

DEPARTMENT OF THE INTERIOR**Fish and Wildlife Service****50 CFR Part 17**

RIN 1018-A174

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for *Arabis perstellata* (Braun's Rock-cress)**AGENCY:** Fish and Wildlife Service, Interior.**ACTION:** Final rule

SUMMARY: We, the Fish and Wildlife Service (Service), designate critical habitat for *Arabis perstellata* (Braun's rock-cress) pursuant to the Endangered Species Act of 1973, as amended (Act). This endangered species is restricted to two counties (Rutherford and Wilson) in Tennessee and three counties (Franklin, Owen, and Henry) in Kentucky. We are designating 22 specific geographic areas (units) in Kentucky (17 units) and Tennessee (5 units) as critical habitat for *Arabis perstellata*. These units encompass approximately 648 hectares (ha) (1,600 acres (ac)) of upland habitat. Kentucky has approximately 328 ha (810 ac) and Tennessee has approximately 320 ha (790 ac) designated as critical habitat for *Arabis perstellata*.

In the development of this final rule, we solicited and considered data and comments from the public on all aspects of this designation, including data on economic and other impacts of the designation. This publication also provides notice of the availability of the final economic analysis for this designation.

DATES: This rule becomes effective on July 6, 2004.

ADDRESSES: Comments and materials received, as well as supporting documentation used in preparation of this final rule, are available for public inspection, by appointment, during normal business hours at the Tennessee Field Office, U.S. Fish and Wildlife Service, 446 Neal Street, Cookeville, Tennessee 38501.

You may obtain copies of the final rule or the economic analysis from the field office address above, by calling (931) 528-6481, or from our Internet site at <http://cookeville.fws.gov>.

If you would like copies of the regulations on listed wildlife or have questions about prohibitions and permits, please contact the appropriate State Ecological Services Field Office: Tennessee Field Office, (ADDRESSES above), or the Kentucky Field Office,

U.S. Fish and Wildlife Service, 3761 Georgetown Road, Frankfort, KY 40601.

FOR FURTHER INFORMATION CONTACT:

Timothy Merritt at the Tennessee Field Office address above (telephone (931) 528-6481, extension 211; facsimile (931) 528-7075).

SUPPLEMENTARY INFORMATION:**Designation of Critical Habitat Provides Little Additional Protection to Species**

In 30 years of implementing the Act, the Service has found that the designation of statutory critical habitat provides little additional protection to most listed species, while consuming significant amounts of available conservation resources. The Service's present system for designating critical habitat has evolved since its original statutory prescription into a process that provides little real conservation benefit, is driven by litigation and the courts rather than biology, limits our ability to fully evaluate the science involved, consumes enormous agency resources, and imposes huge social and economic costs. The Service believes that additional agency discretion would allow our focus to return to those actions that provide the greatest benefit to the species most in need of protection.

Role of Critical Habitat in Actual Practice of Administering and Implementing the Act

While attention to and protection of habitat is paramount to successful conservation actions, we have consistently found that, in most circumstances, the designation of critical habitat is of little additional value for most listed species, yet it consumes large amounts of conservation resources. Sidle (1987) stated, "Because the ESA can protect species with and without critical habitat designation, critical habitat designation may be redundant to the other consultation requirements of section 7." Currently, only 36 percent (445 species) of the 1,244 listed species in the U.S. under the jurisdiction of the Service have designated critical habitat. We address the habitat needs of all 1,244 listed species through conservation mechanisms such as listing, section 7 consultations, the section 4 recovery planning process, the section 9 protective prohibitions of unauthorized take, section 6 funding to the States, and the section 10 incidental take permit process. The Service believes it is these measures that may make the difference between extinction and survival for many species.

Procedural and Resource Difficulties in Designating Critical Habitat

We have been inundated with lawsuits for our failure to designate critical habitat, and we face a growing number of lawsuits challenging critical habitat determinations once they are made. These lawsuits have subjected the Service to an ever-increasing series of court orders and court-approved settlement agreements, compliance with which now consumes nearly the entire listing program budget. This leaves the Service with little ability to prioritize its activities to direct scarce listing resources to the listing program actions with the most biologically urgent species conservation needs.

The consequence of the critical habitat litigation activity is that limited listing funds are used to defend active lawsuits, to respond to Notices of Intent (NOIs) to sue relative to critical habitat, and to comply with the growing number of adverse court orders. As a result, listing petition responses, the Service's own proposals to list critically imperiled species and final listing determinations on existing proposals are all significantly delayed.

The accelerated schedules of court ordered designations have left the Service with almost no ability to provide for adequate public participation or to ensure a defect-free rulemaking process before making decisions on listing and critical habitat proposals due to the risks associated with noncompliance with judicially-imposed deadlines. This in turn fosters a second round of litigation in which those who fear adverse impacts from critical habitat designations challenge those designations. The cycle of litigation appears endless, is very expensive, and in the final analysis provides relatively little additional protection to listed species.

The costs resulting from the designation include legal costs, the cost of preparation and publication of the designation, the analysis of the economic effects and the cost of requesting and responding to public comment, and in some cases the costs of compliance with the National Environmental Policy Act (NEPA), all are part of the cost of critical habitat designation. None of these costs result in any benefit to the species that is not already afforded by the protections of the Act enumerated earlier, and they directly reduce the funds available for direct and tangible conservation actions.

Background

Arabis perstellata (Braun's rock-cress) is a perennial herb of the mustard

family (Brassicaceae). It was originally described by E. Lucy Braun (1940) from specimens collected between 1936 and 1939 in Franklin County, Kentucky (see the proposed rule at 69 FR 4274, January 9, 2004, for complete information on characteristics, life history, and forest associates). While the final rule for the determination of endangered status for this species recognized the two varieties, these two varieties are no longer recognized by the scientific community. Consequently, we will treat the plants that occur in both geographically separated areas as one species (*Arabis perstellata*) for the purpose of designating critical habitat.

Two non-native species (*Alliaria petiolata* (European garlic mustard) and *Lonicera maackii* (amur honeysuckle)) compete directly with *Arabis perstellata* for areas of natural disturbance once it has become established in a forest. Management schemes for the control of these species are being tested, but these nonnative plant species continue to spread into natural areas. The presence of these species and competition for available habitat and resources poses a severe threat to *Arabis perstellata*. Native plant species may also be an invasive threat to *Arabis perstellata*, particularly *Toxicodendron radicans* (poison ivy), *Parthenocissus quinquefolia* (Virginia creeper), and *Galium aparine* (bedstraw or cleavers). These species may spread rapidly in response to habitat changes and compete with *Arabis perstellata* (D. Lincicome, pers. comm. 2004).

Arabis perstellata is never a common component of the ground flora. It usually occurs in small groups (especially around rock outcrops) or as scattered individuals. The small size of the populations, the species' specialized habitat, and its apparent inability to expand into available or similar habitats suggests that it is a poor competitor. This inability to compete has likely limited its distribution and abundance. This species cannot withstand vigorous competition from invasive weeds or even native herbaceous species.

Arabis perstellata occurs on slopes composed of calcium carbonate, calcium, or limestone in moderately moist to almost dry forests (see proposed rule 69 FR 4274 for further information on habitat requirements). The soils at *Arabis perstellata* sites are limestone-derived, and a rock outcrop component is usually present in the soil complex (see proposed rule, 69 FR 4274, for more information on soil requirements). *Arabis perstellata* is presently known from 42 populations in two separate sections of the Interior Low Plateaus Physiographic Province—the

Blue Grass Section (Kentucky) and the Central Basin Section (Tennessee). Both areas where this species is found are predominantly underlain by sediments of Ordovician age (510–438 million years ago) (Quartermann and Powell 1978). The Kentucky populations occur in Franklin, Henry, and Owen counties along the Kentucky River and its tributaries (primarily Elkhorn Creek). The Tennessee populations occur in Rutherford and Wilson counties, principally along the Stones River.

Within the Bluegrass Section of the Interior Low Plateaus in Kentucky, the Lexington Limestone Formation is common on the slopes entrenched by the Kentucky River and its major drainages (McDowell 1986). All but one of the Kentucky populations of *Arabis perstellata* are found on the Grier and Tanglewood members of this formation. The exception is the population in Henry County, Kentucky, occurring on what is mapped as Kope and Clays Ferry members, which have a higher shale component (Service 1997). However, the plants actually occur on limestone outcrops at this site similar to the populations found in the Grier and Tanglewood members.

In Tennessee, *Arabis perstellata* sites are restricted to the Central Basin Section, which, like the Blue Grass Section, is underlain by Ordovician limestone. The primary rocks of the *Arabis perstellata* populations in Rutherford and Wilson Counties are Leipers and Catheys Limestone, as well as Bigby-Cannon Limestone (Wilson 1965, 1966a, 1966b).

The majority of the land containing *Arabis perstellata* populations is in private ownership. One site (Clements Bluff) in Kentucky is owned by the State and is part of the Kentucky River Wildlife Management Area. This publicly owned site is under no formal management agreement at this time. One privately owned site, Strohmeiers Hills in Kentucky, is under a management agreement with the Kentucky Natural Heritage Program. Management activities include sediment and noxious weed control. The agreement is nonbinding and does not restrict the property owner's activities or property rights. Thus, the only protection granted by the management agreement is habitat enhancement.

The primary threats to this species are alteration or loss of habitat through development (primarily home and road construction), competition with native and exotic weedy species, grazing and trampling, and timber harvesting. *Arabis perstellata* is vulnerable to extinction because of its very small range, low abundance, and declining number of

populations. Thirty-seven extant populations are known from Kentucky and six in Tennessee. The full range of this species in Kentucky is an approximately 518-square-kilometer (200-square-mile) area, with six disjunct populations in Tennessee. This narrow range makes the species vulnerable to potential catastrophic phenomena, such as disease, extreme weather, and insect infestations. Also, population levels are declining (Deborah White, KSNPC, pers. comm. 2003). Eight sites previously known in Kentucky were found to be extirpated during 1996 (KSNPC 1996a). Four previously known populations in Tennessee are presumed extirpated (Jones 1991; Tennessee Department of Environment and Conservation 2000).

Previous Federal Action

Federal Government actions on this species began with passage of section 12 of the Endangered Species Act of 1973 (16 U.S.C. 1531 *et seq.*). On January 3, 1995, (60 FR 56), we published our final rule to list *Arabis perstellata* as endangered. Please refer to the final listing rule for a complete description of Federal actions concerning this species between the inception of the Act and publication of the final listing determination. In the final rule, we found that a critical habitat designation was not prudent.

On July 22, 1997, we finalized the *Arabis perstellata* Recovery Plan (Service 1997). The recovery plan established the criteria that must be met prior to the delisting of *Arabis perstellata*. The recovery plan also identified the actions that are needed to assist in the recovery of *Arabis perstellata*.

On October 12, 2000, the Southern Appalachian Biodiversity Project filed suit against us, challenging our not prudent critical habitat determinations for *Arabis perstellata* and 15 other federally listed species (*Southern Appalachian Biodiversity Project v. U.S. Fish and Wildlife Service, Babbitt, & Clark* (CN 2:00–CV–361 (E.D. TN))). On November 8, 2001, the District Court of the Eastern District of Tennessee issued an order directing us to reconsider our previous prudency determinations and submit a new prudency determination and, if appropriate, proposed critical habitat designation for *Arabis perstellata* to the **Federal Register** no later than May 26, 2003, and a final decision not less than 12 months after the new prudency determination.

On June 3, 2003, we published a proposed rule in the **Federal Register** (68 FR 33058) which included a finding that critical habitat designation was prudent for *Arabis perstellata*. We

proposed 20 specific geographic areas (units) in Kentucky (17 units) and Tennessee (3 units) as critical habitat for *Arabis perstellata*. These units encompassed approximately 408 ha (1,008 ac). Kentucky had approximately 328 ha (810 ac) and Tennessee had approximately 80 ha (198 ac) proposed. During the comment period, which ended on August 4, 2003, we received comments from the Tennessee Division of Natural Heritage (TDNH) providing new information regarding the Tennessee populations of *Arabis perstellata*. During a survey conducted by TDNH staff in the spring and early summer of 2003, the distribution of *Arabis perstellata* was found to be more widespread at the three extant populations (Units 18, 19, and 20) and two new populations were documented (Grandfather Mountain and Versailles Knob). As a result of this information, we revised our critical habitat designation in Tennessee to include the additional areas. A revised proposed rule was published in the **Federal Register** (69 FR 4274) on January 29, 2004. In this supplemental proposed rule, we increased the designated critical habitat acreage in Tennessee from 80 ha (198 ac) to 320 ha (790 ac). We accepted public comments on the revised proposed rule and the revised draft economic analysis until March 1, 2004.

Summary of Comments and Recommendations

In the June 3, 2003, proposed rule and notice of document availability (68 FR 33058), we requested that all interested parties submit comments or information concerning the designation of critical habitat and/or the draft economic analysis for *Arabis perstellata*. We contacted appropriate Federal, State, and local agencies, county government, elected officials, scientific organizations, and other interested parties and invited them to comment on the proposed critical habitat for *Arabis perstellata*. We provided notification of these documents through e-mail, telephone calls, letters, and news releases faxed and/or mailed to affected elected officials, media outlets, local jurisdictions, and interest groups. We sent press releases to the following newspapers on March 29, 2004: The Tennessean, Nashville, Tennessee; State Journal, Frankfort, Kentucky; The Daily News Journal, Murfreesboro, Tennessee; and the Owenton News Herald, Owenton, Kentucky. We posted copies of the proposed critical habitat and draft economic analysis on the Service's Tennessee Field Office Internet site following their release.

Based on substantial new information received during the first public comment period, we revised the proposed critical habitat in Tennessee to include two additional areas determined to be essential to the conservation of *Arabis perstellata* and expand the extent of three additional areas that had been already proposed. These revisions to proposed critical habitat, reopening of comment period, and notice of availability of revised draft economic analysis were published in the **Federal Register** on January 29, 2004 (69 FR 4274). We requested that all interested parties submit comments or information concerning the revised designation of critical habitat and/or the revised draft economic analysis for *Arabis perstellata* by March 1, 2004. We again contacted appropriate Federal, State, and local agencies, county governments, elected officials, scientific organizations, and other interested parties and invited them to comment on the revised proposed critical habitat and/or revised draft economic analysis for *Arabis perstellata*. We also provided notification of these documents through e-mail, telephone calls, letters, and news releases faxed and/or mailed to affected elected officials, media outlets, local jurisdictions, and interest groups. We additionally posted the revised proposed rule and economic analysis on the Service's Tennessee Field Office Internet site following their release.

During the first public comment period, we received comments from five parties, which included one Federal agency, two State agencies, one non-profit agency, and one individual. Of the five parties responding, one supported the proposed designation, three were neutral, and two wanted additional areas added to the critical habitat proposal. None were opposed. Four additional comments were received during the second public comment period. One was from a State agency, two were from non-profit agencies, and one from an individual. Three supported the proposed designation and one was neutral.

In accordance with our peer review policy published on July 1, 1994 (59 FR 34270), we solicited independent opinions from four knowledgeable individuals who have expertise with the species, with the geographic region where the species occurs, and/or familiarity with the principles of conservation biology. We received comments from three of the four peer reviewers. These are included in the summary below and incorporated into this final rule.

We reviewed all comments received from the peer reviewers and the public

for substantive issues and new information regarding critical habitat and the draft economic analysis. Substantive comments received during the two comment periods have either been addressed below or incorporated directly into this final rule. The comments were grouped according to peer review or public comments. For readers' convenience, we have assigned comments to major issue categories, and we have combined similar comments into single comments and responses.

Peer Review Comments

(1) *Comment:* The Tennessee Department of Environment and Conservation (TDEC) provided additional information concerning four plant species that may invade *Arabis perstellata* habitat and compete with *Arabis perstellata* for habitat and resources. These plant species include one additional non-native plant, *Lonicera maackii* (amur honeysuckle) and three native plants, *Toxicodendron radicans* (poison ivy), *Parthenocissus quinquefolia* (Virginia creeper), and *Galium aparine* (bedstraw or cleavers).

Our Response: We acknowledge that these additional native and non-native plants can invade *Arabis perstellata* habitat particularly when the habitat is disturbed due to natural or man-made reasons. We have included a discussion of these additional potentially invasive plant species in the Background section of this rule and their potential threat to *Arabis perstellata*.

(2) *Comment:* The fourth occurrence of *Arabis perstellata* in Tennessee at the Shelby Bottoms Greenway site along the Cumberland River in Davidson County has recently been identified and verified as *Arabis shortii* (Short's rock-cress).

Our Response: The Shelby Bottoms Greenway site along the Cumberland River in Davidson County was not included in our initial proposed critical habitat designation on June 3, 2003, (68 FR 33058) because the area where the population occurred did not contain one or more of the primary constituent elements and was not considered to be essential to the conservation of *Arabis perstellata*. Since this information was received during our first public comment period, we included a discussion of it and its relevance to this designation in our revisions to proposed critical habitat on January 29, 2004, (69 FR 4274).

(3) *Comment:* A survey for *Arabis perstellata*, unrelated to this critical habitat designation, was conducted in the spring and early summer of 2003 by the TDEC personnel. During this survey, the documented extent of the distribution and abundance of *Arabis*

perstallata was expanded at three occurrences in Tennessee. Additionally, two new populations of *Arabis perstallata* were documented in Rutherford and Wilson Counties, Tennessee. As a result of this new information, the critical habitat designation in Tennessee does not include all of the areas essential to the conservation of *Arabis perstallata*.

Our Response: We acknowledged in the June 3, 2003, proposal (68 FR 33058) that we had received new information from TDEC regarding two new populations of *Arabis perstellata*, but due to time and budget constraints, we were unable to adequately and formally analyze them for inclusion as proposed critical habitat in that document. We stated that we would conduct the required analysis of these two sites to determine if the areas are essential to the conservation of *Arabis perstellata*. If the areas were found to be essential, our intent was to include them in the final designation. We found during the original public comment period that all the existing sites in Tennessee had additional unknown plants, and that a new site was also discovered in Rutherford County. Upon receiving this information, we analyzed all five sites (additions to three extant sites plus the two new sites) and determined that they are all essential to the conservation of *Arabis perstallata*. We then proposed revisions to the original proposed critical habitat designation that included the additional sites that have been documented in Tennessee. These revisions were published in the **Federal Register** on January 29, 2004 (69 FR 4274), along with the reopening of the comment period (30 days) and the notice of availability of the revised draft economic analysis. We believe that, based on the best available information, we have designated as critical habitat the areas essential to the conservation of *Arabis perstallata*.

(4) **Comment:** The Kentucky State Nature Preserves Commission (KSNPC) provided updated information for the site identified as critical habitat Unit 12 and for a new population of *Arabis perstallata* located geographically between critical habitat Unit 6 and Unit 8 on the west side of the Kentucky River. They believed that this new information should be taken into consideration during the development of the final designation.

Our Response: We greatly appreciate the new information concerning *Arabis perstallata* provided by KSNPC. Following a review of this information we determined that these areas are not essential to the conservation of the species. The criteria used for selecting

essential sites can be found in the June 3, 2003, proposed designation of critical habitat for *Arabis perstallata* (please refer to the Critical Habitat section of the proposed rule (68 FR 33058) and this final rule), but generally included a combination of the recovery plan objectives and criteria, and the four primary constituent elements. According to the recovery plan, *Arabis perstellata* will be considered for delisting when 20 geographically distinct, self-sustaining populations, consisting of 50 or more plants each, are protected in Kentucky and Tennessee, and it has been demonstrated that the populations are stable or increasing after five years of monitoring following reclassification to threatened status. At this time, we believe the areas we have designated as critical habitat in Kentucky and Tennessee are adequate to provide for the conservation of the species.

Public Comments

(5) **Comment:** The Natural Resources Conservation Service (NRCS) in Tennessee addressed the issue of whether the proposed critical habitat would impact the Wildlife Habitat Incentives Program and/or the Environmental Quality Incentives Program that they administer. Based on the allowable practices under each program and the type of habitat (*i.e.*, steep, rocky terrain) proposed as critical habitat for *Arabis perstellata*, NRCS projected very few informal consultations under section 7 of the Act would be required as a result of the designation of critical habitat. They further indicated that they should not experience a significant economic impact as a result of the designation.

Our Response: We concur with NRCS's findings that the critical habitat designation in Tennessee would result in few, if any, section 7 consultations on the Wildlife Habitat Incentives and/or the Environmental Quality Incentives Programs. We also do not believe NRCS would experience a significant economic impact from the designation of critical habitat in Tennessee. This assertion is further supported by the information contained within our economic analysis of the designation of critical habitat for *Arabis perstallata*.

(6) **Comment:** One commenter asked whether we just designated everything as critical without an analysis of how much habitat an evolutionarily significant unit needs.

Our Response: In section 3(5)(A) of the Act, critical habitat is defined as "(i) the specific areas within the geographical area occupied by the species * * * on which are found those

physical and biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside of the geographical area occupied by the species * * * [that] are essential to the conservation of the species". Pursuant to the Act and our implementing regulations, we must determine whether the designation of critical habitat for a given species is prudent and determinable. If it is both, then we conduct a focused analysis to determine and delineate the specific areas, within the geographical area occupied by the species, that contain the physical and biological features essential to the conservation of the species. Once these areas are defined, a determination is then made as to whether additional specific areas outside of the geographical area occupied by the species are required for the conservation of the species. In conducting our analyses, we use the best available scientific and commercial data available. Our analyses take into consideration specific parameters including (1) space for individual and population growth and normal behavior; (2) food, water, air, light, minerals or other nutritional or physiological requirements; (3) cover or shelter; (4) sites for breeding, reproductions, rearing of offspring, germination or seed dispersal; and (5) habitats that are protected from disturbance or are representative of the historical or ecological distribution of the species (50 CFR 424.12(b)). Consequently, we do take into consideration all available information concerning a species, its habitat, ecology, and threats and conduct an analysis to determine which specific areas are essential to its conservation. This final designation of critical habitat for *Arabis perstellata* has been developed using the approach discussed above and constitutes our best assessment of the areas essential to its conservation.

Further, the phrase, "evolutionarily significant unit" is used by the National Marine Fisheries to distinguish distinct populations or evolutionary segments of anadromous salmon species. It reflects that authority under the Act to consider distinct population segments of vertebrate species for addition to the lists of threatened and endangered species. However, the Act only allows listing of plants at the species and subspecies level, so the "evolutionarily significant unit" concept cannot be applied to federally listed plant species under our jurisdiction.

(7) **Comment:** The proposed rule to designate critical habitat for *Arabis*

perstellata did not discuss the extent of private lands encompassed within the boundaries of the proposal.

Our Response: On page 33064 of our proposed rule (June 3, 2003, 68 FR 33058) we have included a table, Table 1—Approximate Area (Hectares and Acres) of Proposed Critical Habitat by Unit for *Arabis perstellata*, that clearly identifies the extent of private land in the proposal by critical habitat unit. This table is similarly included in this final rule and has been updated to incorporate the revisions to critical habitat identified in our January 29, 2004, notice (69 FR 4274). Additionally, in the June 3, 2003, proposed critical habitat rule, the January 29, 2004, notice, and this final rule, landownership is discussed in the textual descriptions for each critical habitat unit under the section titled “Critical Habitat Unit Descriptions”.

(8) **Comment:** The agency’s approach to critical habitat must be improved by banning hunting, trapping, grazing, logging, mining, snowmobile use, ATV (all terrain vehicles) use, and Jet Ski use in these areas immediately. Such uses cause pollution and are anti-environmental and must be banned to preserve endangered plants and animals.

Our Response: Activities such as mining, snowmobile use, and Jet Ski use are not known to occur in areas being designated as critical habitat for *Arabis perstellata* since the proper landscape and/or use areas for such activities do not exist within any of the critical habitat units. Additionally, activities such as hunting, trapping, and ATV use are unlikely to occur in areas being designated as critical habitat for *Arabis perstellata* due to the steep, rocky slopes this plant occupies. We have no records of any adverse impact to *Arabis perstellata* or its habitat from these three uses. We acknowledged in the June 3, 2003, proposed critical habitat rule that grazing and timber harvesting (logging) are potential threats to the species. This critical habitat designation will serve to control those potential threats only to the extent that they are part of a Federal action subject to a consultation under section 7 of the Act. We are committed to working with the private and public landowners regarding the conservation of *Arabis perstellata* and the need to protect the species and its habitat.

(9) **Comment:** One commenter stated the belief that the text in the sections, Designation of Critical Habitat Provides Little Additional Protection to Species, Role of Critical Habitat in Actual Practice of Administering and Implementing the Act, and Procedural and Resource Difficulties in Designating

Critical Habitat, of the proposed rule is factually inaccurate on three specific topics: (1) That critical habitat provides little additional protection to species, (2) that there are insufficient budgetary resources and time to designate critical habitat for listed species, and (3) that the statement, “these measures * * * may make the difference between extinction and survival for many species” applies a standard of survival which is different than the standard of conservation that is mandated by the Act.

Our Response: While we understand and appreciate the concerns raised by the commenter, we respectfully disagree.

As discussed in the sections, Designation of Critical Habitat Provides Little Additional Protection to Species, Role of Critical Habitat in Actual Practice of Administering and Implementing the Act, and Procedural and Resource Difficulties in Designating Critical Habitat and other sections of this and other critical habitat designations, we believe that, in most cases, conservation mechanisms provided through section 7 consultations, the section 4 recovery planning process, the section 9 protective prohibitions of unauthorized take, section 6 funding to the States, the section 10 incidental take permit process, and cooperative programs with private and public landholders and tribal nations provide greater incentives and conservation benefits than does the designation of critical habitat.

As iterated in the sections, Designation of Critical Habitat Provides Little Additional Protection to Species, Role of Critical Habitat in Actual Practice of Administering and Implementing the Act, and Procedural and Resource Difficulties in Designating Critical Habitat, we have been inundated with lawsuits for our failure to designate critical habitat, and we face a growing number of lawsuits challenging critical habitat determinations once they are made. These lawsuits have subjected the Service to an ever-increasing series of court orders and court-approved settlement agreements, compliance with which now consumes nearly the entire listing program budget. This leaves the Service with little ability to prioritize our activities to direct scarce listing resources to the listing program actions with the most biologically urgent species conservation needs. As an example, in FY 2003, the Service estimated that there was a gap of \$1,995,757 between our FY 2003 appropriation and the total cost of complying with court orders and

settlement agreements in FY 2003. This funding shortfall was caused by several circumstances. A number of court orders that were issued after the Service compiled its budget request dramatically increased the amount of funding needed for judicially-mandated critical habitat work. In addition, before the critical habitat work required by the courts had exceeded the amount of the FY 2003 budget request, the Service entered into a number of court-approved settlements requiring us to perform further critical habitat work in FY 2003. Several critical habitat actions also required a greater expenditure of resources than the Service anticipated. With the \$6,000,000 of critical habitat funding that was available in FY 2003, we completed 32 critical habitat designations pursuant to court orders and settlement agreements. However, we were not able to complete work on 21 critical habitat actions for 30 species, which had court-ordered deadlines requiring critical habitat actions to be completed after July 28, 2003, due to insufficient resources.

(10) **Comment:** The critical habitat proposal does not go far enough to protect habitat for the species’ recovery. The commentator urges the Service to include areas historically occupied by *Arabis perstellata*.

Our Response: The delisting criteria identified in the recovery plan for *Arabis perstellata* requires 20 geographically distinct, self-sustaining populations, consisting of 50 or more plants each, protected in Kentucky and Tennessee. Additionally, those populations must be stable or increasing after five years of monitoring following reclassification to threatened status. Because critical habitat is defined as those specific areas essential to the conservation of the species, and since the Act defines conservation similarly to recovery, we have based the designation of critical habitat for *Arabis perstellata* on the criteria necessary to delist or recover the species. Consequently, we have designated units containing 22 (17 in Kentucky and 5 in Tennessee) populations that will meet the criteria for being geographically distinct, self-sustaining, and consisting of 50 or more plants. Therefore, we believe that we have adequately identified and designated as critical habitat those areas essential to the conservation of *Arabis perstellata*. We do not believe that designating additional historically occupied habitat is essential to the conservation of this species. Please refer to the Criteria Used to Identify Critical Habitat section of this final rule for further discussion of the criteria used in

the development of this final designation.

(11) *Comment:* We received some general comments on population viability analysis (PVA) and how it can be used to suggest where habitat restoration can make a significant contribution to species survival.

Our Response: While PVAs can be useful scientific and conservation tools in certain situations, we did not believe, in this case, a PVA was necessary to determine the physical and biological features, and therefore, the specific areas, that are essential to the conservation of *Arabis perstellata*. We believe that the biological and scientific analyses conducted during the development of the recovery plan for this species was sufficient to identify the amount of habitat and number of populations, including specific habitat and population criteria, to recover the species. As previously discussed, we based this critical habitat designation on those criteria established for the recovery plan, and believe them to be adequate to conserve the species.

(12) *Comment:* The commentor noted that our maps of proposed critical habitat contained in the June 3, 2003, **Federal Register** (68 FR 33072 and 33086) are textbook designs of fragmentation. The commentor requested that where possible, we should establish habitat connectivity to prevent genetic isolation of the existing populations.

Our Response: We acknowledge that our understanding of the genetic exchange between populations of *Arabis perstellata* is limited. We believe, and the experts agree, that *Arabis perstellata* is most likely pollinated by insects, but we do not know whether it is self-fertile. Jones (1991) assumed that the plants are pollinated by insects, most likely by small flies and bees. Seed dispersal is likely occurring through wind or gravity rather than animal movements, as this species has no specific morphological (structural) mechanisms such as hooks or burs for seed dispersal. Seeds are probably most commonly dispersed downslope. Also, the species requires specialized habitat and appears to show some inability to expand into available or similar habitats. This inability to compete has likely limited its distribution and abundance. Therefore, habitat connectivity does not appear to be a limiting factor since 17 populations in two counties in Kentucky and 5 populations in two counties in Tennessee are thriving under present conditions. We believe that our present critical habitat designations contain habitat that is essential to the conservation of this species.

(13) *Comment:* We received a comment that the limestone soils that *Arabis perstellata* needs are a perfect example of habitat specialization and, therefore, these specialized areas must be protected.

Our Response: We are designating those specific areas that are defined by the physical and biological features essential to the conservation of *Arabis perstellata* based on the criteria for delisting identified in the recovery plan. As discussed in the Primary Constituent Elements section of the final rule and the previous proposal, limestone substrates are identified as a primary constituent element for *Arabis perstellata*. Therefore, lands containing limestone substrates that also contain self-sustaining populations of 50 or more plants of *Arabis perstellata* are being designated as critical habitat and afforded the protections thereof.

(14) *Comment:* Stones River National Battlefield in Rutherford County, Tennessee, has been identified as having viable populations of *Arabis perstellata*. The commentor requests that we designate critical habitat at Stones River National Battlefield and any other areas on public lands where the species could be reintroduced.

Our Response: Based on our current information regarding this species, it is not known to occur at Stones River National Battlefield nor does this public land have suitable habitat for the reintroduction of *Arabis perstellata*. Additionally, we are not aware of any public lands that have suitable habitat for the reintroduction of this species in Kentucky or Tennessee. However, we welcome any additional specific information concerning locations of *Arabis perstellata* and habitat defined by the primary constituent elements as being essential to its conservation.

(15) *Comment:* In conducting our economic analyses of critical habitat designations pursuant to section 4(b)(2) of the Act, we must solicit data regarding all economic impacts associated with a listing as part of the critical habitat designation, including sections 9 and 10 of the Act.

Our Response: We are not required by statute or implementing regulation to collect information pertaining to and consider economic impacts associated with the listing of a species, even while conducting the required economic impact analyses for critical habitat pursuant to section 4(b)(2) of the Act. However, because it may be difficult to distinguish potential economic effects resulting from a species being listed as endangered or threatened relative to those potential economic effects resulting from designating critical

habitat for a species, we often collect economic data associated with the species being listed to provide for a better understanding of the current economic baseline from which to make more informed decisions as we conduct our required analyses under section 4(b)(2) of the Act. This approach is consistent with the ruling of the 10th Circuit Court of Appeals in *N.M. Cattle Growers Ass'n v. USFWS*, 248 F.3d 1277 (2001).

(16) *Comment:* The final rule designating critical habitat for *Arabis perstellata* must include an explanation of the cost/benefit analysis for both why an area was included and why an area was excluded.

Our Response: Pursuant to section 4(b)(2) of the Act, we are required to take into consideration the economic impact, national security, and any other relevant impact of specifying any particular area as critical habitat. We also may exclude any area from critical habitat if we determine that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, providing that the failure to designate such area will not result in the extinction of the species. We use information from our economic analysis, or other sources such as public comments, management plans, etc., to conduct this analysis. For us to consider excluding an area from the designation, we are required to determine that the benefits of the exclusion outweigh the benefits (*i.e.*, biological or conservation benefits) of including the specific area in the designation. This is not simply a monetary cost/benefit analysis, however. This is a policy analysis, and can include consideration of the impacts of the designation, the benefits to the species from the designation, as well as policy considerations such as national security, tribal relationships, impacts on conservation partnerships and other public policy concerns. This evaluation is done on a case-by-case basis for particular areas based on the best available scientific and commercial data. A decision to exclude an area is discretionary with the Secretary. There is no requirement that we conduct a cost/benefit analysis for including areas within critical habitat, or that we must exclude an area based on our analysis of costs and benefits.

(17) *Comment:* The final rule must clearly explain why specific areas with the essential features may be in need of special management considerations or protection.

Our Response: Please refer to the Background, Primary Constituent Elements, Need for Special Management Consideration or Protection sections,

and Critical Habitat Unit Descriptions sections of this rule for a more detailed discussion of needs for special management and protections. However, at this time we are not aware of any special management or protections afforded the physical and biological features defined by the critical habitat units.

(18) *Comment*: As currently drafted, the proposed rule evidences major analytical gaps, resulting in many miles of water crossing four States being “critical habitat” (and triggering the concomitant regulatory burdens such designations impose) without the adequate data or analysis to support such a decision.

Our Response: Critical habitat for *Arabis perstellata* is only being designated in Kentucky and Tennessee and encompasses only upland habitat. We have conducted the required analysis (see “Criteria Used to Identify Critical Habitat” above and the final Economic Analysis) and determined that out of the 42 known *Arabis perstellata* sites, only 22 sites are essential for the conservation of this species.

Summary of Changes From the Proposed Rule

Other than minor clarifications and incorporation of additional information on the species’ range in Tennessee, we made three substantive changes to our designation:

(1) We modified one of the primary constituent elements to include *Lonicera maackii* as another nonnative species that is noted to have negatively impacted *Arabis perstellata* populations in Tennessee.

(2) Critical units 18, 19, and 20 in Tennessee were increased in size and two new units were added in Tennessee upon obtaining new information from TDEC during the first comment period. The revised designation for Tennessee was increased from 80 ha (198 ac) to 320 ha (790 ac).

(3) The location coordinates associated with Unit 2 and Unit 12 in Kentucky were discovered to be incorrect when we were making the reviews for this final rule. We have changed the coordinates for these two units and have verified the coordinates for all units to ensure that they are correct.

Critical Habitat

Please refer to the proposed rule to designate critical habitat for the *Arabis perstellata* for a general discussion of sections 3, 4, and 7 of the Act and our policy in relation to the designation of

critical habitat (68 FR 33058; June 3, 2003).

A. Methods

As required by section 4(b) of the Act and its implementing regulations (50 CFR 424.12), this proposal is based on the best scientific and commercial information available concerning the species’ current and historical range, habitat, biology, and threats. In preparing this rule, we reviewed and summarized the current information available on *Arabis perstellata*, including the physical and biological features that are essential for the conservation of the species (see “Primary Constituent Elements” section), and identified the areas containing these features. The information used includes known locations, our own site-specific species and habitat information, statewide Geographic Information System (GIS) coverages (e.g., soils, geologic formations, and elevation contours), the Natural Resources Conservation Service’s soil surveys, the final listing rule for *Arabis perstellata*; recent biological surveys and reports; peer-reviewed literature; our final recovery plan; and discussions and recommendations from *Arabis perstellata* experts.

B. Primary Constituent Elements

In accordance with sections 3(5)(A)(i) and 4(b)(1)(A) of the Act and regulations at 50 CFR 424.12, in determining which areas to designate as critical habitat, we are required to base critical habitat determinations on the best scientific data available and to focus on those physical and biological features (primary constituent elements) that are essential to the conservation of the species and that may require special management considerations or protection. Such requirements include, but are not limited to, space for individual and population growth and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for germination or seed dispersal; and habitats that are protected from disturbance or are representative of the historical geographical and ecological distribution of a species.

Much of what is known about the specific physical and biological requirements of *Arabis perstellata* is described in the “Background” section of this rule and the previously published proposed rule (69 FR 4274). The designated critical habitat is designed to provide sufficient habitat to maintain self-sustaining populations of *Arabis perstellata* throughout its range,

and to provide those physical or biological features essential for the conservation of the species. These physical or biological features provide for the following—(1) Individual and population growth, including sites for germination, pollination, reproduction, pollen and seed dispersal, and seed dormancy (Constituent element 1, 2, 3, and 4.); (2) areas that provide basic requirements for growth, such as water, light, and minerals (Constituent element 1, 2, and 4); and (3) areas that support populations of pollinators and seed dispersers (Constituent element 1, 2, and 4); and (4) habitats that are representative of the historic geographical and ecological distribution of the species (Constituent element 1, 2, 3, and 4). Based on the occurrence of this species and field data, all of these physical or biological features are essential to the conservation of the species.

We believe the conservation of *Arabis perstellata* is dependent upon a number of factors, including the conservation and management of sites where existing populations grow and the maintenance of normal ecological functions within these sites. The areas we are designating as critical habitat provide some or all of the physical or biological features essential for the conservation of this species.

Based on the best available information, primary constituent elements essential for the conservation of *Arabis perstellata* are:

(1) Relatively undisturbed, closed canopy mesophytic and sub-xeric forest with large, mature trees (such as sugar maple (*Acer saccharum*), chinquapin oak (*Quercus muhlenbergii*), hackberry (*Celtis occidentalis*), or Ohio buckeye (*Aesculus glabra*)), and

(2) Open forest floors with little herbaceous cover and leaf litter accumulation with natural disturbance to allow for *Arabis perstellata* germination and seedling germination, and

(3) Areas with few introduced weed species such as *Alliaria petiolata* or *Lonicera maackii*, and

(4) Rock outcrops on moderate to steep calcareous slopes defined by:

(a) Ordovician limestone, in particular the Grier, Tanglewood, and Macedonia Bed Members of the Lexington Limestone in Kentucky and the Lebanon, Carters, Leipers, and Catheys, and Bigby-Cannon Limestones in Tennessee; and

(b) Limestone soils such as the Fairmont Rock outcrop complexes in Kentucky and the Mimosa Rock outcrop complexes in Tennessee.

Based on the specific requirements of this species, units contain many of the same physical and biological features. Management, therefore, will address both the maintenance of these features and the reduction of threats specific to each unit.

C. Criteria Used to Identify Critical Habitat

We considered several factors in the selection of specific areas for critical habitat for *Arabis perstellata*. We assessed the final recovery plan objectives and criteria, which emphasize the protection of populations throughout a significant portion of the species' range in Kentucky and Tennessee. According to the criteria identified in the recovery plan, *Arabis perstellata* will be considered for delisting when 20 geographically distinct, self-sustaining populations, consisting of 50 or more plants each, are protected in Kentucky and Tennessee, and it has been demonstrated that the populations are stable or increasing after five years of monitoring following reclassification to threatened status. Because of the proximity of occurrences of *Arabis perstellata*, protected populations must be distributed throughout the species' range in order to decrease the probability of a catastrophic event impacting all the protected populations.

Following the completion of the final recovery plan and during the development of the proposed critical habitat designation for *Arabis perstellata*, two additional populations were discovered in Tennessee. The discovery of these two populations was discussed in the proposed critical habitat rule, but due to the court-ordered date for completion of the proposed rule there was insufficient time to conduct the appropriate analysis to determine if these two populations were essential to the conservation of the species and should be included in the designation. We subsequently conducted an analysis of these populations based on the criteria identified in the final recovery plan and the physical and biological features essential to the conservation of the species (*i.e.*, primary constituent elements) identified herein. On the basis of that analysis and the determination that the protection of the two additional sites in Tennessee, where there were previously only three populations (all meeting the recovery and critical habitat criteria), will provide for greater long-term survivability and conservation of the species, we determined that these two newly discovered populations are essential to the conservation of *Arabis*

perstellata. As such, they were proposed to be included in the designation in a revised proposed rule published in the **Federal Register** (69 FR 4274) on January 29, 2004, and have been subsequently included in this final designation bringing the total number of sites to 22.

Our approach to delineating specific critical habitat units, based on the recovery criteria outlined above, focused first on considering all areas of suitable habitat within the geographic distribution of this species and the known locations of the extant and historic populations. We evaluated field data collected from documented occurrences, various GIS layers, soil surveys, and United States Geological Survey (USGS) quadrangle maps. These data include *Arabis perstellata* locations, soils, elevation, topography, geologic formations, streams, and current land uses.

Based on information concerning historical occurrences of *Arabis perstellata*, there were historically a total of 56 populations, nine populations in Tennessee and 47 in Kentucky. Four of the populations in Tennessee and ten in Kentucky no longer have plants or the primary constituent elements (Jones 1991; Tennessee Department of Environment and Conservation 2000), and therefore, are not considered to be essential to the conservation of *Arabis perstellata*.

Of the 42 remaining historic locations of *Arabis perstellata* in Kentucky (37) and Tennessee (5), we identified 20 as having fewer than 50 plants and degraded habitat. These sites are, therefore, not considered to be essential to the conservation of *Arabis perstellata*. The 22 remaining locations contain populations of *Arabis perstellata* in which greater than 50 plants have been documented and the primary constituent elements for the species as defined in this rule. These 22 locations are considered to be essential to the conservation of *Arabis perstellata*, and as such, are being designated as critical habitat.

The 22 units in this designation include a considerable part, but not all, of the species' historic range. They all contain the primary constituent elements essential for the conservation of *Arabis perstellata* (see "Primary Constituent Elements" section). The omission of historically occupied sites and the rest of the currently occupied sites from this critical habitat designation should not diminish their individual or cumulative importance to the species. Rather, it is our determination that the habitat contained within the 22 units included in this

final rule constitutes our best determination of areas essential for the conservation of *Arabis perstellata*. The 22 units we are designating as critical habitat encompass approximately 648 ha (1,600 ac) in Kentucky and Tennessee.

To the extent feasible, we will continue, with the assistance of other State, Federal, and private researchers, to conduct surveys, research, and conservation actions on the species and its habitat in areas designated and not designated as critical habitat. If additional information becomes available on the species' biology, distribution, and threats, we will evaluate the need to revise critical habitat, or refine the boundaries of critical habitat as appropriate. Sites that are occupied by this plant that are not being designated for critical habitat will continue to receive protection under the Act's section 7 jeopardy standard where a Federal nexus may occur (see "Critical Habitat" section).

D. Mapping

Once we determined that 22 populations are essential to the conservation of *Arabis perstellata*, we used site-specific information to determine the extent of these populations. The designated critical habitat units were delineated by screen digitizing polygons (map units) using ArcView, a computer Geographic Information Systems (GIS) program. Based on the known plant distribution and allowing for downslope germination, we placed boundaries around the populations that included the plants, as well as their primary constituent elements. In defining these critical habitat boundaries, we made an effort to exclude all developed areas, such as housing developments, open areas, and other lands unlikely to contain the primary constituent elements essential for the conservation of *Arabis perstellata*. We used Kentucky State Plane North/North American Datum 1983 (NAD83) coordinates to designate the boundaries of the designated critical habitat in Kentucky and Tennessee State Plane/NAD83 coordinates to designate the boundaries of the designated critical habitat in Tennessee.

E. Need for Special Management Consideration or Protection

An area designated as critical habitat contains one or more of the primary constituent elements that are essential to the conservation of the species (see "Primary Constituent Elements" section). When designating critical habitat, we assess whether the areas

determined to be essential for conservation may require special management considerations or protection. Regulations at 50 CFR 424.02(j) define special management considerations or protection to mean any methods or procedures useful in protecting the physical and biological features of the environment for the conservation of listed species. Critical habitat designations apply only to Federal activities or those funded or authorized by a Federal agency.

The primary threats to this species range-wide are alteration or loss of habitat through development (primarily home and road construction), competition with native and exotic weedy species, grazing and trampling, and timber harvesting. Various activities in or adjacent to each of the critical habitat units described in this final rule may affect one or more of the primary constituent elements that are found in the unit. These activities include, but are not limited to, ground disturbances

that destroy or degrade primary constituent elements of the plant, activities that directly or indirectly affect *Arabis perstellata* plants or underlying seed bank, activities that encourage the growth of *Arabis perstellata* competitors, and activities that significantly degrade or destroy *Arabis perstellata* pollinator populations.

The majority of the land containing *Arabis perstellata* populations is in private ownership. One site (Clements Bluff) in Kentucky is owned by the State and is part of the Kentucky River Wildlife Management Area. This publicly owned site is under no formal management agreement at this time. One privately owned site, Strohmeiers Hills in Kentucky, is under a management agreement with the Kentucky Natural Heritage Program. Management activities include sediment and noxious weed control. The agreement is nonbinding and does not restrict the property owner's activities

or property rights. Thus, the only protection granted by the management agreement is habitat enhancement.

We have determined that the critical habitat units may require special management or protection, largely because no long-term protection or management plans exist for any of the units and due to the existing threats to this plant. Absent special management or protection, these 22 units are susceptible to existing threats and activities such as the ones listed in the "Effects of Critical Habitat" section, which could result in degradation and disappearance of the populations and their habitat.

F. Critical Habitat Designation

Table 1 summarizes the location and extent of designated critical habitat. We provide general descriptions of the boundaries of designated critical habitat units below.

TABLE 1. APPROXIMATE AREA (HECTARES AND ACRES) OF CRITICAL HABITAT BY UNIT FOR *Arabis perstellata*.

Critical habitat unit	County/state	Land ownership	Hectares	Acres
1. Sky View Drive	Franklin/Kentucky	Private	22	54
2. Benson Valley Woods	Franklin/Kentucky	Private	37	91
3. Red Bridge Ridge	Franklin/Kentucky	Private	6	15
4. Trib to South Benson Ck	Franklin/Kentucky	Private	10	25
5. Davis Branch	Franklin/Kentucky	Private	3	7
6. Onans Bend	Franklin/Kentucky	Private	12	30
7. Shadrock Ferry Road	Franklin/Kentucky	Private	15	37
8. Hoover Site	Franklin/Kentucky	Private	83	205
9. Longs Ravine Site	Franklin/Kentucky	Private	30	74
10. Strohmeiers Hills	Franklin/Kentucky	Private	20	49
11. U.S. 127	Franklin/Kentucky	Private	11	27
12. Camp Pleasant Branch	Franklin/Kentucky	Private	14	35
13. Saufley	Franklin/Kentucky	Private	8	20
14. Clements Bluff	Owen/Kentucky	State	11	27
15. Monterey U.S. 127	Owen/Kentucky	Private	12	30
16. Craddock Bottom	Owen/Kentucky	Private	23	57
17. Backbone North	Franklin/Kentucky	Private	11	27
18. Scales Mountain	Rutherford/Tennessee	Private	103	255
19. Sophie Hill	Rutherford/Tennessee	Private	53	132
20. Indian Mountain	Rutherford/Tennessee	Private	87	214
21. Grandfather Knob	Wilson/Tennessee	Private	43	106
22. Versailles Knob	Rutherford/Tennessee	Private	34	83
Total			648	1,600

G. Critical Habitat Unit Descriptions

We are designating a total of 22 critical habitat units for *Arabis perstellata* in Kentucky and Tennessee—14 critical habitat units in Franklin County, Kentucky; three units in Owen County, Kentucky; four units in Rutherford County, Tennessee; and one unit in Wilson County, Tennessee. In order to provide determinable legal descriptions of the critical habitat boundaries, we drew polygons around these units, using as criteria the plant's primary constituent elements, the

known extent of the populations, and the elevation contours on the map. We made an effort to avoid developed areas that are unlikely to contribute to the conservation of *Arabis perstellata*. Areas within the boundaries of the mapped units such as buildings, roads, clearings, transmission lines, lawns, and other urban landscaped areas do not contain one or more of the primary constituent elements. As such, Federal actions limited to these areas would not trigger consultation pursuant to section 7 of the Act, unless they affect the species or

primary constituent elements in the critical habitat.

On the basis of the best available scientific and commercial information, we determined that the 22 critical habitat units contain the primary constituent elements essential to the conservation of *Arabis perstellata*. Additionally, these 22 sites represent the only known *Arabis perstellata* populations that meet the recovery criteria of being geographically distinct, self-sustaining, and containing 50 or more plants. These 22 sites contain the highest-quality populations in terms of

size and habitat that are presently known. The remaining known populations (20) of *Arabis perstellata* do not meet these criteria, because each has fewer than 50 plants occurring on degraded sites, making their long-term viability questionable. As such, based on the best available information, we do not believe that these 20 sites are essential to the conservation of *Arabis perstellata*.

A brief description of each of these critical habitat units is given below. The population information presented in all of the unit descriptions was taken from the KSNPC's Natural Heritage Database for the Kentucky units and the TDEC's Natural Heritage Database for the Tennessee units. Information on threats to specific units is provided where available.

Based on the specific requirements of this species, units contain many of the same physical and biological features. Management, therefore, will address both the maintenance of these features and reduction of threats specific to each unit. Generally, *Arabis perstellata* requires relatively undisturbed, closed canopy mesophytic and sub-xeric forest with large, mature trees (e.g., sugar maple (*Acer saccharum*), chinquapin oak (*Quercus muhlenbergii*), hackberry (*Celtis occidentalis*), or Ohio buckeye (*Aesculus glabra*)). Removal of canopy trees may result in detrimental effects on *Arabis perstellata*. This species also requires open forest floors with little herbaceous cover and leaf litter accumulation with natural disturbance to allow for *Arabis perstellata* germination and seedling germination. Minimization of unnatural disturbance (e.g., trampling, grazing) may be managed through fencing or other access restrictions around features important to the species and existing populations. Areas with few introduced weeds such as *Alliaria petiolata* or *Lonicera maackii* are important because of the competition existing between the species. *Arabis perstellata* is a poor competitor with very specific habitat requirements. Therefore, removal of invasive species is already used in management for this species and will likely be used in future management.

Arabis perstellata is found specifically on rock outcrops on moderate to steep calcareous slopes. Additionally, the plant appears to prefer Ordovician limestone, in particular the Grier, Tanglewood, and Macedonia Bed Members of the Lexington Limestone in Kentucky and the Lebanon, Carters, Leipert, and Catheys, and Bigby-Cannon Limestones in Tennessee; and Limestone soils such as the Fairmont Rock outcrop complexes in Kentucky

and the Mimosa Rock outcrop complexes in Tennessee. *Arabis perstellata* has been documented on these specific soil series. While management measures may be limited, protection of these soils and rock outcrops in the range of this species is important.

Unit 1. Sky View Drive in Franklin County, Kentucky

Unit 1 is located on the west side of the City of Frankfort. It occurs along U.S. 127 and Skyview Drive on the slopes of the first large ravine system due west of the confluence of Benson Creek and the Kentucky River. It contains approximately 22 ha (54 ac), all of which are privately owned. This site was first observed to have *Arabis perstellata* in 1979. In 2001, surveys conducted by the KSNPC found over 150 plants, but not all habitat was surveyed. The majority of the plants occur on the west- and south-facing slopes and are associated with bare soil on trails and tree bases (Kentucky State Nature Preserves 2003).

Unit 2. Benson Valley Woods in Franklin County, Kentucky

Unit 2 is located west of the City of Frankfort. The unit lies southeast of Benson Valley Road on the south side of Benson Creek. It is privately owned and contains approximately 37 ha (91 ac). The plants occur on the southeast-facing slope. They were first observed in 1979. KSNPC personnel last observed more than 200 plants in 2001. The site is threatened by trampling and competition by weeds (Kentucky State Nature Preserves 2003).

Unit 3. Red Bridge Ridge in Franklin County, Kentucky

Unit 3 is located west of Kentucky (KY) Highway 1005, at the confluence of South Benson and Benson Creeks. The site is privately owned. It is approximately 6 ha (15 ac) in size. Plants at this site were first observed in 1987. In 1990, 75 plants were found along the southeast- and northwest-facing slopes (Kentucky State Nature Preserves 2003).

Unit 4. Tributary to South Benson Creek in Franklin County, Kentucky

This unit is located northeast of the City of Frankfort. It occurs along the southeast side of South Benson Creek and the north and south slopes of an unnamed tributary. The site is in private ownership and is 10 ha (25 ac) in size. In 1996, over 1,000 plants were found along the northwest-facing lower, mid, and upper slopes, making this one of the best sites in Kentucky for *Arabis*

perstellata (Kentucky State Nature Preserves 2003).

Unit 5. Davis Branch in Franklin County, Kentucky

This unit occurs along the east side of Harvieland Drive and Davis Branch. This unit contains approximately 3 ha (7 ac) and is privately owned. Plants were first observed at this site in 1990. In 2001, hundreds of plants were found along the south-facing slope throughout the ravine system (Kentucky State Nature Preserves 2003).

Unit 6. Onans Bend in Franklin County, Kentucky

Unit 6 occurs north of Onans Bend Road and east of KY Highway 12. The unit lies along the banks of an unnamed stream near its mouth with the west bank of the Kentucky River. This unit is privately owned and contains approximately 12 ha (30 ac). Plants at this unit were first observed in 1979. In 1990, more than 100 plants were found on the south-facing slope. The plants were exceptionally vigorous. The site is threatened by weed competition (Kentucky State Nature Preserves 2003).

Unit 7. Shadrock Ferry Road in Franklin County, Kentucky

This unit is located along the north side of Shadrock Ferry Road (KY Highway 898). Property at this location is in private ownership. This unit is approximately 15 ha (37 ac) in size. Plants were first observed at this site in 1996. In 2001, several hundred plants were found on the south-facing slope (Kentucky State Nature Preserves 2003).

Unit 8. Hoover Site in Franklin County, Kentucky

This unit lies northwest of the City of Frankfort, along the west side of the Kentucky River on slopes bordering two unnamed tributaries. Plants are widely scattered in small groups along the Kentucky River bluff from river kilometer (km) 98.6 to 101.7 (river mile 61.3 to 63.2). This unit is in private ownership and contains approximately 83 ha (205 ac). The plants were first observed in 1990. In 1996, hundreds of plants were found (Kentucky State Nature Preserves 2003).

Unit 9. Longs Ravine Site in Franklin County, Kentucky

Unit 9 is located north of the City of Frankfort and Lewis Ferry Road. This unit lies east of the Kentucky River in a large ravine and along the steep slopes above the river. This unit is privately owned. There is approximately 30 ha (74 ac) in this unit. In 1990, more than 250 plants were found on the northeast,

southwest, and northwest-facing slopes (Kentucky State Nature Preserves 2003).

Unit 10. Strohmeiers Hill in Franklin County, Kentucky

This unit is located south of the Town of Swallowfield and adjacent to Strohmeier Road and U.S. 127. It occurs on steep slopes on the south side of Elkhorn Creek and on the east bank of the Kentucky River, south of the confluence with Elkhorn Creek. The plants at this site were first observed in 1930. The property is privately owned. The site is approximately 20 ha (49 ac) in size. In 1994, the site contained more than 200 flowering plants. The plants were exceptionally vigorous and occurred throughout a large area, making this one of the best populations of *Arabis perstellata* in Kentucky (Kentucky State Nature Preserves 2003).

Unit 11. U.S. 127 in Franklin County, Kentucky

Unit 11 is located along the east side of U.S. 127 in a ravine just southeast of Elkhorn Creek. The site is privately owned. This unit is approximately 11 ha (27 ac) in size. The plants were first observed in 2001, at which time approximately 100 plants were found on the west-facing slope (Kentucky State Nature Preserves 2003).

Unit 12. Camp Pleasant Branch Woods in Franklin County, Kentucky

Unit 12 is located along the south side of Camp Pleasant Road (KY Highway 1707). This site is privately owned and contains approximately 14 ha (35 ac). The first observance of plants at this site was in 1987. In 2001, over 100 plants were found along the lower northwest-facing slope. Plants at this site are threatened by competition from weeds (Kentucky State Nature Preserves 2003).

Unit 13. Saufley in Franklin County, Kentucky

Unit 13 occurs west of the KY Highway 1900 bridge over Elkhorn Creek on the hillside above the creek. The land ownership for this unit is private. The site is approximately 8 ha (20 ac) in size. Plants were first observed in 1988. In 1996, more than 100 hundred plants were found along the top of the ridge on the northeast-facing slope (Kentucky State Nature Preserves 2003).

Unit 14. Clements Bluff in Owen County, Kentucky

This unit is located in a ravine facing the Kentucky River along the east side of KY Highway 355. The site is owned by the State of Kentucky and is part of the Kentucky River Wildlife

Management Area. This unit is approximately 11 ha (27 ac) in size. The plants were first observed at this site in 1980 on the north-facing slope. In 1996, approximately 100 plants occurred at the site (Kentucky State Nature Preserves 2003).

Unit 15. Monterey U.S. 127 in Owen County, Kentucky

Unit 15 is located 1.6 km (1 mile) north of the City of Monterey, just north of the junction of U.S. 127 and KY Highway 355. The property is privately owned. It is approximately 12 ha (30 ac) in size. Plants were first observed at this site in 1996. In 1997, 150 plants were found along the southwest-facing slope of an unnamed tributary to the Kentucky River. The site is being threatened by weedy competition (Kentucky State Nature Preserves 2003).

Unit 16. Craddock Bottom in Owen County, Kentucky

This unit is located south of the City of Monterey. It occurs along the west side of Old Frankfort Pike on the west-facing slope just east of Craddock Bottom. Property at this site is privately owned. The site contains approximately 23 ha (57 ac). In 1996, over 150 plants were found. In 1996, there was evidence of logging in the surrounding area (Kentucky State Nature Preserves 2003).

Unit 17. Backbone North in Franklin County, Kentucky

Unit 17 is located north of KY Highway 1900. It occurs in an old river oxbow west of the existing Elkhorn Creek and is privately owned. The unit size is approximately 11 ha (27 ac). Plants were first observed at this site in 1981. In 1990, more than 200 plants were found on the southeast-facing slope (Kentucky State Nature Preserves 2003).

Unit 18. Scales Mountain in Rutherford County, Tennessee

This unit is located west of the City of Murfreesboro on Scales Mountain, 1.6 km (1 mile) south of Highway 96. The site is privately owned. This unit is 103 ha (255 ac) in size and consist of three knobs. Plants were first observed at this site in 1985 only on the easternmost knob. In 2003, the central and eastern knobs contained more than 200 plants and the western knob contained more than 100 plants (Tennessee Department of Environment and Conservation 2003). The primary threat to this site is competition from weeds.

Unit 19. Sophie Hill in Rutherford County, Tennessee

Unit 19 is located west of the City of Murfreesboro on Sophie and Townsel Hills which lies between Newman and Coleman Hill Roads. The properties at these sites are privately owned. The unit is approximately 53 ha (132 ac) in size and consists of two hills. The first observance of *Arabis perstellata* on this site was in 1991 on Sophie Hill. In 2000, more than 200 plants were found on the northwest side of Sophie Hill. In 2003, in excess of 300 plants were documented on the adjacent Townsel Hill. Due to the physical proximity of the two locations, Sophie Hill and Townsel Hill, we believe that the occurrences of *Arabis perstellata* documented at these sites are one population, containing over 500 standing plants (Tennessee Department of Environment and Conservation 2003).

Unit 20. Indian Mountain in Rutherford County, Tennessee

Unit 20 is located west of the City of Murfreesboro on Indian Mountain between Highway 96 and Coleman Hill Road. This site is privately owned. The unit size is approximately 87 ha (214 ac) and consists of three knobs. In 2000, over 2,600 plants were found on the eastern and central knobs. In 2003, *Arabis perstellata* was documented at two locations on the western knob and consisted of more than 300 plants. Because of the proximity of the occurrences, it is assumed that these occurrences constitute one population. This unit is the best site for *Arabis perstellata* in Tennessee. Logging is the biggest threat to this exceptional site (Tennessee Department of Environment and Conservation 2003).

Unit 21. Grandfather Knob in Wilson County, Tennessee

This unit is located 1.8 km (1.1 miles) west of Cainesville between State Route 266 (Cainesville Road) and Spain Hill Road. This site is privately owned. The unit is 43 ha (106 ac) in size and consists of two sites that contain *Arabis perstellata* in excellent habitat. These plants were located in 2003 and represent the first documented occurrence of *Arabis perstellata* in Wilson County. More than 100 plants occur at the two sites, and due to their physical proximity, we believe that they comprise a single population. This population is 32 km (20 miles) from the nearest extant *Arabis perstellata* population in Tennessee (Tennessee Department of Environment and Conservation 2003). This population is an important find because it could

reduce the likelihood of one catastrophic event destroying all populations in Tennessee (Units 18, 19, and 20 all occur within close proximity of each other).

Unit 22. Versailles Knob in Rutherford County, Tennessee

Unit 22 is located 1.3 km (0.8 mile) south of Versailles between Versailles Road and Bowles Road. The property at this site is privately owned. The unit size is approximately 34 ha (83 ac). This population was first discovered in 2003 and contains more than 200 plants. This population is 18 km (11 miles) from the nearest extant *Arabis perstellata* population in Tennessee, making this, like Unit 21, important to the long-term persistence of the species in Tennessee (Tennessee Department of Environment and Conservation 2003).

Effects of Critical Habitat Designation

ESA Section 7 Consultation

The regulatory effects of a critical habitat designation under the Act are triggered through the provisions of section 7, which applies only to activities conducted, authorized, or funded by a Federal agency (Federal actions). Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR 402. Individuals, organizations, States, local governments, and other non-Federal entities are not affected by the designation of critical habitat unless their actions occur on Federal lands, require Federal authorization, or involve Federal funding. Please refer to the proposed rule to designate critical habitat for *Arabis perstellata* for a detailed discussion of section 7 of the Act in relation to the designation of critical habitat (68 FR 33058; June 3, 2003).

There are no known populations of *Arabis perstellata* occurring on Federal lands. However, activities on private, State, or city lands requiring a permit from a Federal agency, such as a permit from the U.S. Army Corps of Engineers (USACE) under section 404 of the Clean Water Act, a permit under section 10(a)(1)(B) of the Act from us, or some other Federal action, including funding (e.g., from the Federal Highway Administration (FHWA), Federal Aviation Administration, or Federal Emergency Management Agency); permits from the Department of Housing and Urban Development; activities funded by the U.S. Environmental Protection Agency (EPA), Department of Energy, or any other Federal agency; and construction of communication sites licensed by the Federal

Communications Commission will be subject to the section 7 consultation process. Federal actions not affecting listed species or critical habitat and actions on non-Federal lands that are not federally funded, authorized, or permitted do not require section 7 consultation.

Section 4(b)(8) of the Act requires us to briefly evaluate and describe in any proposed or final regulation that designates critical habitat those activities involving a Federal action that may adversely modify such habitat, or that may be affected by such designation. Activities that may result in the destruction or adverse modification of critical habitat include those that alter the primary constituent elements to an extent that the value of critical habitat for the conservation of *Arabis perstellata* is appreciably reduced. We note that such activities may also jeopardize the continued existence of the species. Activities that, when carried out, funded or authorized by a Federal agency, may directly or indirectly destroy or adversely modify critical habitat include, but are not limited to:

(1) Ground disturbances that destroy or degrade primary constituent elements of the plant (e.g., clearing, tilling, grading, construction, road building, etc.);

(2) Activities that directly or indirectly affect *Arabis perstellata* plants or underlying seed bank (e.g., herbicide application that could degrade the habitat on which the species depends, incompatible introductions of non-native herbivores, incompatible grazing management, clearing, tilling, grading, construction, road building, etc.);

(3) Activities that encourage the growth of *Arabis perstellata* competitors (e.g., widespread fertilizer application, road building, clearing, logging, etc.); and

(4) Activities that significantly degrade or destroy *Arabis perstellata* pollinator populations (e.g., pesticide applications).

Previous Section 7 Consultations

Several section 7 consultations for Federal actions affecting *Arabis perstellata* and its habitat have preceded this critical habitat proposal. The action agencies have included the USACE, U.S. Department of Agriculture Rural Development, FHWA, and EPA.

Since *Arabis perstellata* was listed on January 3, 1995 (60 FR 56), we have conducted 33 informal and no formal consultations involving *Arabis perstellata*. The informal consultations, all of which concluded with a finding

that the proposed Federal action would not affect or would not likely adversely affect *Arabis perstellata*, addressed a range of actions including highway and bridge construction, maintenance of utility lines (e.g., water and sewer lines) along existing roads, and building construction.

The designation of critical habitat will have no impact on private landowner activities that do not require Federal funding or permits. Designation of critical habitat is only applicable to activities approved, funded, or carried out by Federal agencies.

If you have questions regarding whether specific activities would constitute adverse modification of critical habitat, you may contact the following Service offices:

Kentucky—Frankfort Ecological Services Office (502/695-0468)
Tennessee—Cookeville Ecological Services Office (931/528-6481)

To request copies of the regulations on listed wildlife and plants, and for inquiries regarding prohibitions and permits, please contact the U.S. Fish and Wildlife Service, Ecological Services, 1875 Century Boulevard, Atlanta, GA 30345 (telephone 404/679-4176; facsimile 404/679-7081).

Exclusions Under Section 4(b)(2)

Section 4(b)(2) of the Act requires that we designate critical habitat on the basis of the best scientific information available, and that we consider the economic impact, national security, and any other relevant impacts of designating a particular area as critical habitat. We may exclude areas from critical habitat if the benefits of exclusion outweigh the benefits of designation, provided the exclusion will not result in the extinction of the species. We have completed an analysis of the economic impacts of designating these areas as critical habitat. The economic analysis was conducted in a manner that is consistent with the ruling of the 10th Circuit Court of Appeals in *N.M. Cattle Growers Ass'n v. USFWS*, 248 F.3d 1277 (2001). It was available for public review and comment during the comment periods for the proposed rule. The final economic analysis is available from our Web site at <http://cookeville.fws.gov> or by contacting our Tennessee Field Office (see ADDRESSES).

The largest single category of costs expected from this designation of critical habitat is attributable to technical assistance efforts (approximately 33 percent, or \$91,000) involving consultation under section 7 of the Act. Forestry projects will be most

affected by the designation, with consultations comprising about 27 percent of the total economic impact. In addition to forestry projects, activities potentially affected by the designation of critical habitat for *Arabis perstellata* are utilities, development, and road construction and maintenance. The total expected cost of this designation in present value terms is \$47,000 to \$209,000, or about \$7,000 to \$30,000 per year. This range reflects the range in estimates of the number of consultations for forestry and utilities activities, and the range in administrative consultation costs.

Benefits arising from designation of critical habitat for *Arabis perstellata* may include preservation of the endangered species, increased support for conservation efforts, the education/information value of the designation, and reduced uncertainty regarding the extent of essential *Arabis perstellata* habitat.

Pursuant to section 4(b)(2) of the Act, we must consider any other relevant impact of designating critical habitat for *Arabis perstellata* in addition to economic impacts. We determined that the lands within the designation of critical habitat for *Arabis perstellata* are not owned or managed by the Department of Defense, there are currently no habitat conservation plans for *Arabis perstellata*, and the designation does not include any Tribal lands or trust resources. There is currently one management plan in existence for the species. Strohmeiers Hills in Kentucky, is under a management agreement with the Kentucky Natural Heritage Program. The agreement is nonbinding and does not restrict the property owner's activities or property rights. We anticipate no impact to national security, Tribal lands, partnerships, or habitat conservation plans from this critical habitat designation.

Based on the best available information including the prepared economic analysis, we believe that all of these units are essential for the conservation of this species. Our economic analysis indicates an overall low cost resulting from the designation. Therefore, we have found no areas for which the benefits of exclusion outweigh the benefits of inclusion, and so have not excluded any areas from this designation of critical habitat for *Arabis perstellata* based on economic impacts.

Required Determinations

Regulatory Planning and Review

In accordance with Executive Order 12866, this document is a significant rule in that it may raise novel legal and policy issues, but it is not anticipated to have an annual effect on the economy of \$100 million or more or affect the economy in a material way. As such, the Office of Management and Budget (OMB) has reviewed this rule. We prepared an economic analysis of this action to meet the requirement of section 4(b)(2) of the Endangered Species Act to determine the economic consequences of designating the specific areas as critical habitat. The draft economic analysis was made available for public comment and we considered those comments during the preparation of this rule. The economic analysis indicates that this rule will not have an annual economic effect of \$100 million or more or adversely affect any economic sector, productivity, competition, jobs, the environment, or other units of government.

Under the Act, critical habitat may not be destroyed or adversely modified by a Federal agency action; the Act does not impose any restrictions related to critical habitat on non-Federal persons unless they are conducting activities funded or otherwise sponsored or permitted by a Federal agency. Because of the potential for impacts on other Federal agencies' activities, we reviewed this action for any inconsistencies with other Federal agency actions. Based on our economic analysis and information related to implementing the listing of the species such as conducting section 7 consultations, we believe that this designation will not create inconsistencies with other agencies' actions or otherwise interfere with an action taken or planned by another agency, nor will it materially affect entitlements, grants, user fees, loan programs, or the rights and obligations of their recipients.

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

Under the Regulatory Flexibility Act (5 U.S.C. 601 et seq., as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), 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. SBREFA amended the Regulatory Flexibility Act (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. SBREFA also amended the RFA to require a certification statement. We are hereby certifying that this rule will not have a significant effect on a substantial number of small entities.

According to the Small Business Administration, small entities include small organizations, such as independent nonprofit organizations, and small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents, as well as 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.

SBREFA does not explicitly define either "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 the area. Similarly, this analysis considers the relative cost of compliance on the revenues/profit margins of small entities in determining whether or not entities incur a "significant economic impact." Only small entities that are expected to be directly affected by the designation are considered in this portion of the analysis. This approach is consistent with several judicial opinions related to the scope of the RFA (*Mid-Tex Electric Co-op Inc. v. F.E.R.C.*, 773 F.2d 327 (D.C. Cir. 1985) and *American Trucking Associations, Inc. v. U.S. E.P.A.*, 175 F.3d 1027, (D.C. Cir. 1999)).

To determine if the rule would affect a substantial number of small entities, we considered the number of small entities affected within particular types of economic activities (e.g., housing development, grazing, oil and gas production, timber harvesting, etc.). We applied the "substantial number" test

individually to each industry to determine if certification is appropriate. In estimating the numbers of small entities potentially affected, we also considered whether their activities have any Federal involvement; some kinds of activities are unlikely to have any Federal involvement and so will not be affected by critical habitat designation. Designation of critical habitat only affects activities conducted, funded, or permitted by Federal agencies; non-Federal activities are not affected by the designation. Federal agencies are already required to consult with us under section 7 of the Act on activities that they fund, permit, or implement that may affect *Arabis perstellata*.

Federal agencies must also consult with us if their activities may affect designated critical habitat. However, we believe this will result in minimal additional regulatory burden on Federal agencies or their applicants because consultation would already be required due to the presence of the listed species, and consultations to avoid the destruction or adverse modification of critical habitat would be incorporated into the existing consultation process and trigger only minimal additional regulatory impacts beyond the duty to avoid jeopardizing the species.

Designation of critical habitat could result in an additional economic burden on small entities due to the requirement to reinstate consultation for ongoing Federal activities. However, since *Arabis perstellata* was listed in 1995, we have conducted only 33 informal and no formal consultations involving this species. Most of these consultations involved Federal projects or permits to businesses that do not meet the definition of a small entity (e.g., Federally sponsored projects). Also, a number of USACE permit actions involved other large public entities (e.g., State-sponsored activities) that do not meet the definition of a small entity. No formal consultations involved a non-Federal entity. However, about five informal consultations were on behalf of a private business. Most of these informal consultations were utility-related (e.g., water lines, sewer lines, and gas lines), some being proposed by small entities. We do not believe that the number of utility-related small entities meets the definition of substantial described above. Therefore, the requirement to reinstate consultations for ongoing projects will not affect a substantial number of small entities.

The economic analysis identified activities that are within, or will otherwise be affected by, section 7 of the Act for *Arabis perstellata*. These

activities may lead to section 7 consultation with us, and in some cases specific projects may be modified in order to protect *Arabis perstellata* and/or its habitat. All of the projects that are potentially affected by section 7 implementation for *Arabis perstellata* are expected to involve either no project modifications, or minor project modifications or opportunity costs. The greatest share of the costs associated with the consultation process typically stems from project modifications (as opposed to the consultation itself). Indeed, costs associated with the consultation itself are relatively minor, with third party costs estimated to range from \$1,200 to \$4,100 per consultation, including the cost of technical assistance. The analysis predicted that the following agencies and activities will be the most impacted by section 7 consultation:

- Timber stand improvement plans (Natural Resources Conservation Service)
- Road construction and maintenance (Federal Highway Administration)
- Commercial development (Army Corps of Engineers)
- Utilities construction and maintenance (Tennessee Valley Authority)

After excluding the previous set of action agencies and consultations noted above from the total universe of impacts identified in the body of the economic analysis, there are no remaining action agencies or consultations that may produce significant impacts on small entities. Thus, the economic analysis indicated that small businesses participating in consultations involving the above-listed activities and corresponding action agencies will not be significantly affected as a result of section 7 implementation.

In summary, we have considered whether this rule would result in a significant economic effect on a substantial number of small entities. We have concluded that it would not affect a substantial number of small entities. Therefore, we are certifying that the designation of critical habitat for *Arabis perstellata* will not have a significant economic impact on a substantial number of small entities, and a final regulatory flexibility analysis is not required.

Small Business Regulatory Enforcement Fairness Act (5 U.S.C. 802(2))

Under the Small Business Regulatory Enforcement Fairness Act (5 U.S.C. 801 *et seq.*), this designation of critical habitat for *Arabis perstellata* is not considered to be a major rule. Our detailed assessment of the economic

effects of this designation is described in the economic analysis. Based on the effects identified in our analysis, we believe that this rule will not have an effect on the economy of \$100 million or more, will not cause a major increase in costs or prices for consumers, and will not have significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises, nor will the rule have a significant economic impact on a substantial number of small entities. Refer to the final economic analysis for a discussion of the effects of this determination.

Executive Order 13211

On May 18, 2001, the President issued Executive Order 13211 on regulations that significantly affect energy supply, distribution, and use. Executive Order 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. The purpose of this requirement is to ensure that all Federal agencies "appropriately weigh and consider the effects of the Federal Government's regulations on the supply, distribution, and use of energy. The OMB has provided guidance for implementing this executive order that outlines nine outcomes that may constitute "a significant adverse effect" when compared without the regulatory action under consideration. One of these criteria is relevant to this analysis—increases in the cost of energy distribution in excess of one percent. Based on our economic analysis of this designation of critical habitat for *Arabis perstellata*, Tennessee Valley Authority (TVA) consultations on transmission line construction and maintenance resulting from *Arabis perstellata* being listed and critical habitat being designated are expected to have project modification costs of \$4,000 to \$15,000, and administrative costs of \$5,000 to \$36,000. Thus, the total costs incurred by TVA as a result of section 7 implementation range from \$9,000 to \$51,000. Total operation expenses for TVA in 2002 were \$5.2 billion. The total costs incurred as a result of section 7 are less than one thousandth of one percent of TVA's operating expenses, so the impact to energy distribution is not anticipated to exceed the one percent threshold. 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),

the Service makes the following findings:

(a) 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, 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; AFDC 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 who receive Federal funding, assistance, permits or 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 on to State governments.

(b) We do not believe that this rule will significantly or uniquely affect small governments. This determination is based on the economic analysis conducted for this designation of critical habitat for *Arabis perstellata*. As such, a Small Government Agency Plan is not required.

Takings

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 approximately 648 ha (1600 ac) of lands in Franklin, Owen, and Henry counties, Kentucky, and Rutherford and Wilson counties, Tennessee, as critical habitat for *Arabis perstellata* in a takings implication assessment. The takings implications assessment concludes that this final designation of critical habitat for *Arabis perstellata* does not pose significant takings implications.

Federalism

In accordance with Executive Order 13132, this rule does not have significant Federalism effects. A Federalism assessment is not required. In keeping with Department of the Interior policy, the Service requested information from, and coordinated development of this critical habitat designation with, appropriate State resource agencies in Kentucky and Tennessee, as well as during the listing process. The impact of the designation on State and local governments and their activities was fully considered in the Economic Analysis. As discussed above, the designation of critical habitat in areas currently occupied by *Arabis perstellata* would have little incremental impact on State and local governments and their activities. The designations may have some benefit to these governments in that the areas essential to the conservation of these species are more clearly defined, and the primary constituent elements of the habitat necessary to the survival of the species are identified. While making this definition and identification does not alter where and what federally sponsored activities may occur, it may assist these local governments in long-range planning, rather than waiting for case-by-case section 7 consultation to occur.

Civil Justice Reform

In accordance with Executive Order 12988, the Office of the Solicitor has determined that the rule does not unduly burden the judicial system and meets the requirements of sections 3(a) and 3(b)(2) of the Order. We are designating critical habitat in accordance with the provisions of the Act, as amended. This rule uses standard property descriptions and identifies the primary constituent elements within the designated areas to assist the public in understanding the habitat needs that are essential for the conservation of *Arabis perstellata*.

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

This rule does not contain new or revised information collection for which Office of Management and Budget approval is required under the Paperwork Reduction Act. 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

We have determined that we do not need to prepare an Environmental Assessment or an Environmental Impact Statement as defined by the National Environmental Policy Act of 1969, in connection with regulations adopted pursuant to section 4(a) of the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244).

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, 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. We are not aware of any Tribal lands essential for the conservation of *Arabis perstellata*. Therefore, the critical habitat for *Arabis perstellata* does not contain any Tribal lands or lands that we have identified as impacting Tribal trust resources.

References Cited

A complete list of all references cited in this rule is available upon request from the Cookeville Field Office (see **ADDRESSES** section).

Author

The primary author of this document is Timothy Merritt (*see ADDRESSES* section), 931/528–6481, extension 211.

List of Subjects in 50 CFR Part 17

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

Regulation Promulgation

■ For the reasons outlined in the preamble, we amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as follows:

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. In section 17.12(h), revise the entry for “*Arabis perstellata*” under “FLOWERING PLANTS” in the List of Endangered and Threatened Plants to read as follows:

§ 17.12 Endangered and threatened plants.

* * * * *

(h) * * *

Species		Historic range	Family	Status	When listed	Critical habi- tat	Special rules
Scientific name	Common name						
FLOWERING PLANTS							
*	*	*	*	*	*		*
<i>Arabis perstellata</i>	Braun's Rock-cress	U.S.A. (KY, TN)	Brassicaceae	E	570	17.96(a)	NA
*	*	*	*	*	*		*

■ 3. In 17.96, amend paragraph (a) by adding an entry for *Arabis perstellata* in alphabetical order under Family Brassicaceae to read as follows:

§ 17.96 Critical habitat—plants.

(a) * * *

Family Brassicaceae: *Arabis perstellata* (Braun's rock-cress).

(1) Critical habitat units are depicted for Franklin, Henry, and Owen counties, Kentucky, and Rutherford and Wilson counties, Tennessee, on the maps below.

(2) Based on the best available information, primary constituent elements essential for the conservation of *Arabis perstellata* are:

(i) Relatively undisturbed, closed canopy mesophytic and sub-xeric forest with large, mature trees (such as sugar maple (*Acer saccharum*), chinquapin oak (*Quercus muhlenbergii*), hackberry (*Celtis occidentalis*), or Ohio buckeye (*Aesculus glabra*)), and

(ii) Open forest floors with little herbaceous cover and leaf litter accumulation with natural disturbance to allow for *Arabis perstellata* germination and seedling germination, and

(iii) Areas with few introduced weed species such as *Alliaria petiolata* or *Lonicera maackii*, and

(iv) Rock outcrops on moderate to steep calcareous slopes defined by:

(A) Ordovician limestone, in particular the Grier, Tanglewood, and Macedonia Bed Members of the Lexington Limestone in Kentucky and the Lebanon, Carters, Leipers, and Catheys, and Bigby-Cannon Limestones in Tennessee; and

(B) Limestone soils such as the Fairmont Rock outcrop complexes in Kentucky and the Mimosa Rock outcrop complexes in Tennessee.

(3) Existing features and structures made by people, such as buildings,

roads, railroads, airports, other paved areas, lawns, and other urban landscaped areas, do not contain one or more of the primary constituent elements and are not critical habitat. Federal actions limited to those areas, therefore, would not trigger a consultation under section 7 of the Act unless they may affect the species and/or primary constituent elements in adjacent critical habitat.

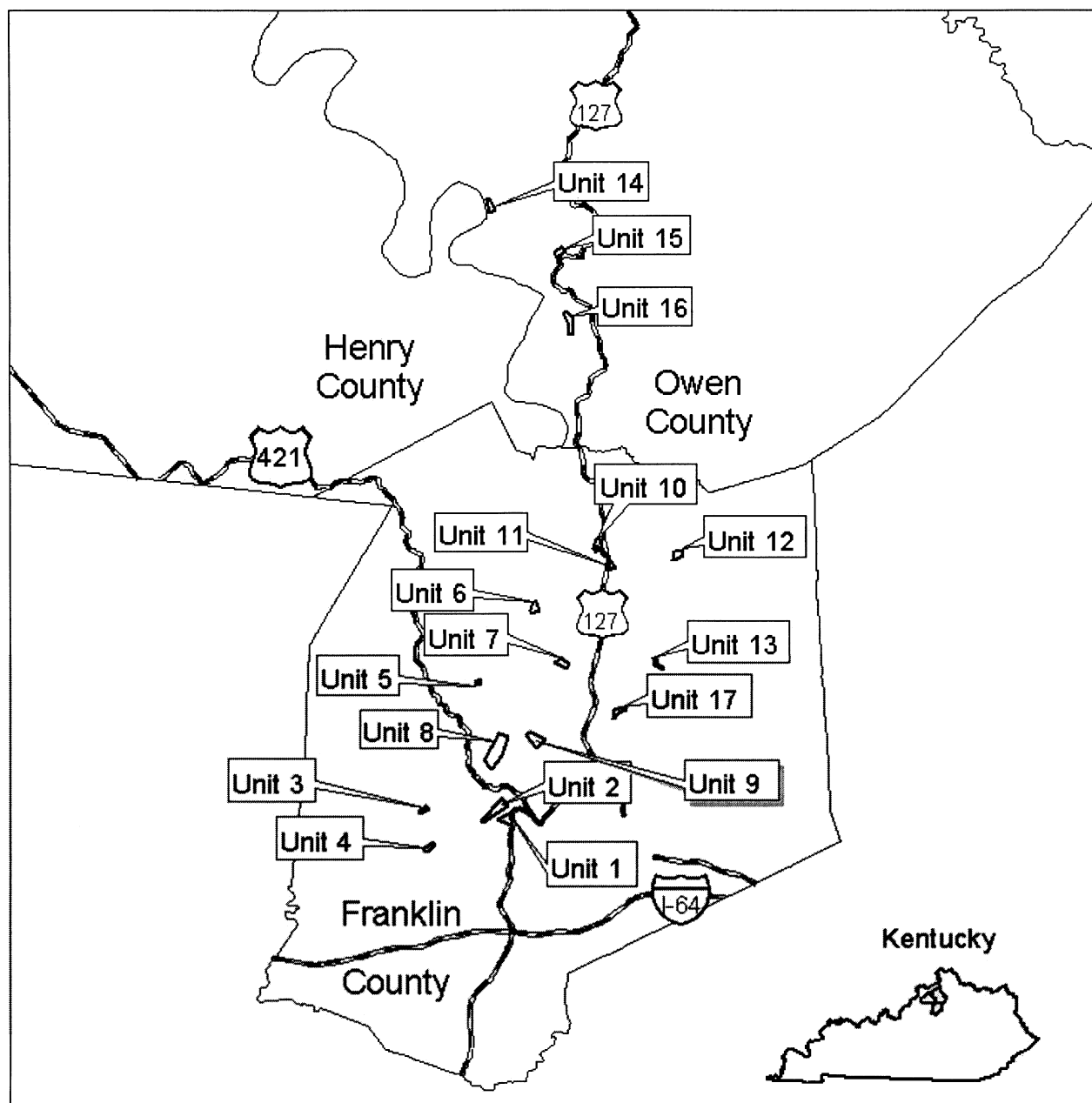
(4) Critical Habitat Map Units for Kentucky.

(i) Data layers defining map units were created on a base of USGS 7.5' quadrangles and critical habitat units were then mapped in feet using Kentucky State Plane North, NAD 83, and Tennessee State Plane, NAD 83, coordinates.

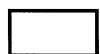
(ii) Map 1—Index map of Critical Habitat for Braun's Rock-cress, Kentucky, follows:

BILLING CODE 4310–55–P

Map 1 - Index of Critical Habitat for Braun's rock-creep for Kentucky



State Roads



Final Critical Habitat

Projection: Kentucky Stateplane North

Units: Feet

Datum: NAD83



0 10 Miles

0 10 Kilometers

(5) Unit 1: Sky View Drive, Franklin County, Kentucky.

(i) From USGS 1:24,000 quadrangle map Frankfort West, Kentucky; land

bounded by the following Kentucky State Plane North / NAD83 (Feet)

coordinates: 1453158.08, 257013.95; 1455318.02, 258193.89; 1455537.40, 256159.34.

(6) Unit 2: Benson Valley Woods, Franklin County, Kentucky.

(i) From USGS 1:24,000 quadrangle map Frankfort East, Kentucky; land bounded by the following Kentucky State Plane North / NAD83 (Feet) coordinates: 1450864.02, 256869.46;

1453925.25, 260160.79; 1454705.56, 258980.31; 1451054.09, 256519.32.

(7) Unit 3: Red Bridge Road, Franklin County, Kentucky.

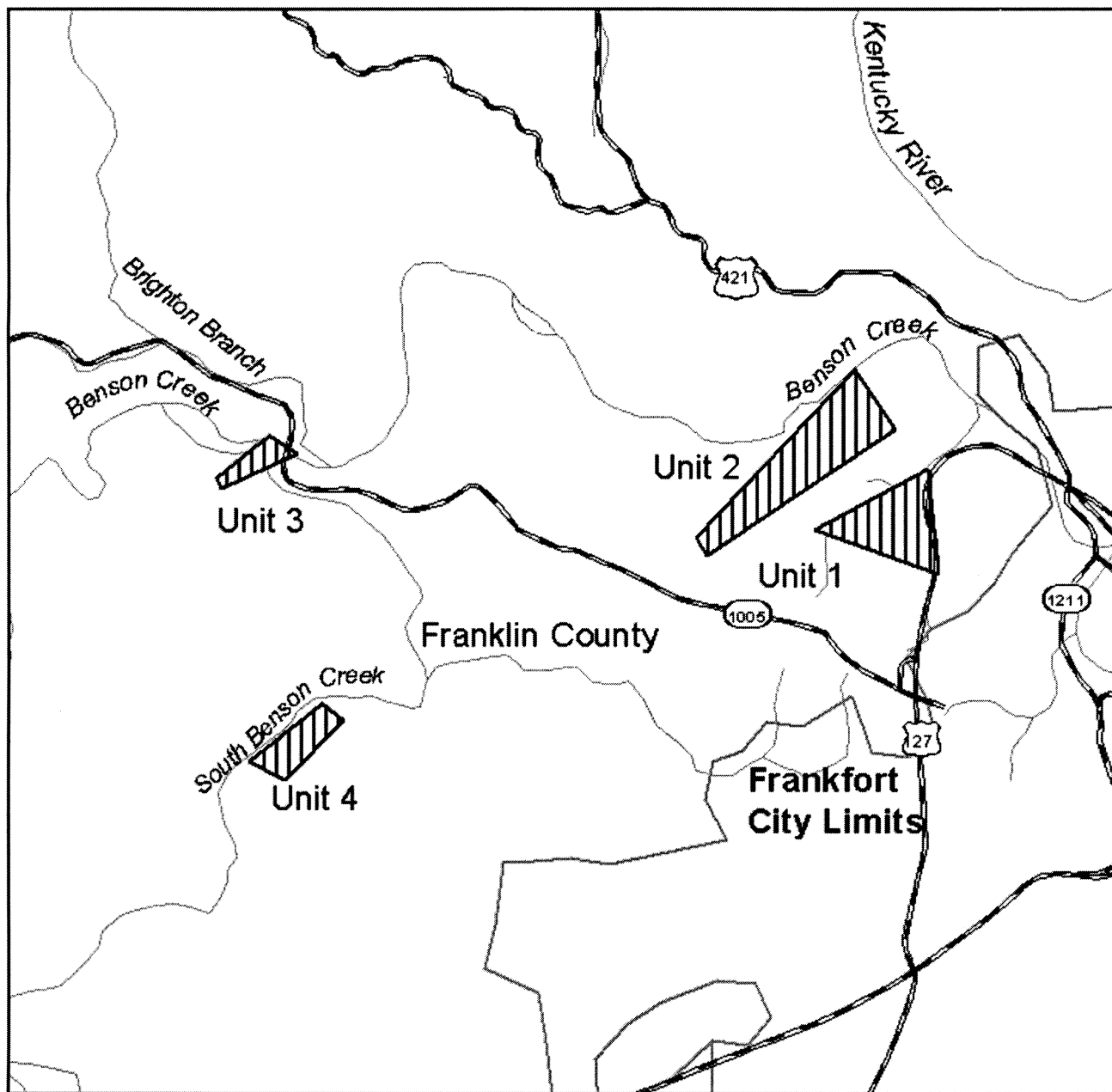
(i) From USGS 1:24,000 quadrangle Frankfort West, Kentucky; land bounded by the following Kentucky State Plane North / NAD83 (Feet) coordinates: 1442614.00, 258863.10; 1443144.60, 258502.62; 1441670.26, 257801.90; 1441581.15, 258012.52.

(8) Unit 4: Tributary to South Benson Creek, Franklin County, Kentucky.

(i) From USGS 1:24,000 quadrangle map Frankfort West, Kentucky; land bounded by the following Kentucky State Plane North / NAD83 (Feet) coordinates: 1443620.37, 253609.15; 1444037.01, 253294.00; 1442925.97, 252129.54; 1442210.20, 252471.40.

(ii) Map 2—Units 1, 2, 3, and 4, follows:

Map 2 - Units 1, 2, 3 and 4: critical habitat for Braun's rock-cress in Kentucky.



State Roads



Final Critical Habitat

Projection: Kentucky Stateplane North

Units: Feet

Datum: NAD83

0

1 Miles

0

1 Kilometers



(9) Unit 5: Davis Branch, Franklin County, Kentucky.

(i) From USGS 1:24,000 quadrangle map Polsgrove, Kentucky; land bounded by the following Kentucky State Plane North / NAD83 (Feet) coordinates: 1450167.05, 277739.69; 1450767.00, 277750.87; 1450761.41, 277314.88; 1450202.46, 277180.73.

(10) Unit 6: Onans Bend, Franklin County, Kentucky.

(i) From USGS 1:24,000 quadrangle map Polsgrove, Kentucky; land bounded by the following Kentucky State Plane North / NAD83 (Feet) coordinates: 1458610.26, 289401.40; 1459066.14,

289401.50; 1459484.82, 288182.67; 1458210.30, 287759.68; 1458191.76, 288155.34.

(11) Unit 7: Shadrock Ferry Road, Franklin County, Kentucky.

(i) From USGS 1:24,000 quadrangle Switzer, Kentucky; land bounded by the following Kentucky State Plane North / NAD83 (Feet) coordinates: 1461695.27, 280422.79; 1462823.09, 280986.70; 1463880.43, 280256.18; 1463463.90, 279506.43.

(12) Unit 8: Hoover Site, Franklin County, Kentucky.

(i) From USGS 1:24,000 quadrangle Frankfort West, Kentucky; land bounded by the following Kentucky

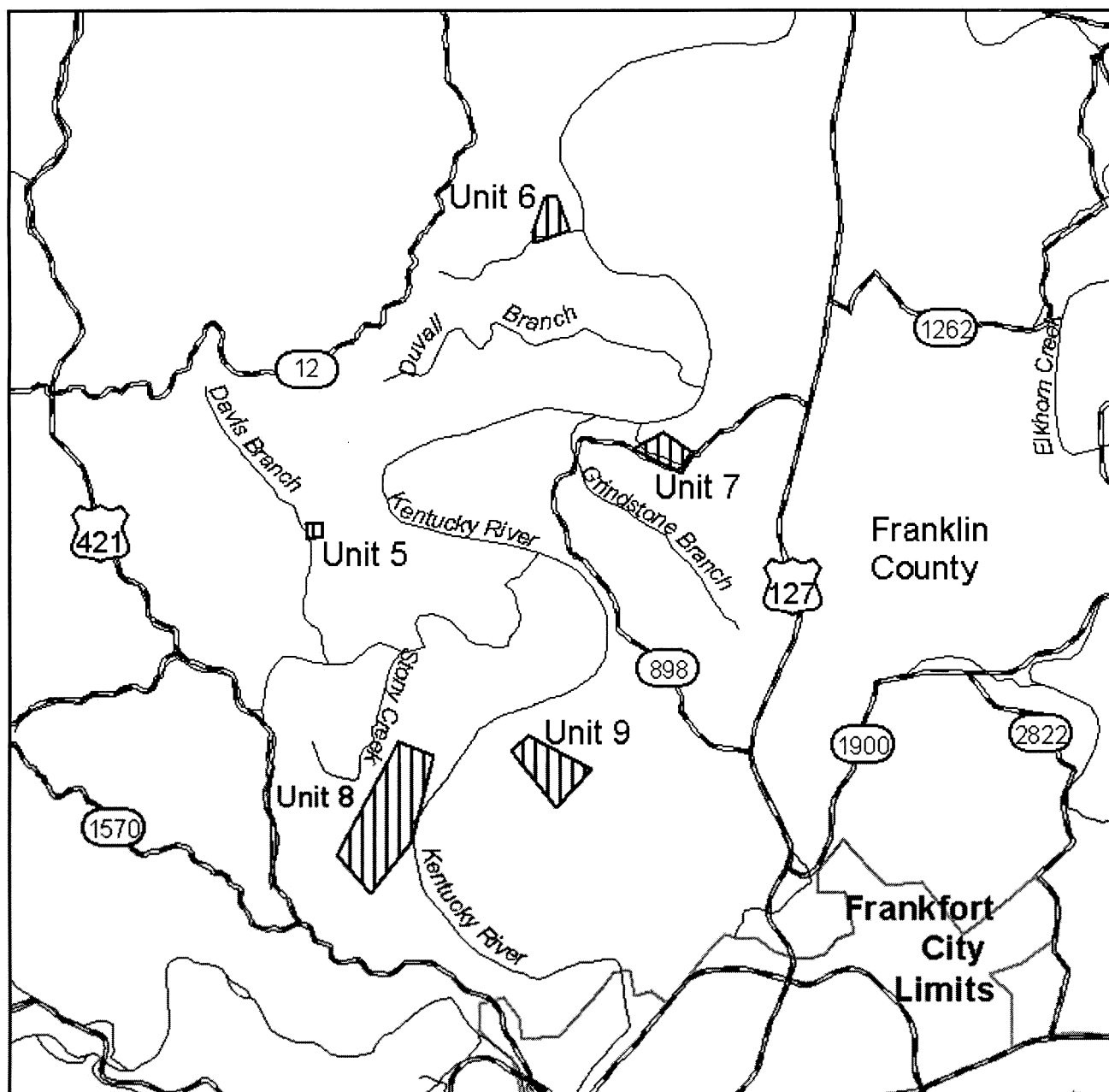
State Plane North / NAD83 (Feet) coordinates: 1479208.72, 296984.32; 1480548.19, 297074.83; 1480548.19, 296260.28; 1479407.83, 295690.11; 1479177.04, 295694.63.

(13) Unit 9: Longs Ravine Site, Franklin County, Kentucky.

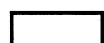
(i) From USGS 1:24,000 quadrangle Frankfort West, Kentucky; land bounded by the following Kentucky State Plane North / NAD83 (Feet) coordinates: 1457404.81, 269596.23; 1457959.89, 270126.46; 1460205.09, 268958.30; 1459003.79, 267607.86.

(ii) Map 3—Units 5, 6, 7, 8, and 9, follows:

Map 3 - Units 5, 6, 7, 8 and 9: critical habitat for Braun's rock-cress in Kentucky.



State Roads



Final Critical Habitat

Projection: Kentucky Stateplane North

Units: Feet

Datum: NAD83

0

2 Miles

0

2 Kilometers



(14) Unit 10: Strohmeiers Hills, Franklin County, Kentucky.

(i) From USGS 1:24,000 quadrangle Switzer, Kentucky; land bounded by the following Kentucky State Plane North / NAD83 (Feet) coordinates: 1467733.92, 298729.06; 1468218.13, 298978.50; 1468695.00, 297144.38; 1469854.17,

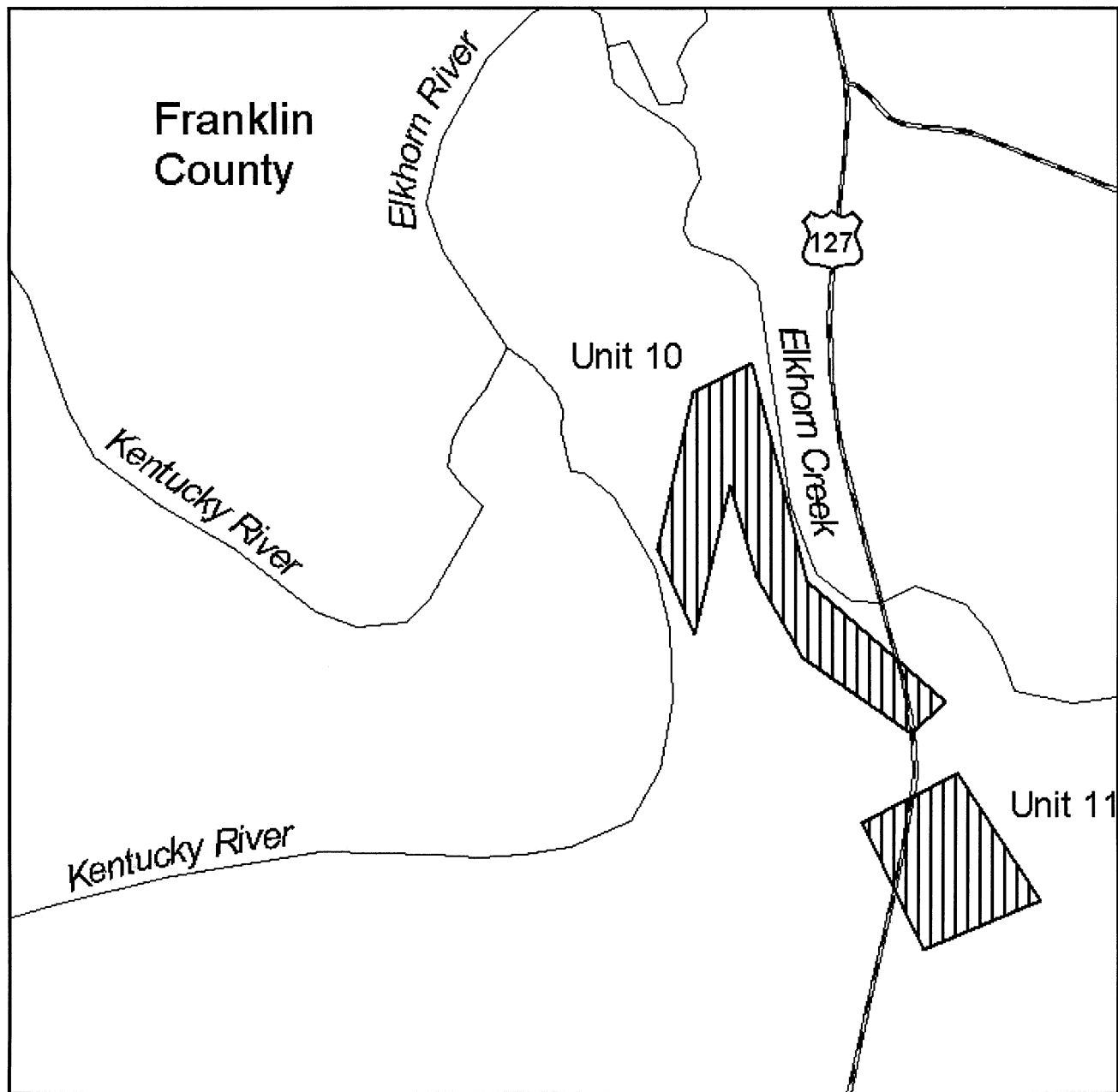
296131.94; 1469568.53, 295848.76; 1468658.32, 296498.77; 1468247.47, 297181.06; 1468056.72, 297936.72; 1467763.26, 296704.19; 1467440.46, 297415.83.

(15) Unit 11: U.S. 127, Franklin County, Kentucky.

(i) From USGS 1:24,000 quadrangle Switzer, Kentucky; land bounded by the following Kentucky State Plane North / NAD83 (Feet) coordinates: 1469164.24, 295115.19; 1469939.07, 295511.62; 1470629.82, 294466.49; 1469662.78, 294058.06.

(ii) Map 4—Units 10 and 11, follows:

Map 4 - Units 10 and 11: critical habitat for Braun's rock-creep in Kentucky.



State Roads



Final Critical Habitat

Projection: Kentucky Stateplane North

Units: Feet

Datum: NAD83

0

0.4 Miles

0

0.4 Kilometers

N



(16) Unit 12: Camp Pleasant Branch Woods, Franklin County, Kentucky.

(i) From USGS 1:24,000 quadrangle Switzer, Kentucky; land bounded by the following Kentucky State Plane North / NAD83 (Feet) coordinates: 1453446.71,

269919.75; 1454641.35, 269410.27; 1453921.05, 266476.39; 1452392.62, 264561.46; 1451250.69, 265879.07.

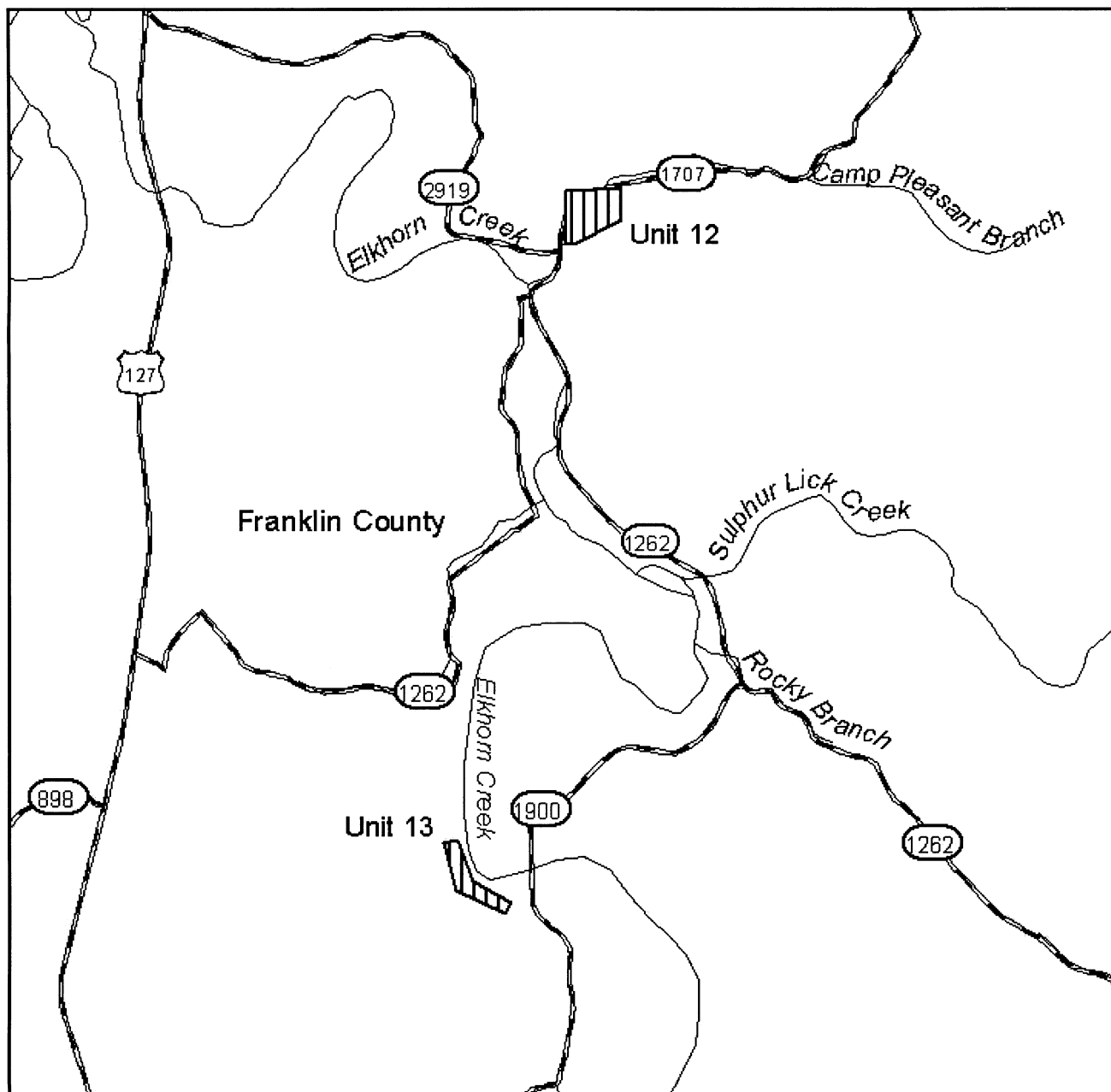
(17) Unit 13: Sauflley, Franklin County, Kentucky.

(i) From USGS 1:24,000 quadrangle Switzer, Kentucky; land bounded by the

following Kentucky State Plane North / NAD83 (Feet) coordinates: 1476234.26, 281055.05; 1476538.92, 281115.98; 1476924.83, 280171.52; 1477848.97, 279612.98; 1476538.92, 279887.17.

(ii) Map 5—Units 12 and 13, follows:

Map 5 - Units 12 and 13: critical habitat for Braun's rock-cress in Kentucky.



State Roads



Final Critical Habitat

Projection: Kentucky Stateplane North

Units: Feet

Datum: NAD83

0

1 Miles

0

1 Kilometers



(18) Unit 14: Clements Bluff, Owen County, Kentucky.

(i) From USGS 1:24,000 quadrangle Gratz, Kentucky; land bounded by the following Kentucky State Plane North / NAD83 (Feet) coordinates: 1451615.01, 349295.36; 1452022.39, 349505.61; 1452910.30, 347908.24; 1452180.35, 347473.85.

(19) Unit 15: Monterey U.S. 127, Owen County, Kentucky.

(i) From USGS 1:24,000 quadrangle Monterey, Kentucky; land bounded by the following Kentucky State Plane North / NAD83 (Feet) coordinates: 1462791.17, 342357.03; 1463347.35, 341639.38; 1462109.41, 340778.21; 1461660.88, 341370.27.

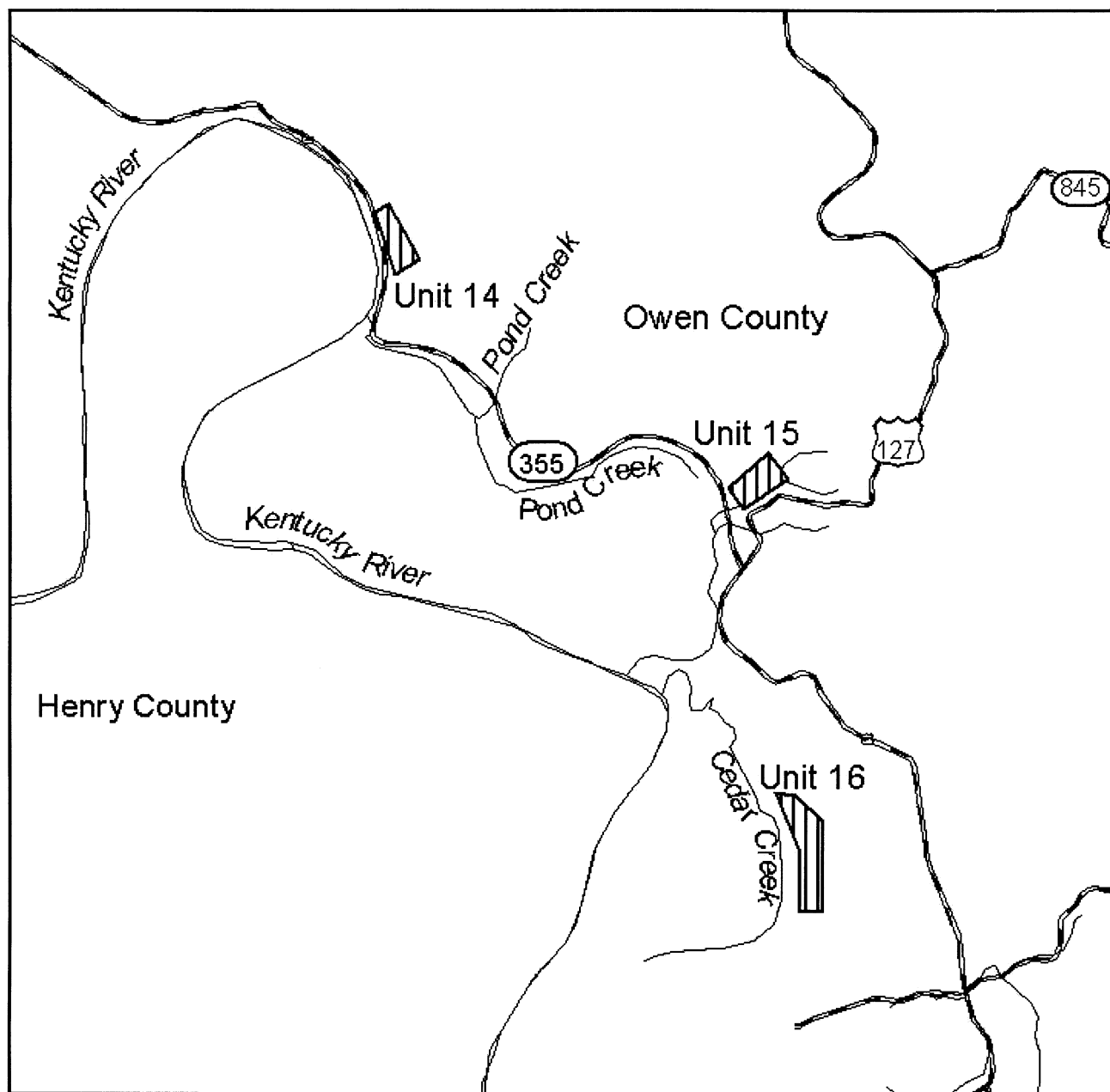
(20) Unit 16: Craddock Bottom, Owen County, Kentucky.

(i) From USGS 1:24,000 quadrangles Frankfort East and West, Kentucky; land

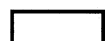
bounded by the following Kentucky State Plane North / NAD83 (Feet) coordinates: 1463039.86, 332602.65; 1463575.00, 332555.43; 1464377.71, 331784.20; 1464377.71, 329218.68; 1463748.13, 329202.94; 1463716.65, 330918.53.

(ii) Map 6—Units 14, 15, and 16, follows:

Map 6 - Units 14, 15 and 16: critical habitat for Braun's rock-cress in Kentucky.



State Roads



Final Critical Habitat

Projection: Kentucky Stateplane North

Units: Feet

Datum: NAD83

0

2 Miles

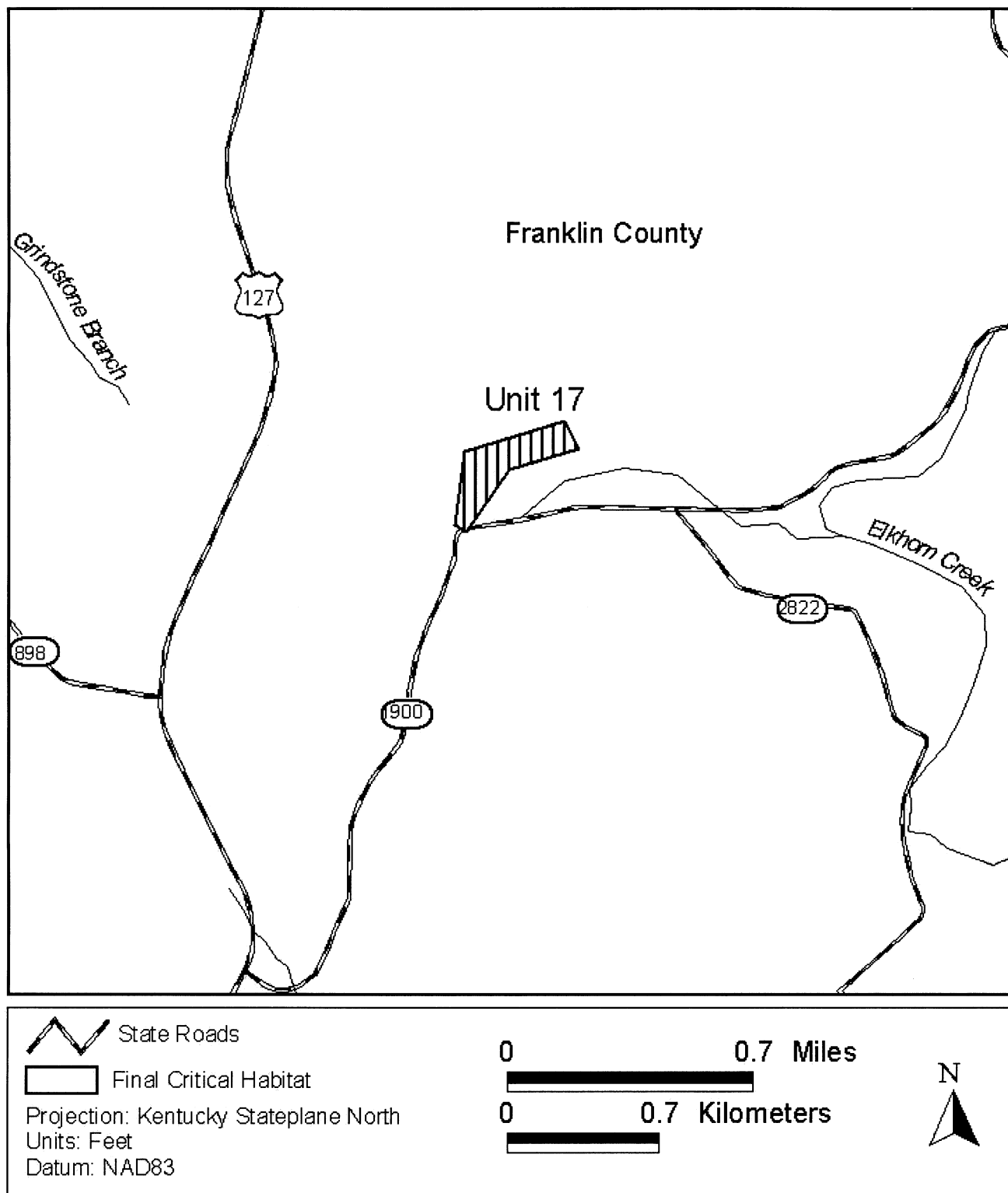
0

2 Kilometers



(21) Unit 17: Backbone North, Franklin County, Kentucky.	by the following Kentucky State Plane North / NAD83 (Feet) coordinates:	1471168.97, 272953.00; 1470516.94, 272031.81; 1470339.01, 272116.74.
(i) From USGS 1:24,000 quadrangle Frankfort East, Kentucky; land bounded	1470487.13, 273240.06; 1471988.00, 273697.42; 1472199.59, 273279.29;	(ii) Map 7—Unit 17, follows:

Map 7 - Unit 17: critical habitat for Braun's rock-creep in Kentucky.



(21) Critical Habitat Map Units for Tennessee.

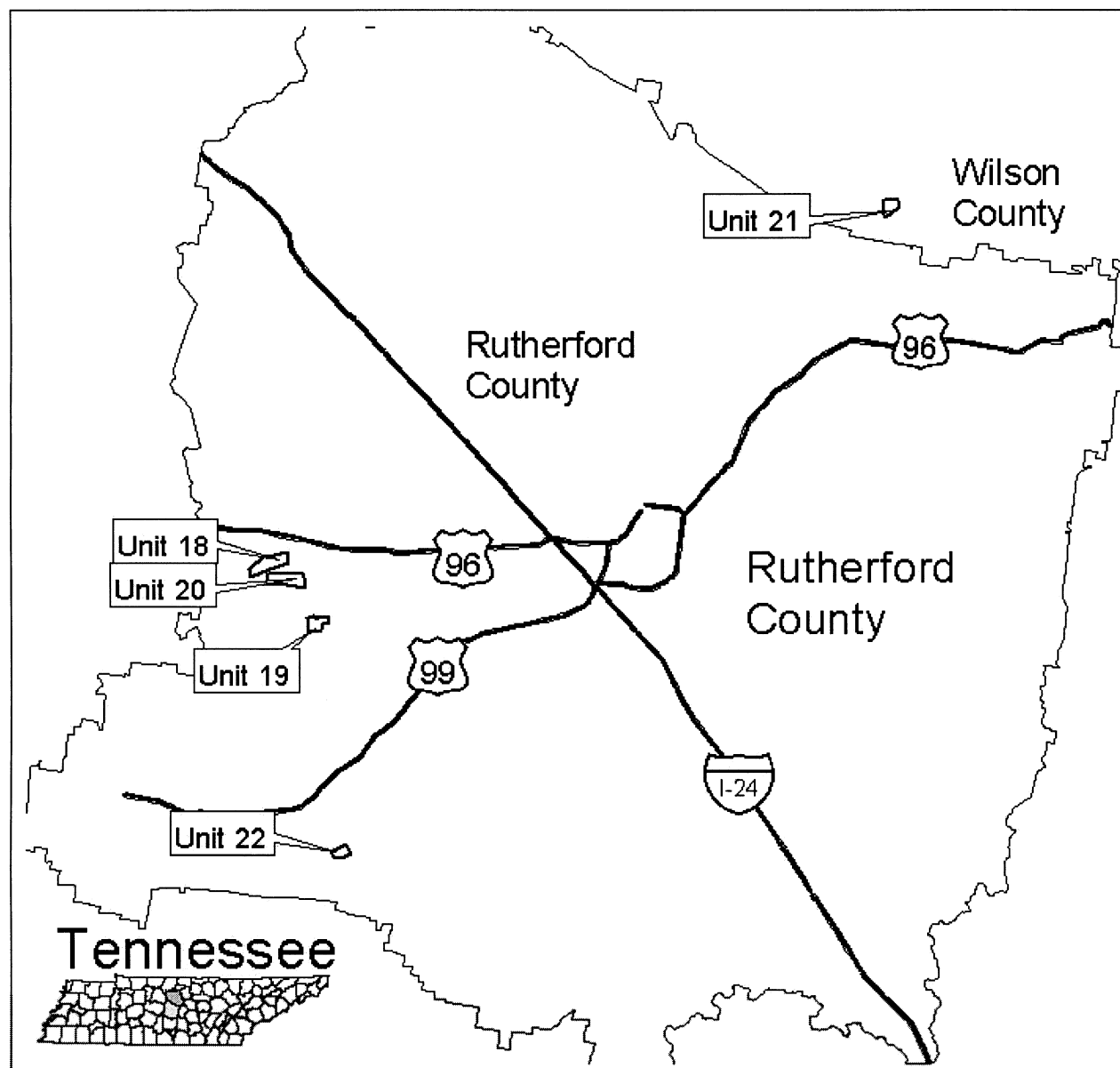
(i) Data layers defining map unit were created on a base of USGS 7.5'

quadrangles and proposed critical habitat units were then mapped in feet

using Tennessee State Plane, NAD 83,
coordinates.

(ii) Map 8—Index of Critical Habitat
for Braun's Rock-creep, Tennessee,
follows:

Map 8 - Index of Critical Habitat for Braun's rock-cress for Tennessee



State Roads



Final Critical Habitat

Projection: Tennessee Stateplane North

Units: Feet

Datum: NAD83



0

10 Miles

0

10 Kilometers

(22) Unit 18: Scales Mountain,
Rutherford County, Tennessee.

(i) From USGS 1:24,000 quadrangle
Rockvale, Tennessee; land bounded by

the following Tennessee State Plane /
NAD83 (Feet) coordinates (E,N):

1797871.97, 548892.57; 1800101.59, 549457.83; 1800070.19, 547856.27; 1797934.77, 547071.19.

(23) Unit 19: Sophie Hill, Rutherford County, Tennessee.

(i) From USGS 1:24,000 quadrangle Rockvale, Tennessee; land bounded by the following Tennessee State Plane /

NAD83 (Feet) coordinates (E,N): 1804270.37, 539691.44; 1805958.29, 539809.20; 1806076.05, 538867.10; 1804427.38, 538631.58.

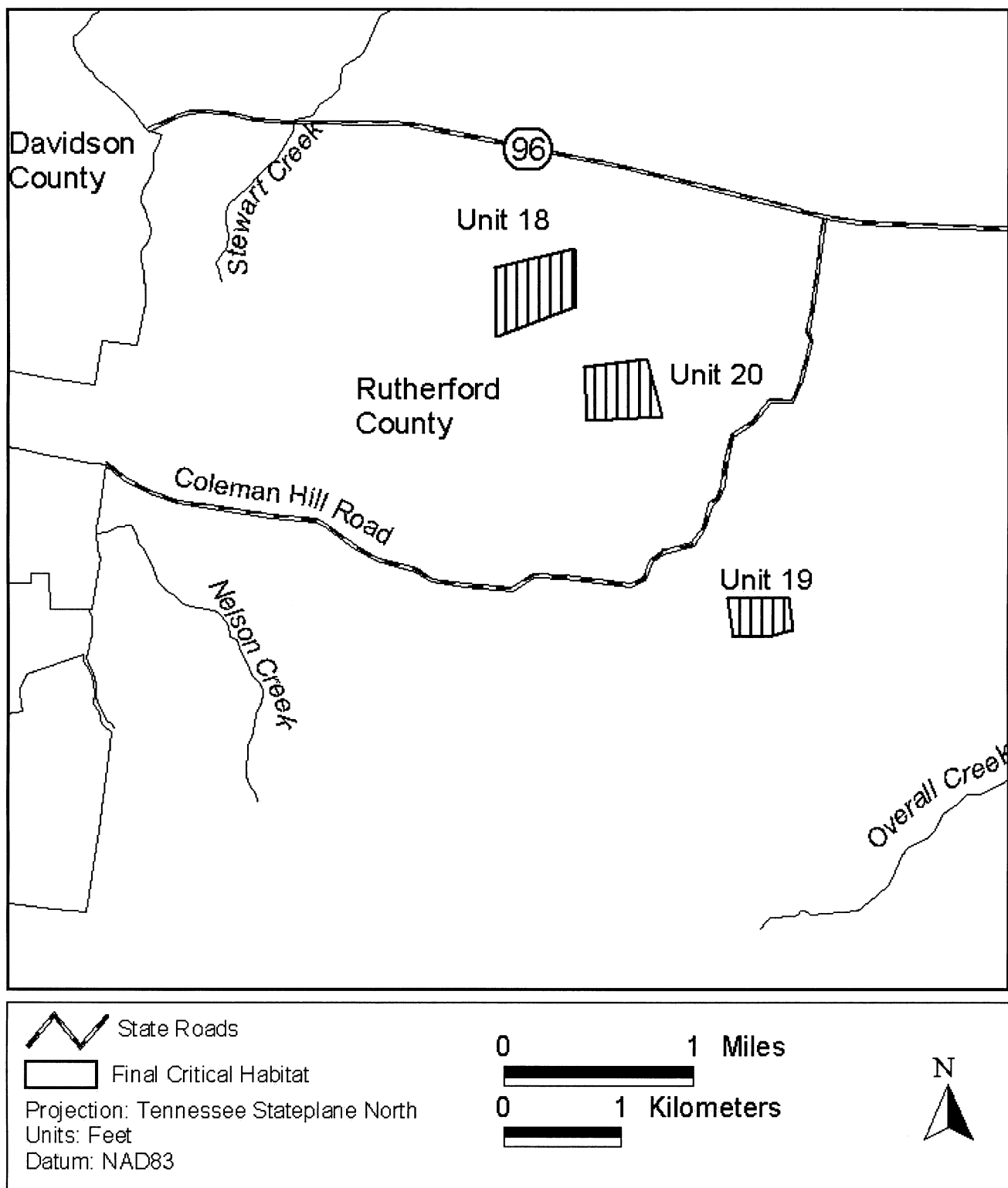
(24) Unit 20: Indian Mountain, Rutherford County, Tennessee.

(i) From USGS 1:24,000 quadrangle Rockvale, Tennessee; land bounded by

the following Tennessee State Plane / NAD83 (Feet) coordinates (E,N): 1800305.71, 546168.35; 1802111.40, 546443.12; 1802543.19, 544794.46; 1800423.48, 544676.69.

(ii) Map 9—Units 18, 19, and 20, follows:

Map 9 - Units 18, 19 and 20: critical habitat for Braun's rock-cress in Tennessee.



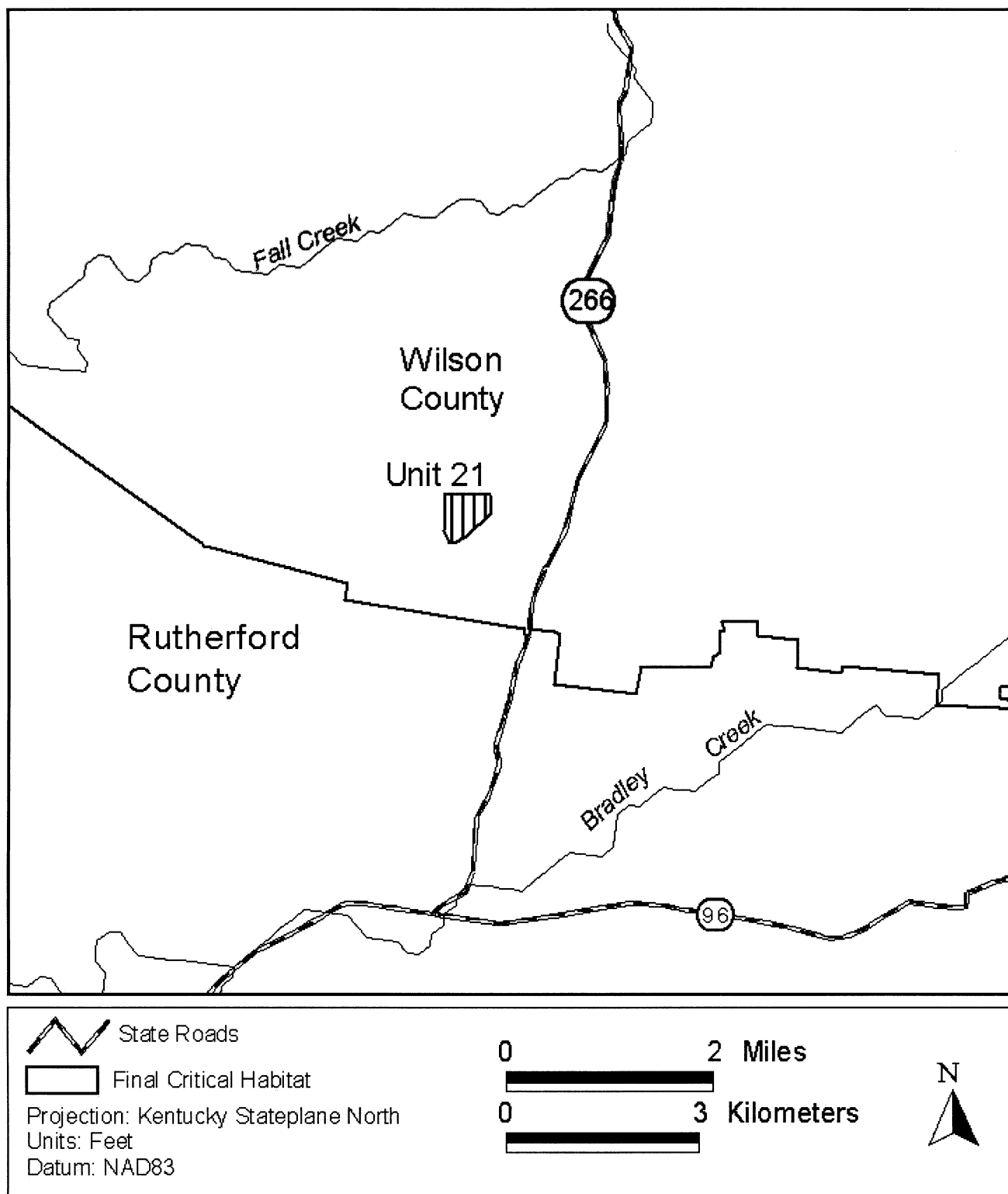
(25) Unit 21: Grandfather Knob,
Wilson County, Tennessee.

(i) From USGS 1:24,000 quadrangle
Lascassas, Tennessee; land bounded by

the following Tennessee State Plane /
NAD83 (Feet) coordinates (E,N):

1888463.64, 602182.29; 1890759.35,	599638.40; 188670.46, 599638.40;
602182.29; 1890842.07, 601189.55;	1888401.59, 600300.23.
1889518.42, 599969.31; 1888877.28,	(ii) Map 10—Unit 21, follows:

Map 10 - Unit 21: critical habitat for Braun's rock-cress in Tennessee.



(26) Unit 22: Versailles Knob,
Rutherford County, Tennessee.

(i) From USGS 1:24,000 quadrangle
Rover, Tennessee; land bounded by the

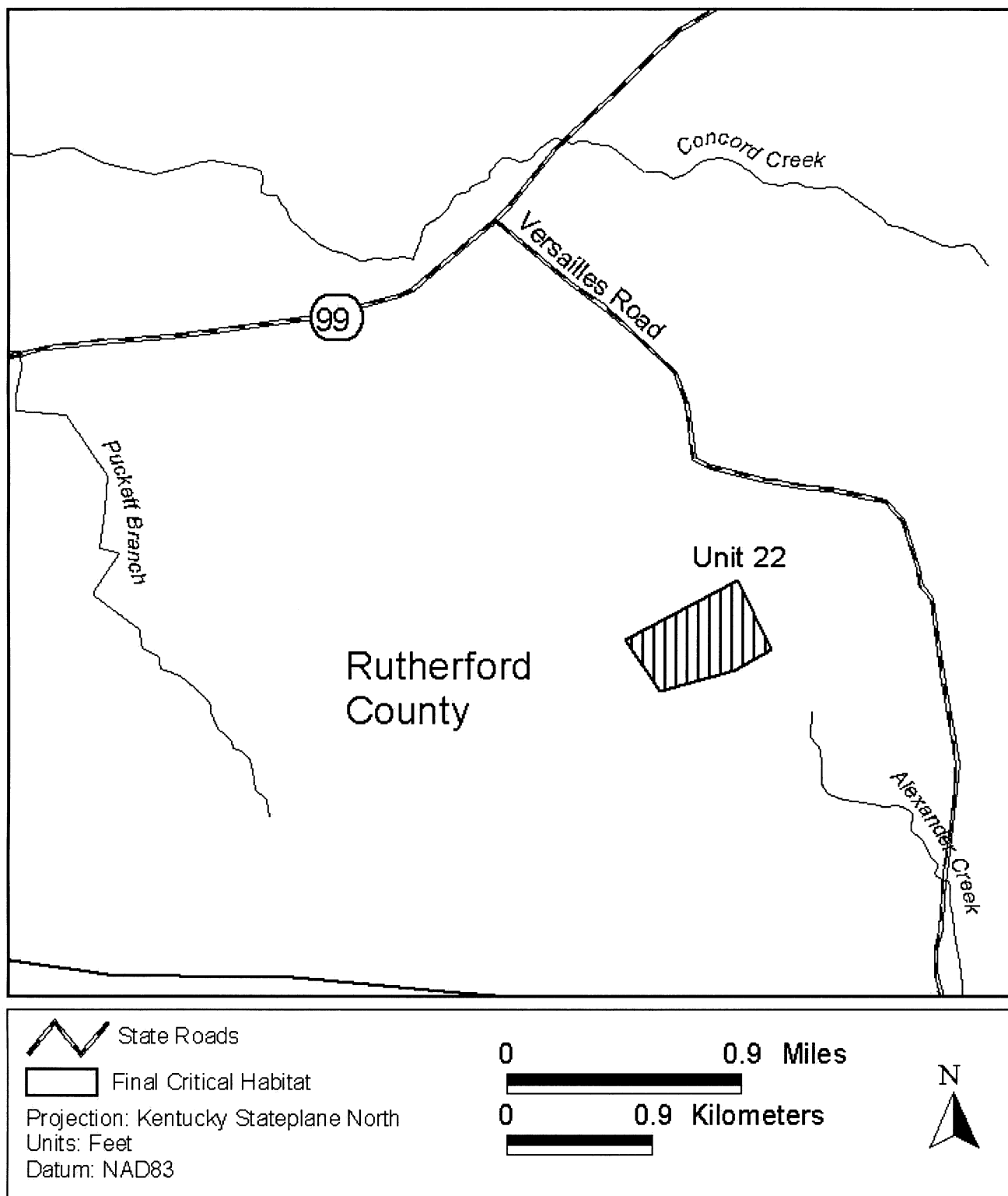
following Tennessee State Plane /
NAD83 (Feet) coordinates (E,N):

1806361.65, 504515.38; 1808616.22,
505711.83; 1809308.27, 504327.51;

1808517.23, 503872.66; 1807034.03,
503477.14.

(ii) Map 11—Unit 22, follows:

Map 11 - Unit 22: critical habitat for Braun's rock-cress in Tennessee.



Dated: May 26, 2004.

Craig Manson,

*Assistant Secretary for Fish and Wildlife and
Parks.*

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BILLING CODE 4310-55-C