critical habitat for the species. In other words, the incremental costs are those attributable solely to the designation of critical habitat above and beyond the baseline costs; these are the costs we consider in the final designation of critical habitat. The analysis looks retrospectively at baseline impacts incurred since the species was listed, and forecasts both baseline and incremental impacts likely to occur with the designation of critical habitat.

The FEA also addresses how potential economic impacts are likely to be distributed, including an assessment of any local or regional impacts of habitat conservation and the potential effects of conservation activities on government agencies, private businesses, and individuals. The FEA measures lost economic efficiency associated with residential and commercial development and public projects and activities, such as economic impacts on water management and transportation projects, Federal lands, small entities, and the energy industry. Decision-makers can use this information to assess whether the effects of the designation might unduly burden a particular group or economic sector. Finally, the FEA looks retrospectively at costs that have been incurred since 2002 (67 FR 52879), and considers those costs that may occur in the 20 years following the designation of critical habitat, which was determined to be the appropriate period for analysis because limited planning information was available for most activities to forecast activity levels for projects beyond a 20-year timeframe. The FEA quantifies economic impacts of the Tumbling Creek cavesnail conservation efforts associated with the following categories of activity: water management and any activities that may affect water quality.

Because any baseline impacts would be those associated with already existing regulations absent critical habitat designation, and such actions will not be affected by the regulation, no new baseline costs were identified. The primary focus on the FEA was on monetizing the projected incremental impacts forecast from the designation. Incremental impacts are estimated to be \$50,100 between 2011 and 2030, assuming a 7 percent discount rate. Estimated incremental costs are forecast

to be entirely administrative costs of section 7 consultations involving projects that could potentially adversely modify the water management and water quality of Tumbling Creek.

Our economic analysis did not identify any disproportionate costs that are likely to result from the designation. Consequently, the Secretary is not exerting his discretion to exclude any areas from this designation of critical habitat for the Tumbling Creek cavesnail based on economic impacts.

A copy of the FEA with supporting documents may be obtained by contacting the Columbia Fish and Wildlife 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 the lands within the designation of critical habitat for the Tumbling Creek cavesnail are not owned or managed by the Department of Defense, and, therefore, we anticipate no impact on national security. Consequently, the Secretary is not exerting his discretion to exclude any areas from this final designation based on impacts on national security.

Exclusion Based on Other Relevant Impacts

Under section 4(b)(2) of the Act, we consider any other relevant impacts, in addition to economic impacts and impacts on national security. We consider a number of factors, including whether landowners have developed any conservation plans or other management plans for the area, or whether there are conservation partnerships that would be encouraged by designation of lands for, or exclusion of lands from, critical habitat. In addition, we look at any Tribal issues, and 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.

In preparing this final rule, we have determined that there are currently no conservation plans or other management plans for the Tumbling Creek cavesnail, and the designation does not include any Tribal lands or trust resources. We anticipate no impact to Tribal lands, partnerships, or management plans from this critical habitat designation. There are no areas proposed for exclusion

from this designation based on other relevant impacts.

Required Determinations

Regulatory Planning and Review—Executive Order 12866

The Office of Management and Budget (OMB) has determined that this rule is not significant under Executive Order 12866 (E.O. 12866). OMB bases its determination on the following four criteria:

(1) Whether the rule will have an annual effect of \$100 million or more on the economy or adversely affect an economic sector, productivity, jobs, the environment, or other units of the government.

(2) Whether the rule will create inconsistencies with other Federal agencies' actions.

(3) Whether the rule will materially affect entitlements, grants, user fees, loan programs, or the rights and obligations of their recipients.

(4) Whether the rule raises novel legal or policy issues.

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 (SBREFA) of 1996 (5 U.S.C. 801 *et seq.*), whenever an agency must 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 (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 statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities. In this final rule, we are certifying that the critical habitat designation for Tumbling Creek cavesnail will not have a significant economic impact on a substantial number of small entities. The following discussion explains our rationale.

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; as well as small businesses. 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 on these small entities are significant, we consider the types of activities that might trigger regulatory impacts under this rule, as well as the 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.

To determine if the rule could significantly affect a substantial number of small entities, we consider the number of small entities affected within particular types of economic activities (e.g., water management and any activities that may affect the water quality of Tumbling Creek). We apply the "substantial number" test individually to each industry to determine if certification is appropriate. However, the SBREFA does not explicitly define "substantial number" or "significant economic impact." Consequently, to assess whether a "substantial number" of small entities is affected by this designation, this analysis considers the relative number of small entities likely to be impacted in an area. In some circumstances, especially with critical habitat designations of limited extent, we may aggregate across all industries and consider whether the total number of small entities affected is substantial. In estimating the number of small entities potentially affected, we also consider whether their activities have any Federal involvement.

Designation of critical habitat only affects activities authorized, funded, or carried out by Federal agencies. Some kinds of activities are unlikely to have any Federal involvement and so will not be affected by critical habitat designation. In areas where the species is present, Federal agencies already are required to consult with us under section 7 of the Act on activities they authorize, fund, or carry out that may affect the Tumbling Creek cavesnail. Federal agencies also must consult with us if their activities may affect critical habitat. Designation of critical habitat, therefore, could result in an additional

economic impact on small entities due to the requirement to reinstate consultation for ongoing Federal activities (see *Application of the "Adverse Modification Standard"* section).

In our FEA of the critical habitat designation, we evaluated the potential economic effects on small business entities resulting from conservation actions related to the listing of the Tumbling Creek cavesnail and the designation of critical habitat. The analysis is based on the estimated impacts associated with the rulemaking as described in Chapters 1 through 3 and Appendix A of the analysis and evaluates the potential for economic impacts related to water management and any activities that may affect water quality. As outlined in the distributional analyses in chapter 3 of the FEA and Appendix A, it is not anticipated that there will be any economic impact to any small entities including any city, county, or privately owned businesses.

In summary, we considered whether this designation would result in a significant economic effect on a substantial number of small entities. Based on the above reasoning and currently available information, we concluded that this rule would not result in a significant economic impact on a substantial number of small entities. Therefore, we are certifying that the designation of critical habitat for the Tumbling Creek cavesnail 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 are relevant to this analysis. Thus, based on information in the economic analysis, energy-related impacts associated with Tumbling Creek cavesnail 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 it would not produce a Federal mandate of \$100 million or greater in any year; that is, it is not a “significant regulatory action” under the Unfunded Mandates Reform Act. The FEA concludes incremental impacts may occur due to administrative costs of section 7 consultations for actions that impact the water management or water quality of Tumbling Creek; however, these are not expected to significantly affect small governments. Thus, we do not believe that the critical habitat designation would significantly or uniquely affect small government entities, and 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 Tumbling Creek cavesnail in a takings implications assessment. Critical habitat designation does not affect landowner actions that do not require Federal funding or permits, nor does it preclude development of habitat conservation programs or issuance of incidental take permits to permit actions that do require Federal funding or permits to go forward. The takings implications assessment concludes that this designation of critical habitat for the Tumbling Creek cavesnail does not pose significant takings implications for lands within or affected by the designation.

Federalism—Executive Order 13132

In accordance with E.O. 13132 (Federalism), the rule does not have significant Federalism effects. A Federalism assessment 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

Missouri. The designation of critical habitat in areas currently occupied by the Tumbling Creek cavesnail imposes no additional restrictions to those currently in place and, therefore, has little incremental impact on State and local governments and their activities. The designation may have some benefit to this government in that the areas that contain the physical and biological features essential to the conservation of the species are more clearly defined, and the elements of the habitat features necessary for 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 local governments in long-range planning (rather than having them 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 E.O. 12988 (Civil Justice Reform), the regulation 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. This final rule uses standard property descriptions and identifies the elements of the physical and biological features essential to the conservation of the Tumbling Creek cavesnail within the designated areas to assist the public in understanding the habitat needs of the species.

Paperwork Reduction Act of 1995

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 (NEPA)

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 as defined by 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)).

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.

We have determined that there are no Tribal lands occupied at the time of listing that contain the features essential for the conservation of the Tumbling Creek cavesnail, and no Tribal lands unoccupied by the Tumbling Creek cavesnail that are essential for the conservation of the species. Therefore, we are not designating critical habitat for the Tumbling Creek cavesnail on Tribal lands.

Data Quality Act

In developing this rule, we did not conduct or use a study, experiment, or survey requiring peer review under the Data Quality Act (Pub. L. 106-554).

References Cited

A complete list of all references cited is available on the Internet at <http://www.regulations.gov> and upon request from the Field Supervisor, Columbia Fish and Wildlife Office (see **ADDRESSES**).

Authors

The primary authors of this document are the staff members of the Columbia Fish and Wildlife 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—[AMENDED]

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

Authority: 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1544; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500; unless otherwise noted.

■ 2. Amend § 17.11(h), by revising the entry for “Cavesnail, Tumbling Creek” under “SNAILS” 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						
* SNAILS	*	*	*	*	*		*
* Cavesnail, Tumbling Creek.	<i>Antrobia culveri</i>	U.S.A. (MO)	NA	E	731	17.95(f)	NA
*	*	*	*	*	*		*

■ 3. In § 17.95(f), add an entry for “Tumbling Creek Cavesnail (*Antrobia culveri*)” in the same alphabetical order as the species appears in the table at § 17.11(h), to read as follows:

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(f) *Clams and Snails.*

* * * * *

Tumbling Creek Cavesnail (*Antrobia culveri*)

(1) The critical habitat unit is depicted for Taney County, Missouri, on the map at paragraph (f)(5)(ii) of this section.

(2) Within this area, the primary constituent elements of the physical and biological features essential to the conservation of the Tumbling Creek cavesnail consist of five components:

(i) Geomorphically stable stream bottoms and banks (stable horizontal dimension and vertical profile) in order to:

(A) Maintain bottom features (riffles, runs, and pools) and transition zones between bottom features;

(B) Continue appropriate habitat to maintain essential riffles, runs, and pools; and

(C) Promote connectivity between Tumbling Creek and its tributaries and

associated springs to maintain gene flow throughout the population.

(ii) Instream flow regime with an average daily discharge between 0.07 and 150 cubic feet per second (cfs), inclusive of both surface runoff and groundwater sources (springs and seepages).

(iii) Water quality with temperature 55–62 °F (12.78–16.67 °C), dissolved oxygen 4.5 milligrams or greater per liter, and turbidity of an average monthly reading of no more than 200 Nephelometric Turbidity Units (NTU; units used to measure sediment discharge) for a duration not to exceed 4 hours.

(iv) Bottom substrates consisting of fine gravel with coarse gravel or cobble, or bedrock with sand and gravel, with low amounts of fine sand and sediments within the interstitial spaces of the substrates.

(v) Energy input from guano that originates mainly from gray bats (*Myotis grisescens*) that roost in the cave; guano is essential in the development of biofilm (the organic coating and bacterial layer that covers rocks in the cave stream) that cavesnails use for food.

(3) 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 the effective date of this rule.

(4) *Critical habitat map unit.* Data layers defining the map unit were created using 7.5' topographic quadrangle maps and ArcGIS (version 9.3.1) mapping software.

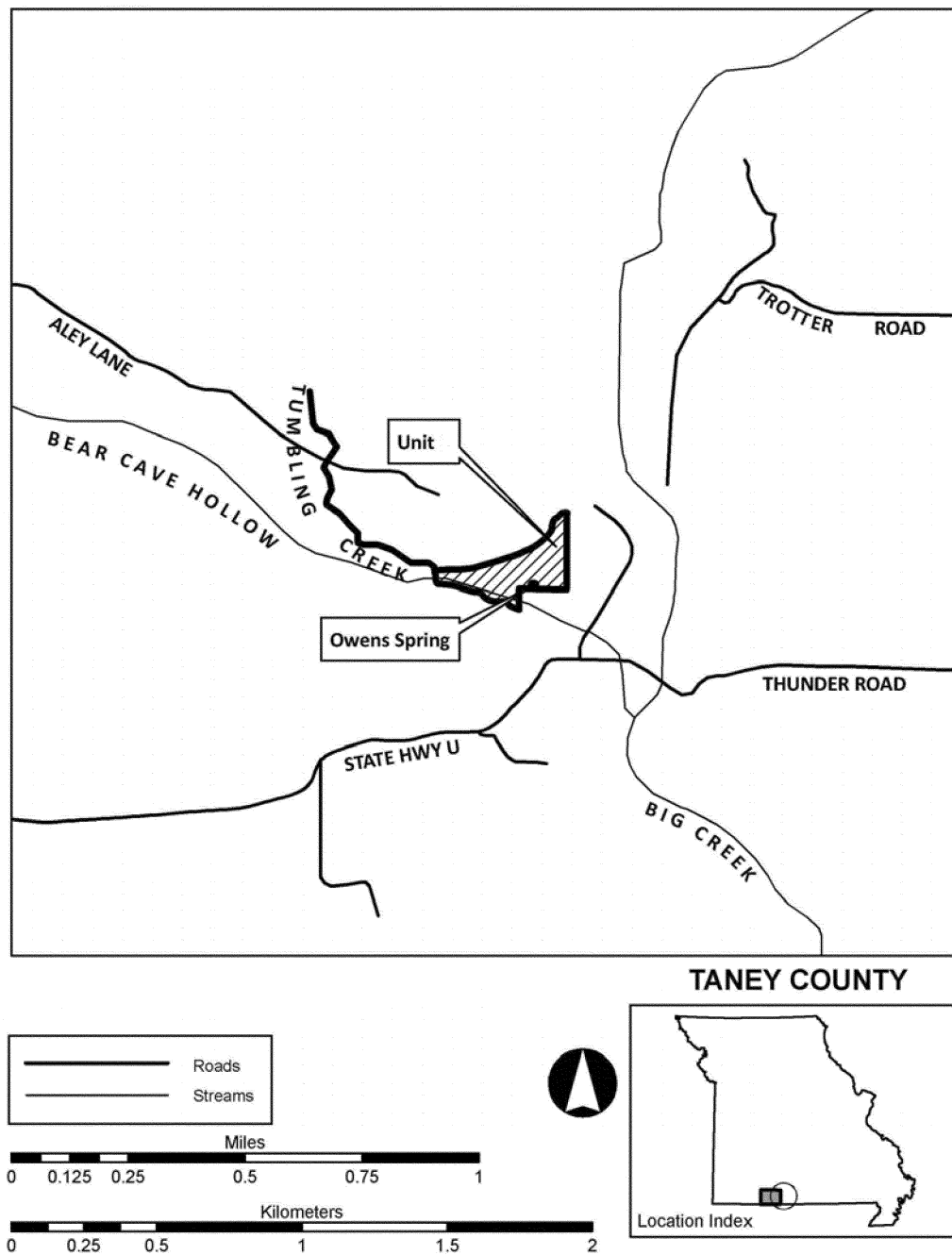
(5) Tumbling Creek Cavesnail Critical Habitat Unit.

(i) U.S. Geological Survey 7.5' Topographic Protem Quad. Land bounded by the following UTM Zone 15N, North American Datum of 1983 (NAD83) coordinates (W, N): from the emergence of Tumbling Creek within Tumbling Creek Cave at Lat. 36°33'37.41" N, Long. 92°48'27.23" W to its confluence with Bear Cave Hollow and Owens Spring upstream of Big Creek at at Lat. 36°33'15.2" N, Long. 92°47'51.74" W.

(ii) *Note:* Map of Tumbling Creek Cavesnail Critical Habitat Unit follows:

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Critical Habitat for Tumbling Creek Cavesnail



* * * * *

Dated: June 17, 2011.

Rachel Jacobson,

*Acting Assistant Secretary for Fish and
Wildlife and Parks.*

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