DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R2–ES–2013–0027, 4500030113]

RIN 1018–AZ49

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for Texas Golden Gladecress and Neches River Rose-Mallow

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), designate critical habitat for two Texas plants, *Leavenworthia texana* (Texas golden gladecress) and *Hibiscus dasycalyx* (Neches River rose-mallow), under the Endangered Species Act of 1973. Critical habitat for the Texas golden gladecress is located in Sabine and San Augustine Counties, Texas, and for the Neches River rose-mallow in Nacogdoches, Houston, Trinity, Cherokee, and Harrison Counties, Texas. The effect of this regulation is to designate critical habitat for these two East Texas plants under the Endangered Species Act.

DATES: This rule becomes effective on October 11, 2013.

ADDRESSES: This final rule and other supplementary information are available on the Internet at *http://www.regulations.gov* (Docket No. FWS–R2–ES–2013–0027) and also at *http://www.fws.gov/southwest/es/ElectronicLibrary/ElectronicLibrary_Main.cfm.* These documents are also available for public inspection, by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Texas Coastal Ecological Services Field Office, 6300 Ocean Drive, USFWS Unit 5837, Corpus Christi, TX 78412–5837; telephone 361–994–9005; facsimile 361–994–8262.

The coordinates or plot points or both from which the critical habitat maps are generated are included in the administrative record for this rulemaking and are available at *http://www.fws.gov/southwest/es/ElectronicLibrary/ElectronicLibrary_Main.cfm,* at *http://www.regulations.gov* at Docket No. FWS–R2–ES–2013–0027, and at the Texas Coastal Ecological Services Field Office, Corpus Christi (see **FOR FURTHER INFORMATION CONTACT**).

FOR FURTHER INFORMATION CONTACT: Edith Erfling, Field Supervisor, U.S. Fish and Wildlife Service, Texas Coastal Ecological Services Field Office (see **ADDRESSES**). Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Executive Summary

Why we need to publish a rule. On September 11, 2012 (77 FR 55968), we published a proposed rule to designate critical habitat for *Leavenworthia texana* (Texas golden gladecress) and *Hibiscus dasycalyx* (Neches River rose-mallow). In this rule, we are finalizing our designation for critical habitat under the Endangered Species Act (Act). The Act requires that a final rule be published in order to designate critical habitat for endangered and threatened wildlife to provide protections under the Act.

Elsewhere in today's **Federal Register**, we are finalizing determination of listing *Leavenworthia texana* (Texas golden gladecress) as an endangered species and *Hibiscus dasycalyx* (Neches River rose-mallow) as a threatened species under the Act. The final listing determination rule and supporting documents will publish under Docket No. FWS–R2–ES–2012–0064, and can also be found at the above locations.

The critical habitat areas we are designating in this rule constitute our current best assessment of the areas that meet the definition of critical habitat for the Texas golden gladecress and the Neches River rose-mallow. Here we are designating:

- Approximately 1,353 ac (547 ha) of critical habitat for the Texas golden gladecress in Sabine and San Augustine Counties; and
- Approximately 166.5 ac (67.4 ha) of critical habitat for the Neches River rose-mallow in Cherokee, Houston, Trinity, Harrison, and Nacogdoches Counties, Texas.

This rule consists of: A final rule for designation of critical habitat for the Texas golden gladecress and the Neches River rose-mallow. The Texas golden gladecress and the Neches River rose-mallow have been listed under the Act. This rule designates critical habitat necessary for the conservation of the species.

We have prepared an economic analysis of the designation of critical habitat. In order to consider economic impacts, we have prepared an analysis of the economic impacts of the critical habitat designations and related factors. We announced the availability of the draft economic analysis (DEA) in the **Federal Register** on April 16, 2013 (78 FR 22506), allowing the public to provide comments on our analysis. We have incorporated the comments and have completed the final economic analysis (FEA) concurrently with this final determination.

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

Previous Federal Actions

All previous Federal actions are described in the final rule to list the Texas golden gladecress as an endangered species and Neches River rose-mallow as a threatened species under the Act published elsewhere in today's **Federal Register**.

Background

This document contains final rules to designate critical habitat for the Texas golden gladecress and Neches River rose-mallow. The document is structured to address the taxa separately under each of the sectional headings that follow.

Summary of Comments and Recommendations

We requested written comments from the public on the proposed designation of critical habitat for the Texas golden gladecress and Neches River rose-mallow during two comment periods. The first comment period associated with the publication of the proposed rule (77 FR 55968) opened on September 11, 2012, and closed on November 13, 2012. We also requested comments on the proposed critical habitat designation and associated draft economic analysis during a comment period that opened April 16, 2013, and closed on May 16, 2013 (78 FR 22506). We received requests for a public hearing, and one was held on May 1, 2013. We also contacted appropriate Federal, State, and local agencies; scientific organizations; and other interested parties and invited them to comment on the proposed rule and draft economic analysis during these comment periods.

During the first comment period, we received 15 comment letters directly addressing the proposed critical habitat designation. During the second comment period, we received 22 comment letters addressing the proposed critical habitat designation or the draft economic analysis. During the May 1, 2013, public hearing, five individuals or organizations made comments on the designation of critical habitat for the Texas golden gladecress and Neches River rose-mallow. All substantive information provided during comment periods has either been incorporated directly into this final determination or addressed below. Comments received were grouped by submitter's affiliation, whether peer reviewer, State (agencies or officials), or public, relating to the proposed critical habitat designation for Texas golden gladecress and Neches River rose-mallow. All are addressed in the following summary and incorporated into the final rule as appropriate.

Peer Review

In accordance with our peer review policy published on July 1, 1994 (59 FR 34270), we solicited expert opinions from six knowledgeable individuals with scientific expertise that included familiarity with the species, the geographic region in which the species occurs, and conservation biology principles and characteristics of their habitats, including the unique geology; as well as land uses common to the region that may bear on the threats to both species. We received responses from four of the peer reviewers.

We reviewed all comments received from the peer reviewers for substantive issues and new information regarding listing of the Texas golden gladecress and Neches River rose-mallow. The peer reviewers generally agreed with portions of our assessment, including the threats analysis, and most of our conclusions, although they pointed out areas where additional research would refine our understanding of the two species' habitat requirements and range. Two peer reviewers agreed with our conclusions that habitat loss and degradation associated with human activities (including energy exploration and production, quarrying, and pine tree plantings in close proximity to glades) as well as the overgrowth of both species' habitats by invading woody and weedy native and nonnative plants, were adversely affecting the Texas golden gladecress and the Neches River rose-mallow. One peer reviewer also agreed that the Neches River rose-mallow has insufficient regulatory protections. One peer reviewer believed that critical habitat designation for the Texas golden gladecress would be an improvement to conservation efforts for this species and an associated endangered plant. The peer reviewers pointed out additional information, clarifications, and suggestions for future research that would inform future surveys to refine the geographic range, and help with management and recovery efforts. Peer reviewer comments are addressed in the following summary and incorporated into the final rule as appropriate.

Peer Reviewer Comments

(1) *Comment:* Additional outreach to private landowners with potential critical habitat is recommended, prior to the determination. It is essential to make each landowner aware of the issues, regardless of their interest.

Our response: With regard to landowners, prior to publication of the proposed rule, in September 2011, we sent letters to 107 entities, including Federal and State elected officials; representatives of Texas Parks and Wildlife Department (TPWD), Texas Commission on Environmental Quality, Texas Department of Transportation (TXDOT), Texas General Land Office, Texas Forest Service, Texas Department of Agriculture, Natural Resources Conservation Service (NRCS), U.S. Army Corps of Engineers, U.S. Forest Service, universities, conservation organizations and other non-governmental organizations; and representatives of timber and forestry industries and forestry services, informing them of our need to gather and analyze the best available information for our use in developing a proposed rule to list and designate critical habitat for both species. From that point on, we added landowner contacts that were given to us to our notification list. For some sites, land ownership was clarified in file records or through communications with representatives of other organizations.

Furthermore, for the Texas golden gladecress, we partnered with TPWD in March 2012 to host a Weches Glades workshop and field tour in San Augustine, to which we invited four private landowners (two with Texas golden gladecress and two with *Lesquerella pallida* (white bladderpod), an associated endangered plant, populations on their property). As preparation for the field tour, permission to access sites was obtained from these four landowners. The purpose of the workshop and field tour was to acquaint landowners, and agency representatives that work with private landowners, with the glade and outcrop habitats, rare plants, and the Act listing process and implications, particularly as it applies to plants. In addition to these landowners, 24 other individuals were invited to the workshop, including two San Augustine County commissioners, the Mayor of San Augustine, the Chairman of the local Soil and Water Conservation District, NRCS, Texas Forest Service, a private forestry services company, and a mining company. Of the 28 invitees, 17 attended the workshop and field tour.

As additional outreach to Neches River rose-mallow landowners, land managers, and agencies that work with them, TPWD organized a workshop and two-day field trip in August, 2012. The workshop also furnished an opportunity to explain the listing process and its applicability for plants. A pre-field trip workshop allowed information to be presented to 45 attendees that included the Texas Land Conservancy (owner of the Neches River rose-mallow Lovelady site) and TXDOT (owner of the right-of-way (ROW) sites along state highway (SH) 204 and 94).

On September 11, 2012, we sent letters to 164 entities notifying them of the proposed rule publication in the **Federal Register**, including Federal and State elected officials; local elected officials (including county judges within the range of the species); representatives of TPWD, Texas Commission on Environmental Quality, TXDOT, Texas General Land Office, Texas Forest Service, Texas Department of Agriculture, NRCS, U.S. Army Corps of Engineers, U.S. Forest Service, universities, conservation organizations and other non-governmental organizations; and representatives of timber and forestry industries and forestry services.

On April 16, 2013, the day of **Federal Register** publication of the notice of availability of the draft economic analysis and reopening of the proposal to list the plants and designate critical habitat, we emailed letters to 157 people including representatives of agriculture, timber, oil and gas, and mining industries; local elected officials from the counties in question; agency staff that work with landowners, and those landowners for whom we had email addresses. Within 2 days of publication in the **Federal Register**, we also sent 208 letters by mail to state and local elected officials (including all county judges and commissioners); industry representatives; academics; conservation organizations; State, Federal, and local agencies: And all individual landowners who had been identified through the past 2 years since

our initial information solicitation in September 2011.

(2) *Comment:* Two peer reviewers commented on the critical habitat maps as they appear in the proposed rule. Specifically for the Neches River rose-mallow's critical habitat unit 1 it seems that the map does not depict critical habitat within the State highway right-of-way (SH ROW); however, Table 8 specifically states that 1.1 ac (0.45 ha) of critical habitat is present within the SH ROW. There might be confusion between landowners and other interested parties about whether or not their property is within critical habitat because of the map resolution and detail.

Our Response: In the case of the rose-mallow's critical habitat unit 1, the designated critical habitat includes both SH ROW and private land. For both species, the intended use of the critical habitat unit maps is to identify the general areas where the Texas golden gladecress' or the Neches River rose-mallow's critical habitat is designated. Although we have tried to include landmarks, such as labeled roads, to help readers find the location of the critical habitat units, the scale of the maps is such that the level of detail and resolution may not help in identifying individual land ownership. The coordinates or plot points or both on which each map is based are available to the public at the Service's internet site, at *http://www.fws.gov/southwest/es/ElectronicLibrary/ElectronicLibrary_Main.cfm, http://www.regulations.gov* at Docket No. FWS–R2–ES–2013–0027 and at the field office responsible for this designation.

(3) *Comment:* One peer reviewer thought that critical habitat designation for the Texas golden gladecress was a good idea ''if it allows the exclusion of some Weches outcrops that are unsuitable . . . and is done on a fine scale . . . of blocks, say one mile in diameter''. This reviewer believed this approach would ensure that economic activity based on mining is not adversely impacted. He indicated his opinion that Weches mining could be done in such a way as to allow both activities to continue.

Our response: Although it is unclear if the peer reviewer's comment about the size of critical habitat blocks (one mile in diameter) has any scientific basis, we are interpreting him to mean that relatively small areas of critical habitat could be included or excluded from designation to allow for quarrying outside of the designated critical habitat. We are required to designate critical habitat for geographical areas that are occupied by the species at the time of listing, which contain the physical or biological features essential to the conservation of the species and which may require special management considerations or protection. Based on this requirement the Service designated critical habitat for the species based on the presence of the features essential to its conservation and its tight association with the Weches Formation and associated soils (Singhurst 2011a, pers. comm.). To determine the boundaries of critical habitat units we used a geographic information system (GIS) to overlay the appropriate soil maps over the occupied areas. The perimeter of Texas golden gladecress critical habitat was mapped by following the borders of the appropriate U.S. Department of Agriculture soil layers (see ''Mapping Texas Golden Gladecress Critical Habitat'' section of this final rule).

Section 7 of the Act requires Federal agencies, in consultation with the Service, to ensure that any action authorized, funded, or carried out by a Federal agency (thereby constituting a Federal nexus) is not likely to result in the destruction or adverse modification of critical habitat. If there is not a Federal nexus for a given action, then critical habitat designation, including on private lands, does not restrict any actions that destroy or adversely modify critical habitat. We have determined that quarrying of glauconite in Texas does not require Federal permits or have any other Federal nexus, therefore section 7 consultation is not expected for quarrying activities. If a person wishes to develop private land, with no Federal nexus, and in accordance with State law, then destroying or adversely modifying critical habitat does not violate the Act. The Service can and will provide technical assistance to mining (quarrying) companies to minimize and avoid impacts to the Texas golden gladecress critical habitat if such assistance is requested.

(4) *Comment:* In the case of the Neches River rose-mallow, a peer reviewer agreed that there is not a mechanism for protection other than perhaps existing wetland regulations under the U.S. Army Corps of Engineers.

Our Response: Section 7 consultation for U.S. Army Corps of Engineers-issued permits is one avenue regulating impacts to the Neches River rose-mallow. Additionally, four of the 11 extant populations of Neches River rose-mallow are found on the Davy Crockett NF where the U.S. Forest Service considers the Neches River rose-mallow as a Regional Forester's Sensitive Species and its habitat is managed under A Revised Land and Resource Management Plan for National Forests and Grasslands in Texas. This provides some level of species and habitat protection; however, their plan is not specific. Section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out (i.e., projects with a Federal nexus) are not likely to jeopardize the continued existence of the species or destroy or adversely modify its critical habitat. If a person wishes to develop private land with no Federal nexus, in accordance with State law, then the potential destruction, damage, or movement of endangered or threatened plants does not violate the Act.

(5) *Comment:* In the case of the Texas golden gladecress, the Service needs a better understanding of the variability of the Weches Formation across the numerous counties which the formation underlies when determining what may constitute the physical or biological features for the species and where these features are currently found. The Service should look at variations in calcium availability and long-term pH changes across the formation in order to identify more potential sites at which to survey for the Texas golden gladecress.

Our response: We recognize that variability of Weches outcrops does exist across the Weches Formation throughout the numerous counties under which it is found. We agree that a better characterization of the geology and soils underlying known Texas golden gladecress populations could provide useful information. However, there are likely other factors characterizing individual outcrop sites that support the Texas golden gladecress that may also be important. Further, the Service must use the best scientific and commercial data available at the time of critical habitat determination. Determining the chemical components of the geological formations beneath known glade sites is not a feasible accomplishment within the timeframe we have to publish our final determination. This research would be addressed in recovery planning. For purposes of this final rule designating critical habitat, we used the more general Weches Formation outcrops descriptions, and we more specifically relied on the geologic and soils information available from one known Texas golden gladecress population site, as well as from one white bladderpod site. Please see the ''Criteria Used To Identify Critical Habitat for Texas Golden Gladecress'' and ''Mapping Texas Golden Gladecress Critical Habitat'' sections for the Texas golden gladecress in this final rule for more information.

(6) *Comment:* Clarification on exclusions of critical habitat within SH ROWs was requested by a peer reviewer and the State. There is a contradiction within the proposed rule regarding critical habitat in SH ROWs for the Neches River rose-mallow versus the Texas golden gladecress. The proposed rule states that, for Neches River rose-mallow, ROW would be excluded for the area designated as critical habitat, but ROW is not considered excluded from critical habitat units for the Texas golden gladecress. For Neches River rose-mallow critical habitat unit 1, the map in the proposed rule does not seem to show critical habitat within the SH ROW; however, Table 8 specifically states that 1.1 ac (0.45 ha) of critical habitat is present within the SH ROW.

Our Response: Language in the proposed rule indicating that Neches River rose-mallow's critical habitat excluded SH ROW was an error and has been corrected in this determination. Extant populations of both Neches River rose-mallow and Texas golden gladecress occur in SH ROWs, so the ROWs at these sites would be considered occupied habitat.

(7) *Comment:* A peer reviewer suggested that the Service consider excluding the ''filled'' portions of the TXDOT ROWs within the critical habitat units. In low areas such as floodplains, valleys, etc., TXDOT constructs the paved surface of the road on large amounts of ''fill'' (Adams 2013a, pers. comm.). Fill consists of clay soil, which is not suitable habitat for the either plant. This fill material is often brought to a site to elevate the road bed. These areas are then revegetated to reduce erosion. The size of a fill area is dependent on the existing slope and width of the roadway or bridge (Adams 2013a, pers. comm.). This reviewer has never witnessed the Neches River rose-mallow or the white bladderbod (habitat associate of the Texas golden gladecress) growing on the front slope (i.e., the area immediately adjacent to the road) of a TXDOT ROW.

Our Response: Portions of both species critical habitat are within TXDOT ROWs. Two Texas golden gladecress and three Neches River rose-mallow sites extend into ROWs managed by TXDOT. The Service agrees that neither species grows on fill material or immediately adjacent to the road edge. Given the Texas golden gladecress' specialized habitat requirements, and the Neches River rose-mallow requirement of hydric alluvial soils, it is unlikely that either would survive on, or spread onto, areas consisting of fill material used by the TXDOT. Both species grow farther downslope within the ROW where suitable soils still exist. The ROW immediately adjacent to the road, containing the fill material lacks the primary constituent elements for these species. The unfilled portions of the ROWs, where the plants are able to persist, do retain the primary constituent elements that support the life-history processes of the species, while the built-up, paved and filled portions of the roadway do not. Based on this information, the Service includes the fill area along roadways as developed areas that are not included in critical habitat designation because these areas do not meet the definition of critical habitat for either species.

(8) *Comment:* There are ongoing service improvements, including installation of communication, electric power, water and sewer lines, taking place in rural areas, some of which occur in highway ROWs and have potential to occur in Texas golden gladecress critical habitat (Walker 2012, pers. comm.).

Our Response: We acknowledge that the installation of new service lines (e.g., communication, water, domestic gas, and power lines) could potentially occur in more rural areas and these activities typically occur in road ROWs, such as where the Texas golden gladecress occurs. There are two known Texas golden gladecress sites that extend into road ROWs as well as three Neches River rose-mallow sites.

Section 7 of the Act requires Federal agencies, in consultation with the Service, to ensure that any action authorized, funded, or carried out by a Federal agency (thereby constituting a Federal nexus) is not likely to result in the destruction or adverse modification of critical habitat. If there is not a Federal nexus for a given action, then critical habitat designation, including on private lands, does not restrict any actions that destroy or adversely modify critical habitat. If a person wishes to develop private land, with no Federal nexus, and in accordance with State law, then destroying or adversely modifying critical habitat does not violate the Act. The Service can and will provide technical assistance to minimize and avoid impacts to the Texas golden gladecress critical habitat if such assistance is requested.

Comments From States

Section 4(i) of the Act states, ''the Secretary shall submit to the State agency a written justification for his failure to adopt regulations consistent with the agency's comments or petition.'' Comments received from the State regarding the proposal to designate critical habitat for the Texas golden gladecress and Neches River rose-mallow are addressed below.

(9) *Comment:* One state commenter and two public commenters noted that the Neches River rose-mallow has not been seen at some sites for over a decade. Of the 11 sites considered to be currently occupied by the Neches River rose-mallow, three have not been observed in more than 10 years. The Camp Olympia site has not been relocated since 1978 despite surveys in 1992 and 1993 (Warnock 1995, p. 6). In fact the site was listed as extirpated or historical by Warnock (1995). The Champion site was last observed in 2001. The site has apparently been logged. This site should be revisited before considering it currently occupied. Additionally, one commenter pointed out that the Harrison County population has not been relocated since 1980, perhaps owing to its imprecise location (ca. 5 miles (mi) (8.05 kilometers (km) south of Hallsville) and suggested that it seems difficult to know with any certainty that this site is currently occupied. Using aerial photography to delineate a 20-ac (8.1-ha) site based on a previous interpretation of a vague location does not lead to a precise location on which to base critical habitat. The Service cannot assume that the habitat has remained intact when the location of the occupied site is unverifiable.

Our Response: We consider the three sites referenced by the commenter (Harrison County, Champion, and Camp Olympia) to be occupied by the Neches River rose-mallow for the purposes of critical habitat. Two voucher specimens were collected from Camp Olympia in 1977 by E. Marsh and in 1978 by E. Marsh and C. McLeod; both were identified as the Neches River rose-mallow (TXNDD 2012, pp. 58–59), confirming the species occurrence at this site. The location information from these plant specimens collected in 1977 was used by Warnock (1995) to relocate the population. In Warnock's status report, he described the location of the site, ''beyond the end of Farm-to-Market Road 3188, 200 feet from the water's edge along Lake Livingston'' and provided the latitude and longitude of the site as well (1995, p. 6). Attempts were made on foot in 1992 and by canoe in 1993 to relocate this population (Warnock 1995, p. 6), but without success. However, there are several reasons why the plants may not have been located. Dense vegetation along the shoreline could have made the plant from that distance not easily discernible. Also, the nature of the Neches River rose-mallow habitat,

especially at sites with fluctuating water levels (like oxbows, sloughs, sand bars of river systems), is such that the zone in which the plants are located could shift or the plants perhaps be killed back when conditions are too wet or too dry, but the plants may then re-establish from seed when conditions are suitable (Warnock 1995, p. 6).

The Champion Site was first observed in 1996 with several hundred plants, and revisited in 1997, 1998, and 2001. In 1997, cuttings from plants and seeds were collected and given to Mercer Arboretum. The plants that were observed in 1998 did not have reproductive structures present but were identified as likely Neches River rose-mallow. In 2001, researchers found 300–400 plants. Logging at this site has occurred in the recent past but there is not information to show that the Neches River rose-mallow is no longer present at this site. The seed bank viability of this species is still not clearly understood, but there is potential that even if above-ground plant parts were removed, the seed bank may still be intact. Further, since this species requires open habitat, the removal of canopy species could benefit the Neches River rose-mallow by providing more suitable habitat.

For the Harrison Site, we used the best scientific and commercial data available at the time the proposed rule was published. A voucher specimen was collected in 1980 and was confirmed in 2011 by TPWD and Stephen F. Austin State University (SFASU) researchers as *Hibiscus dasycalyx.* Because we received new information from a commenter that this critical habitat unit was in part an operating lignite mine, known as South Hallsville No. 1 (Texas Mining and Reclamation Association 2013, p. 3), we made inquiries with the Railroad Commission of Texas (RRC) about locations and status of mines in Harrison County. The RRC confirmed that only two mines were in operational status in Harrison County, one of which included the South Hallsville mine (referred to by the commenter) but that this mine was located northeast of the critical habitat Unit 2. The RRC provided new information that the critical habitat unit was a sedimentation pond of a reclaimed (nonfunctional) lignite mine; inactive since the late 1990's. Because the site is a sedimentation pond, and not an area that is being actively excavated for extraction of lignite, the wetland edge associated with the pond may still support the Neches River rose-mallow. The best available scientific and commercial data does not indicate that the Harrison County Site has been altered to the point that the species has been eliminated from this site.

Regarding delineation of critical habitat at these sites, we used satellite imagery from Google Earth to compare available habitat images from 1995 and 2011 to look for habitat alteration that would make these sites unsuitable for the Neches River rose-mallow. It did not appear that Neches River rose-mallow habitat had been altered to the point that the areas would not contain the physical or biological features essential to the conservation of the species (see the ''Final Critical Habitat Designation'' for the Neches River Rose-mallow section of this final rule for more information).

The Act requires that we use the best scientific and commercial information available regardless of the age of the information. The criteria for critical habitat were evaluated using the best scientific and commercial data available including plant surveys that occurred, in some cases, more than 20 years ago. Some areas have not been revisited; however, absence of evidence does not equate to evidence that the plant has been extirpated from an area. For example, SH 230 ROW had not been seen since 2002, and the site was considered extirpated. However, during this comment period we received information that the Neches River rose-mallow was observed in 2012 by a graduate student from SFASU (Melinchuk 2012, p. 3). This is an example of the potential that this species may go undetected for a period of time due to the biology of the species. We also relied on the existence of voucher specimens to help confirm the species presence at these sites in the past. It is often the case that biological information may be lacking for rare species; however, we reviewed all available information and incorporated it into our final rule. We used the best scientific and commercial data available in assessing occupancy, recognizing the limitations of some of the information. We acknowledge that additional surveys and continued monitoring of existing plots would be valuable and should be considered as a recovery action for these species. The best scientific and commercial data available suggest the site is still occupied by the Neches River rose-mallow and contain at least one of the identified physical and biological features essential to the conservation of the species.

The extent to which the occupancy of this unit is in question, we have alternatively designated Units 2, 9, and 11 under section 3(5)(A)(ii) of the Act because we consider them to be essential for the conservation of the Neches River rose-mallow, regardless of occupancy data. Including these units in the designation of critical habitat for the Neches River rose-mallow aligns with the conservation strategy for this species.

(10) *Comment:* One state commenter, in addition to two public commenters, expressed their belief that these species have not been fully studied. They indicated that there are significant concerns with the quality of data and analysis the Service used for its determination. They believe that the proposal is based largely on inconclusive reports and vast speculation about operations thought to affect habitats, existing regulatory mechanisms, conservation efforts, species populations, and potential threats that fail to provide any sound scientific foundation on which to justify the listing and critical habitat designation of these species.

Our Response: It is often the case that biological information may be lacking for rare species; however, we considered the best available scientific and commercial information and incorporated it into our final rule. We sought comments from independent peer reviewers to ensure that our designation is based on scientifically sound data, assumptions, and analysis. We did not receive information that the science we used was unsound. We solicited information from the general public, non-governmental conservation organizations, State and Federal agencies that are familiar with the species and their habitats in East Texas, academic institutions, and groups and individuals that might have information that would contribute to an update of our knowledge of the Texas golden gladecress and the Neches River rose-mallow, as well as the activities and natural processes that might be contributing to the decline of either species.

We used information garnered from this solicitation in addition to information in the files of the Service, TPWD, the Texas Natural Diversity Database's (TXNDD's) Elements of Occurrence records for both species, published journal articles, newspaper and magazine articles, status reports contracted by the Service and TPWD, reports from site visits, and telephone and electronic mail conversations with knowledgeable individuals. We also used satellite and aerial imagery to ascertain changes in land cover and land use at historical population sites and to determine whether the presence of primary constituent elements for each species were still in place. Additionally,

we used the results of population monitoring from site visits to look at abundance, and if enough information was available, to get an idea of trends in the populations. In October 2011, we also made field trips to known sites where we were granted access, to verify land uses and contribute to the veracity of our threats analysis. In March of 2012, we helped to organize and carry out a workshop and field tour of Texas golden gladecress sites for the purposes of assisting landowners and agricultural agencies with becoming familiar with the species and its habitat. We also revisited accessible Texas golden gladecress sites. In August 2012, we attended a Neches River rose-mallow workshop and field tour conducted by TPWD and revisited Neches River rose-mallow population sites. We used the best scientific and commercial information available in assessing population status, recognizing the limitations of some of the information.

(11) *Comment:* The critical habitat designations will have a negative impact on agricultural-based economies in rural counties in their district, including raising of cattle and forage, poultry, timber, and row crops.

Our response: As discussed in section 4.7 of the draft economic analysis, for activities such as agriculture, husbandry, and forestry, a Federal nexus may result from technical assistance to private landowners from the U.S. Department of Agriculture's NRCS. In such instances, consultation regarding potential effects of the activities on critical habitat would occur. Following discussions with the NRCS, it was determined that the involvement of the NRCS in projects within the critical habitat designation within the timeframe of the study is unlikely. For this reason, consultation is not expected to occur, and the draft economic analysis does not anticipate critical habitat designation to affect these activities.

As stated in the proposed rule, the designation of critical habitat does not impose a legally binding duty on non-Federal Government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency.

As discussed in the draft economic analysis, the designation of critical habitat for the Texas golden gladecress is likely to result in relatively minor administrative impacts, with minimal project modifications likely to result from the designation of critical habitat. All incremental costs are administrative in nature and result from the consideration of adverse modification in section 7 consultation under the Act. Only those projects with a federal nexus would require section 7 consultations with the Service and then it is the responsibility of the federal action agency to consult with the Service, not the private individual or company. Further, all units are occupied by the plant and will require consultation regardless of the designation of critical habitat. In addition, project modifications necessary to avoid adverse modification of critical habitat are indistinguishable from those necessary to avoid jeopardizing the species (see the Service's reasoning in the economic analysis, Appendix B).

(12) *Comment:* One state commenter noted that he was unable to replicate the results presented in Exhibit 4–3 using the formulae presented in Exhibit 2–4.

Our response: The results of the analysis follow from the formulae presented. The cost estimates in the draft economic analysis exhibits are presented as rounded numbers (rounded to two significant digits) but were calculated based on unrounded numbers.

(13) *Comment:* One state comment on the draft economic analysis inquired why the annualized values are identical for both the 3 percent and 7 percent discount rate calculations.

Our response: The annualized value effectively illustrates the economic impact as a stream of payments in equivalent annual payments over a set period of time. If the costs of an activity are expected to be incurred equivalently over the 20-year period of the analysis, the annualized value under any rate will be the annual cost of the activity. For those critical habitat units where the undiscounted calculated costs over the 20-year period are equal in each year, the annualized values are identical for both the 3 percent and 7 percent discount rate. Additionally, if the undiscounted annual costs are equivalent but occur in some pattern over the 20-year period (i.e., they are incurred every other year), the difference in annualized values between discount rates will be very minor. In these cases, with rounding applied, the values are identical in the results table.

(14) *Comment:* One state comment questioned the selection of the discount rate. The comment noted that the Office of Management and Budget's regulatory impact analysis primer includes guidance on the use of a lower discount rate (1 percent to 3 percent) when intergenerational effects are of concern.

Our response: The discount rates of three and seven percent used in the economic analysis are in accordance with the Office of Management and Budget's guidance on the conduct of regulatory impact analysis. The use of a lower discount rate, such as one percent, may be applicable when intergenerational benefits or costs are expected to accrue from regulation. With a 20-year timeframe, we do not consider this analysis to be capturing intergenerational impacts. In the intergenerational discounting literature, a minimum time horizon for considering intergenerational effects is generally 50 years. However, in response to a request received in this comment, we performed a sensitivity analysis using the one percent discount rate. The total present value cost employing a one percent discount rate is $690,000, approximately 13 percent greater than the total, present value cost determined using a three percent discount rate and 35 percent greater than the cost determined using a seven percent discount rate.

(15) *Comment:* Benefits should have been quantified in the economic analysis to allow for a direct comparison between monetized costs and benefits. Further, the unavailability of existing studies specific to the species considered in the analysis should not preclude the estimation and quantification of benefits.

Our response: As described in Chapter 5 of the draft economic analysis, monetization of benefits requires information on how the incremental conservation efforts described in the report affect the recovery probability of either the Texas golden gladecress or Neches River rose-mallow and findings regarding the public's willingness-to-pay for the incremental change in recovery for these species, or similar species. No such studies currently exist and such primary research is outside the scope of the analysis.

(16) *Comment:* One state comment suggested that while the study area is defined in the draft economic analysis to be ''all lands proposed for critical habitat designation,'' the monetization of economic impact should be across the entire range of the species.

Our response: Because the draft economic analysis quantifies the

incremental impact of critical habitat designation, the geographic scope of the analysis is limited to the area over which the critical habitat rule may affect projects or activities.

(17) *Comment:* Specifically with regard to transportation and utility projects, there are trickle-down costs. Conducting section 7 consultations adds costs to projects and these costs may get passed along to consumers.

Our Response: Section 4.2 of the draft economic analysis evaluates impacts on transportation activities, and detailed discussions with TXDOT informed the quantitative and qualitative assessment of these impacts. Based on expected activities and consultations, the incremental effect of designating critical habitat on transportation projects was found to be modest. Over the 20-year period of the study, we project incremental costs for transportation activities to be $66,000 for the Texas golden gladecress critical habitat and $15,000 for the Neches River rose-mallow habitat. For utility projects, an overall undiscounted cost to the three pertinent electric cooperatives of $25,300 over the 20-year timeframe of the study was calculated and the analysis did not anticipate these costs to influence the utility rates charged to customers (for further discussion see Our Response to Comment 24 below).

Public Comments

(18) *Comment:* One commenter requested clarification regarding lack of access being granted to their site. The Camp Olympia landowner stated that they have been at the site since the 1970's and access has never been requested nor denied. This landowner has also searched his property for Neches River rose-mallow and not found it. Two major hurricanes and a severe drought have caused major habitat alterations including a loss of trees and plants. The commenter believes this unit should not be considered for critical habitat or the species for listing.

Our Response: We stated in the proposed rule that we considered the Camp Olympia site to be an extant population (i.e., occupied). We based this on the best scientific and commercial information available at the time of listing, which was the documented presence of the Neches River rose-mallow at this site based on voucher specimens collected in 1977 and in 1978. The best scientific and commercial information available indicates that the species is likely to persist because the habitat has not been altered such that it would no longer support the species or that the population had been extirpated since 1978. The site has only been visited by a species expert twice since 1978.

Although the site was surveyed by Klips in 1992 and Warnock in 1993 without success, leading Warnock (1995, p. 6) to list the site as extirpated or historical, there is reason to believe that the plants may still be there (See Our Response to Comment 9). In addition to site conditions that can change with fluctuations in water level, resulting in shifting of the plants' location, Warnock's 1993 site survey was conducted from the water (canoe), not from the land, and the presence of the Neches River rose-mallow may have been hidden from view by dense vegetation at the water's edge. The site could have been overgrown, the plant may not have been in bloom at the time of the survey, and environmental factors could have hindered the production of flowers at the time of the survey. Although the landowner referred to changes in habitat conditions at the Camp Olympia site due to hurricanes and drought, using Google Earth satellite imagery to compare available habitat from 1995 and 2011 we could not ascertain habitat alteration that would make sites unsuitable for the Neches River rose-mallow. Consequently, the best scientific and commercial data available is still the 1978 record from the TXNDD and we considered this site to be occupied.

The extent to which the occupancy of this unit is in question, we have alternatively designated Units 2, 9, and 11 under section 3(5)(A)(ii) of the Act because we consider them to be essential for the conservation of the Neches River rose-mallow, regardless of occupancy data. Including these units in the designation of critical habitat for the Neches River rose-mallow aligns with the conservation strategy for this species.

(19) *Comment:* As it currently is drawn, the area being proposed for critical habitat unit 4 (SH 204 ROW or Mud Creek) is only a small portion of a historically much larger piece of Neches River rose-mallow habitat. The site has dwindled over time due to mowing and herbicide practices by private landowners.

Our response: The area not designated as critical habitat does not have an open canopy providing partial to full sun exposure. The Neches River rose-mallow is typically found in an open canopy (Warnock 1995, pp. 11, 13), but plants also grow in partial sun (as is the case at SH 204 ROW). However, sunlight is needed for blooming as the blooming period may only last 1 day (Snow and Spira 1993, p. 160).

(20) *Comment:* One commenter questioned the validity of including the introduced Neches River rose-mallow critical habitat unit at the Mill Creek Gardens, in Nacogdoches County. Although the site may be the only remaining pure site for the Neches River rose-mallow, seedlings and seeds have been used for other reintroduction sites. Also, this site is along an emergency spillway of a dam where the soil is much different than any of the natural populations. Another commenter indicated that the four natural populations of Neches River rose-mallow need protection, but does not believe the remaining seven sites of the Neches River rose-mallow should be designated as critical habitat. The Mill Creek site is in the emergency spillway of an 8-acre lake, and the site bears little resemblance to any natural site, specifically the soil. The only management since 1995 has been annual mowing or an occasional burn.

Our response: For the purpose of designating critical habitat for the Neches River rose-mallow, we included all currently occupied populations sites, as required by section 3(5)(A)(i) of the Act. We defined occupied areas as sites where Neches River rose-mallow had been documented based on the most recent field surveys that were available to us as of 2011, including recent reports and survey information from the Davy Crockett NF, TPWD, TXDOT, and observations by species experts (Warnock 1995, p. 6; Miller 2011, pers. comm.; TXNDD 2012a, entire). Based on this information we determined that there are 11 currently occupied areas for the Neches River rose-mallow in Trinity, Houston, Cherokee, Nacogdoches, and Harrison Counties in East Texas. Although two of these areas have not been verified since the 1980s and mid-1990s, the best scientific and commercial data available did not show these sites to have been modified such that they no longer had the physical or biological features essential for the Neches River rose-mallow, therefore we considered them presently occupied. Populations that were successfully introduced were included with the natural populations because the introduced sites are considered to have at least one of the primary constituent elements required by the species and because the species is still present at the site. The primary constituent elements of the Mill Creek Gardens site include its location within Mill Creek (part of the Angelina River basin), open-canopy habitat with full sun, and the presence at the site of alluvial, hydric soils.

(21) *Comment:* Many comments were received expressing concern about the

negative impact the critical habitat designations (particularly the rose-mallow critical habitat unit 4) may have on the Lake Columbia water supply project in Cherokee County and the future water supply of the region. Most prominently, it was proposed that the costs incurred by the Angelina and Neches River Authority (ANRA) and local communities as a result of the critical habitat designation were either not considered or were estimated to be far lower than ANRA projects for itself.

Our Response: As documented in section 4.5 of the draft economic analysis, water management activities were evaluated for the Neches River rose-mallow. Critical habitat unit 4, located downstream from the proposed reservoir, is considered to be occupied for the purposes of critical habitat. Thus, a consultation with the Army Corps of Engineers is expected to take place regardless of critical habitat designation. In addition, the Service anticipates that critical habitat designation will not generate any requests for project modifications above and beyond what would already be recommended due to the presence of the species. As such, the costs associated with critical habitat for this unit are those incremental administrative costs of considering critical habitat during the consultation. Angelina and Neches River Authority is anticipated to incur $2,080 in costs for the additional consideration of critical habitat as a third party participant during the formal consultation process between the Service and Army Corps of Engineers. The Army Corps of Engineers does not anticipate any other future section 7 consultations for the Neches River rose-mallow within the timeframe of this analysis (Industrial Economics 2013, pp. 4–11).

(22) *Comment:* The threat to the SH 204 ROW site (unit 4) by ''water management strategies'' is speculative. There are no scientific data that demonstrate the level of hydrological change that would impact the Neches River rose-mallow, therefore the Service is speculating about this threat.

Our Response: Some degree of hydrologic change has been seen at most of the Neches River rose-mallow sites, with the exception of some private land sites for which information is lacking. The Neches River rose-mallow likely requires high precipitation and flowing water or flood events to disperse seed (Warnock 1995, p. 20; Scott 1997, p. 8; Reeves 2008, p. 3), and although the Neches River rose-mallow is adapted to persist during dry portions of the year, a complete lack of water can diminish seed production, and affect range expansion and genetic exchange. Since Neches River rose-mallow is so water-dependent, hydrological changes can have significant impacts on the species.

Regarding the SH 204 ROW site (unit 4) in particular, the best scientific and commercial data available suggests that the construction of the Lake Columbia reservoir project will divert downstream water, thereby potentially dewatering the Neches River rose-mallow population site. Project details are still being worked out by involved agencies, therefore, we do not know the amount of water that is projected to remain flowing to this site or if future water management practices or decisions will allow for seasonal flooding of the site. Please reference the ''Hydrological Change'' section of this rule for more information on this project and projected hydrological changes to this and other sites.

(23) *Comment:* The Service did not completely ascertain, or was unwilling to admit to, the total economic impact to rural East Texas counties and the State of Texas in general. Water is a critical issue, and the commenter expressed their belief that the designations could seriously restrict construction of critical water resource projects and possible transport of water through pipelines.

Our Response: The only water supply project brought to the Service's attention was the proposed Lake Columbia project (Industrial Economics 2013, pp. 4–11), which is a water supply reservoir. The Service addressed this project in our proposed rule, final rule, and economic analysis. As we stated in the proposed rule, the designation of critical habitat does not impose a legally binding duty on non-Federal Government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency.

(24) *Comment:* Two electric cooperatives operating in East Texas expressed concern about the designation of critical habitat increasing costs for the utility, which would result in higher electricity rates for local users.

Our Response: The U.S. Department of Agriculture's Rural Utility Service may fund project work undertaken by electric cooperatives. This constitutes a Federal nexus triggering consultation under the Act on these projects that may affect listed species and critical habitats. For each 4-year workplan set forth by the three cooperatives serving the areas in which critical habitat is proposed, we anticipated an informal section 7 consultation will occur. For the Neches River rose-mallow, we assume that the costs of these consultations are related to the presence of the plant and the critical habitat designation will generate only limited administrative effort. For the Texas golden gladecress, we assume that the plant will not be present and therefore the incremental costs associated with critical habitat are both: (1) Administrative costs and (2) costs associated with project modifications proposed during the consultation. As described in section 4.6 of the draft economic analysis, based on our conversations with RUS, we expect the utility projects will be able to avoid impacts to critical habitat relatively easily. Project modifications include modifying clearing and maintenance techniques, and adjusting new pole placement to avoid digging into glade substrate. Because the costs associated with these project modifications are anticipated to be very minor, they were not quantified in the analysis. Overall, we calculated an undiscounted cost to the three electric cooperatives of $25,300 over the 20-year timeframe of the study, or approximately $1,265 per year. We do not expect these costs to influence the utility rates charged to customers.

In conclusion, while three small electric cooperatives are anticipated to incur costs as a result of the designation of critical habitat for Texas golden gladecress and Neches River rose-mallow, the costs are not expected to result in significant impacts to these entities (Industrial Economics 2013, p. A–2). See Attachment A and pages 4–11 through 4–13 of the draft economic analysis for a detailed description of our analysis.

(25) *Comment:* Several commenters expressed the need to include impacts of critical habitat designation on natural gas exploration and development in the economic analysis, concerns about additional consultation and permitting requirements for future projects that require a Federal permit or otherwise have a federal nexus causing delays in operations. Other comments thought the Service's draft economic analysis of the critical habitat designation failed to identify oil and gas development as an economic activity that may be affected by the designation of critical habitat for the Texas golden gladecress.

Our Response: The Service does identify natural gas exploration, production, and distribution (pipelines) as current and ongoing threats to the remaining populations of Texas golden gladecress. Texas golden gladecress sites could be directly impacted by site clearing or indirectly impacted by altering the hydrology. As stated in the proposed rule, the Simpson Farms Texas golden gladecress population, located 6 mi (9.7 km) east of the city of Nacogdoches, was eliminated by a natural gas pipeline that was installed sometime between August 2010 and October 2011. The population was estimated to be approximately 200 ft^2 (18 m^2) in size, and the loss of plants at this site represented a loss of approximately 65 percent of all the known plants.

The entire known distribution of Texas golden gladecress is underlain by the Haynesville Shale formation (also known as the Haynesville-Bossier), recently recognized as a major natural gas source for the United States. By September 2011, as many as 1,500 wells had been drilled on the Haynesville Shale with many more anticipated, along with perhaps another 10 years of active drilling on this formation (Murphy 2011, pp. 2–3). Exploration and production of natural gas and oil is anticipated to continue in this area for at least the next decade.

Section 4.7 and Exhibit 3.1 of the final economic analysis suggested that a Federal nexus arises for interstate oil pipelines because of oversight by Federal Energy Regulatory Commission. However, subsequent research determined that management of interstate oil pipelines is not within the scope of Federal Energy Regulatory Commission's operations. Therefore, for oil exploration and development on private land in Texas, no Federal nexus necessitating consideration of critical habitat exists. For this reason, we assume that the designation of critical habitat will have negligible impact on oil exploration and development. The information regarding oil pipelines in the final economic analysis has been corrected to reflect this change.

The Federal nexus for natural gas activities is through Federal Energy Regulatory Commission, the agency responsible for permitting interstate natural gas pipelines. According to Federal Energy Regulatory Commission data, as of February 2013, there were no pending major interstate pipeline projects in East Texas. Furthermore, the white bladderpod, a federally-listed species since 1987 and co-located with the Texas golden gladecress, has no consultation history for natural gas pipeline activity. We have added this information to section 4.7 of the final economic analysis.

The Texas Railroad Commission has detailed information on all existing pipelines, but the agency has no way to predict future routes for new pipelines or wells; they are limited to location data found within permit applications (Nunley 2011, pers. comm.).

Further, the draft economic analysis identifies the baseline protection afforded through listing under the Act for the Texas golden gladecress and the Neches River rose-mallow and their habitats. This existing regulatory baseline provides the context for the evaluation of economic impacts expected to result from critical habitat designation. The draft economic analysis does not evaluate the threats to a species, it evaluates the incremental cost associated with additional conservation measures required due to the designation of critical habitat. The draft economic analysis determined that the designation of critical habitat for the Texas golden gladecress is likely to result in relatively minor administrative impacts. In addition, minimal project modifications are likely to result from the designation of critical habitat. These minor impacts are attributed primarily to very few projects with a Federal nexus being envisioned within the critical habitat designation for the plant. The primary activities expected to result in section 7 consultations and trigger project modifications are routine transportation projects and utility-related activities. To the extent that future economic activity is uncertain, this analysis may have failed to identify projects or land use alterations that may occur within habitat. However, given the stated conditions, project modifications due to critical habitat designation are unlikely for Neches River rose-mallow and minimal in cases where they do occur for Texas golden gladecress.

No small entities are likely to be significantly affected by the designation of critical habitat. In addition, we do not anticipate measurable impacts to the supply, distribution, or use of energy (Industrial Economic 2013, p. ES–5). Pursuant to Executive Order No. 13211, ''Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use,'' issued May 18, 2001, Federal agencies must prepare and submit a ''Statement of Energy Effects'' for all ''significant energy 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.'' (Industrial Economics 2013, p. A–3). For the Neches River rose-mallow and the Texas golden gladecress, minimal modifications to future energy-related economic activities are anticipated to result from the designation of critical habitat (Industrial Economics 2013, p. A–4).

In summary, oil and gas production and distribution do pose a threat to the Texas golden gladecress as we identified in the proposed rule and this final rule. Specifically, the Chapel Hill population may still be affected by future pipeline construction. The draft economic analysis does not evaluate the threats to a species, it evaluates the incremental cost associated with additional conservation measures required due to the designation of critical habitat.

(26) *Comment:* One commenter noted the existence of lignite mining activities in the vicinity of the critical habitat designation, particularly the proximity of critical habitat unit 2 for the Neches River rose-mallow to a sedimentation pond constructed by the Sabine Mining Company. Other commenters noted that in the economic analysis there was not any discussion of lignite coal mining in this region of Texas. The Sabine Mining Company alone produces more than four million tons of coal per year, and there are several other coal mines in east Texas, contributing a combined total state production of some 40 million tons per year. According to the Office of Management and Budget a ''significant adverse effect'' may occur if the regulatory action under consideration results in reductions of coal production of more than five million tons per year. An additional concern was expressed that mining operations, including those for glauconite and other materials that counties buy for road maintenance, will be affected and that all increased costs will get passed along to counties as the purchasers, and ultimately to the tax payers.

Our response: Currently, there are no active mines in the vicinity of the critical habitat; a sediment pond in Unit 2 is associated with a mine that has been in reclamation since the 1990s. However, a lignite belt is noted to exist throughout East Texas, including in the counties in which the critical habitat is designated. Because mines on private land are managed by the Railroad Commission in Texas, for a Federal nexus to occur with lignite mining activities, the critical habitat designation would need to overlay Federal mineral rights. The Bureau of Land Management confirmed that no Federal mineral rights overlap the critical habitat area. This information

has been included in section 4.7 of the economic analysis.

Additionally, our final economic analysis on April 16, 2013 (78 FR 22506–22510) identified and analyzed the potential economic impacts of designating critical habitat for the Texas golden gladecress and the Neches River rose-mallow. The economic analysis addressed the requirements of Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use, May 18, 2001; as well as Executive Orders 12866 (as amended by 13563), 13211, and 12630, the Regulatory Flexibility Act (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA), and the Unfunded Mandates Reform Act (UMRA). The economic analysis determined that no small entities are likely to be significantly affected by the designation of critical habitat. In addition, we do not anticipate measurable impacts to the supply, distribution, or use of energy. See Appendix A of the Final draft economic analysis for further information.

(27) *Comment:* The listing and critical habitat will cause undue economic harm by limiting development opportunities in that region, threaten local jobs, and be too costly.

Our Response: As discussed in the Executive Summary of the draft economic analysis, impacts of the critical habitat designation are expected to be relatively minor and mostly administrative in nature. The administrative costs and project modifications resulting from critical habitat designation are not expected to affect the type or intensity of economic activities occurring in the region. As such, we do not predict impacts to local jobs. See Our Response to Comments 11 and 17 in the Comments from States section, as well as Comments 21 and 23 above in Public comments.

As documented in section 4.3 of the analysis, we do not forecast any restrictions on development or other major land use regulations as a result of the critical habitat designation that might influence private property values. In section 2.3.2, the report does note that public attitudes about limits or restrictions that critical habitat may impose can cause real economic effects to property owners, regardless of whether such limits are actually imposed. As the public becomes aware of the true regulatory effects imposed by critical habitat, the impact of the designation of property markets may decrease. Furthermore, the study cited in this comment did not identify statistically significant effects of the designation on land values outside of urban growth areas, limiting its applicability to this particular designation.

(28) *Comment:* Commenters expressed concerns that critical habitat designations added to the regulatory burden on businesses and private landowners in the area at issue, and such designations, if made without a proper basis, would contravene the President's Executive Order 13563, which directs Federal agencies to identify and use the best, most innovative, and least burdensome tools for achieving regulatory ends. They indicated that it would be an inappropriate use of Service's discretion to place regulatory burdens on development in the areas in question, when the agency has demonstrated neither that the proposed listings and designations are justified nor that such listings and designations would be the least burdensome tool for achieving the Service's goals. Commenters believe projects with a Federal nexus could be delayed or cancelled in East Texas counties due to critical habitat designation. They indicated the belief that any benefits associated with the proposed designations were outweighed by the potential for negative economic impacts.

Our response: Executive Order 13563 requires agencies to tailor regulations to impose the least burden on society, consistent with obtaining regulatory objectives. The Service may exclude any area from critical habitat if we determine that the benefits of such exclusion outweigh the benefits of specifying such areas as part of critical habitat unless we determine that the failure to designate such area as critical habitat will result in the extinction of the species concerned. The Executive Order directs agencies to consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public where these approaches are relevant, feasible, and consistent with regulatory objectives. The Executive Order 13563 emphasizes further that regulations must be based on the best available science and that the rulemaking process must allow for public participation and an open exchange of ideas. We have developed this rule in a manner consistent with these requirements.

For projects occurring within the critical habitat designation for the Neches River rose-mallow, it is unlikely that critical habitat designation will generate project delays or cancellations. As discussed in section 4.1 of the draft economic analysis, any consultations or recommendations for project modifications that may result in project delays are expected to occur due to the presence of the plant regardless of whether critical habitat is designated. Project modifications due to critical habitat for the Texas golden gladecress are generally expected to generate only minor additional costs associated with project implementation. The consultation process and implementation of associated recommendations are not expected to generate substantial project delays or result in cancellation of projects.

(29) *Comment:* The Service incorrectly assumed the generally described site location in Harrison County where the Neches River rose-mallow was collected in 1980 had not been disturbed. Significant disturbance has taken place in that area. The Sabine Mining Company began development of the South Hallsville No. 1 Mine, a large lignite coal mine, in 1984, and has been operating continuously since then. The second largest proposed critical habitat site matches the footprint of a sedimentation pond on one of the state's major coal mines. The shoreline of a large sedimentation pond constructed by the mining company in the early 1990's is the exact boundary of the proposed critical habitat unit 2 for the Neches River rose-mallow.

Our response: In regard to the location of the Harrison County site see Our Response to Comment 9. New information provided by the commenter confirms that the Harrison County critical habitat unit overlays a sedimentation pond of an old lignite (type of coal) mine that is no longer active (Lang 2013, pers. comm.). The pond's edge still provides at least one of the primary constituent elements needed by the Neches River rose-mallow. Consequently, we consider this site to meet the definition of critical habitat for the Neches River rose-mallow.

(30) *Comment:* The draft economic analysis did not monetize the costs of all the project modifications that were recognized to be necessary.

Our response: Executive Order 12866 specifies that quantification of costs should be performed to the extent feasible. As discussed in sections 4.2 and 4.6 of the draft economic analysis, we do not quantify the potential impacts of the designation in two instances. The cost of altering vegetation clearing techniques at the base of utility poles was expected to be minor and is therefore described qualitatively. In addition, the draft economic analysis describes the potential costs to driver safety associated with a narrower roadway shoulder. These costs would be

net of the savings associated with constructing a narrower shoulder. Absent information on the extent to which the reduced roadway shoulder size may increase accident or injury, we describe this cost qualitatively.

(31) *Comment:* The draft economic analysis did not provide a complete or accurate picture of the economic impact that would be caused by the proposed listing.

Our response: As described in section 2.1 of the draft economic analysis, the analysis is focused on the incremental economics impacts of the designation of critical habitat for the Texas golden gladecress and the Neches River rose-mallow. This report does not attempt to capture the economic impacts of the listings of the two species. The Service is required to use the best scientific and commercial data available in determining the threatened or endangered status of a species. For critical habitat designation, the Service is required to use the best scientific and commercial data available, after taking into consideration the probable economic impacts and other impacts of the designation on proposed or ongoing activities. The Service evaluated the probable incremental economic impact of the designation of critical habitat through its economic analysis. The cost of listing the species are in the baseline and therefore not presented.

(32) *Comment:* One comment suggested that potential incremental effects identified in ''Appendix B: The Incremental Effect Memorandum for the draft economic analysis for the proposed rule to Designate Critical Habitat for Texas golden gladecress and Neches River rose-mallow'' of the draft economic analysis associated with activities that may affect the primary constituent elements (PCEs) for the Neches River rose-mallow without affecting the plant were not quantified in the analysis.

Our response: As described in Appendix B, the purpose of the incremental effects memorandum is to provide information to serve as a basis for conducting an economic analysis of the proposed critical habitat. While it serves as the basis, subsequent discussions with the Service and other Federal agencies directly informs the analysis. Through such discussions, we did not identify an instance of the situation outlined in this comment for the Neches River rose-mallow. For this reason, these example incremental effects were not quantified in the analysis.

(33) *Comment:* One comment stated that the estimated costs of consultation likely underestimate administrative costs and fail to reflect the true real-world costs associated with project delays caused by section 7 consultation. Another comment notes that the administrative consultation costs presented in Exhibit 2–3 represent old data.

Our response: The administrative costs assigned in the study were developed from data from the Federal Government Schedule Rates, Office of Personnel Management, and a review of consultation records from several Service field offices across the country. While the estimates of time spent in section 7 consultations were derived from interviews with agencies and review of consultation records in 2002, the cost of time spent is based on current data describing the Federal government's 2012 hourly pay rates, adjusting for overhead and benefits. As such, we consider these administrative costs a reasonable approximation of the administrative costs of consultation. As stated in the response to the comment on time delays, we do not anticipate this rule will generate measurable time delays.

(34) *Comment:* One commenter stated that the draft economic analysis' reliance solely on administrative costs to quantify impact does not present a comprehensive appraisal of the economic impact of the proposed designation.

Our response: The draft economic analysis presents the probable incremental economic impact of the designation of critical habitat for each species. Use of an incremental analysis is the only logical way to implement the Act. To understand the difference that designation of an area as critical habitat makes, one must compare the hypothetical world with the designation to the hypothetical world without the designation. For this reason, the Service compares the protections provided by the designation to the protections without the designation. This methodology is consistent with the general guidance given by the Office of Management and Budget to executive branch agencies as to how to conduct cost-benefit analyses.

Section 2.3.2 of the final economic analysis describes that the economic analysis considers multiple categories of potential impacts, including administrative costs and costs of project modifications, which may be implemented to avoid adverse modification of critical habitat. For projects for which critical habitat designation is not expected to result in project modifications, or otherwise affect economic activities, we anticipate that the costs of the rule are limited to administrative costs.

(35) *Comment:* The draft economic analysis should include the impacts the critical habitat designation would have on private landowners.

Our Response: When prudent and determinable, the Act requires the Service to designate any habitat, which is considered to be critical habitat concurrently with making a determination that a species is an endangered or threatened species. Critical habitat is defined in section 3 of the Act: the specific areas within the geographic area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (a) essential for the conservation of the species and (b) which may require special management considerations or protection. The 11 occupied sites contain either one or more physical or biological feature essential to the Neches River rose-mallow which may require special management considerations or protection, as do the four occupied Texas golden gladecress sites. A final designation of critical habitat is based on the best scientific and commercial data available, after taking into consideration the probable economic impacts and other impacts of the designation on proposed or ongoing activities.

As discussed in section 2.3.2 of the draft economic analysis, private landowners may be affected by critical habitat if they are party to a consultation and experience administrative impacts or bear costs of project modifications. Activities taking place on private land that do not involve a Federal nexus are unlikely to be directly affected by critical habitat; however, section 2.3.2 of the draft economic analysis additionally recognizes the potential for private landowners to be indirectly affected by critical habitat designation, for example in the case that the designation generates uncertainty about restrictions on future land use or triggers changes in state or local management of activities. As presented in section 4.3 of the draft economic analysis, however, we expect costs to private landowners in this case will be limited to the administrative costs associated with technical assistance for land management by Partners for Fish and Wildlife. It is important to note that this technical assistance is offered to willing landowners but is not required.

(36) *Comment:* One commenter noted that if the private landowner does not have restrictions on the plants on their property, then there are no measures that would prevent the landowner from

destroying or further endangering a species.

Our response: The commenter is correct. The Act does not prohibit destroying or adversely modifying critical habitat unless such activities involve an endangered species on Federal land, there is a Federal nexus, or if the action occurs in violation of State laws. If a person wishes to develop private land, with no Federal jurisdiction involved, in accordance with State law, then the potential destruction or adverse modification of critical habitat does not violate the Act. Critical habitat receives protection under section 7 of the Act through requiring Federal agencies to consult with the Service to ensure that action they carry out, fund, or authorize does not result in the destruction or adverse modification of critical habitat. If there is no Federal nexus, the critical habitat designation of private lands itself does not restrict any actions that destroy or adversely modify critical habitat.

(37) *Comment:* Several comments were made addressing potential adverse impacts on property values due to the critical habitat designation.

Our response: As documented in section 4.3 of the draft economic analysis, we do not forecast any restrictions on development or other major land use regulations as a result of the critical habitat designation that might influence private property values. In section 2.3.2 of the draft economic analysis, the report does note that public attitudes about limits or restrictions that critical habitat may impose can cause real economic effects to property owners, regardless of whether such limits are actually imposed. As the public becomes aware of the true regulatory effects imposed by critical habitat, the impact of the designation of property markets may decrease. Furthermore, the study cited in this comment did not identify statistically significant effects of the designation on land values outside of urban growth areas, limiting its applicability to this particular designation.

(38) *Comment:* One commenter questioned the benchmarks for designating species with critical habitat and how these areas are determined.

Our response: Under the Act, any species that is determined to be an endangered or threatened species requires critical habitat to be designated, to the maximum extent prudent and determinable, using the best scientific and commercial data available and primary and original sources of information. Critical habitat is defined in section 3 of the Act as: (1) The specific areas within the geographical area occupied by the species, at the time it is listed, on which are found the physical or biological features that are essential to the conservation of the species and which may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. See the ''Areas Occupied at the Time of Listing'' and ''Areas Unoccupied at the Time of Listing'' sections for both species in this final rule for further information.

(39) *Comment:* One comment expressed concern that the economic analysis was incomplete because citations for discussions did not list the names of all the Service staff and only one state agency. This comment also noted that the document did not provide a list of those individuals consulted for information.

Our response: As described in section 4.1, we contacted multiple Federal agencies and applicable state agencies that may permit, fund, or carry out activities within the proposed critical habitat designation. In response to public comments, we contacted additional agencies in order to confirm the status of a potential activity over the timeframe of the study. The final economic analysis will include these additional individuals. All individuals contacted are referenced by footnote in the economic analysis.

(40) *Comment:* In response to the September publication of the proposed rule, multiple commenters requested an extended comment period.

Our Response: We consider the comment periods described in the ''Summary of Comments and Recommendations'' of this final rule to have provided the public a sufficient opportunity for submitting both written and oral public comments. In addition, the Act requires the Service to publish a final rule within 1 year from the date we propose to list a species. This 1-year timeframe can only be extended if there is substantial disagreement regarding the sufficiency or accuracy of the available data relevant to the determination or revision concerned, but only for 6 months and only for purposes of soliciting additional data. Based on the comments received and data evaluated there is not substantial disagreement regarding the sufficiency or accuracy of the data. We also reopened the comment period for the draft economic analysis and for the proposed rule.

(41) *Comment:* One commenter indicated concern that designation of critical habitat will impose restrictions upon people's freedom of access to Federal lands (the Davy Crockett NF specifically).

Our response: Neither listing nor designation of critical habitat for the Neches River rose-mallow of any area on the Davy Crockett NF will restrict public access of this land. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation does not allow the government or public to access private lands.

Summary of Changes From Proposed Rule

Our analysis or conclusions did not result in any substantial changes to the final rule from what was proposed.

Critical Habitat

Background

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

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

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

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

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

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

Critical habitat receives protection under section 7 of the Act through the requirement that Federal agencies

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

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

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

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific and commercial data available. Further, our Policy on Information Standards Under the Endangered Species Act (published in the **Federal Register** on July 1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106–554; H.R. 5658)), and our associated Information Quality Guidelines provide criteria, establish procedures, and provide guidance to ensure that our decisions are based on the best scientific data available. They require our biologists, to the extent consistent with the Act and with the use of the best scientific data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat.

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

Habitat is dynamic, and species may move from one area to another over time. We recognize that critical habitat designated at a particular point in time may not include all of the habitat areas that we may later determine are necessary for the recovery of the species. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be needed for recovery of the species. Areas that are important to the conservation of the species, both inside and outside the critical habitat designation, will continue to be subject to: (1) Conservation actions implemented under section 7(a)(1) of the Act, (2) regulatory protections afforded by the requirement in section 7(a)(2) of the Act for Federal agencies to insure their actions are not likely to jeopardize the continued existence of any endangered or threatened species, and (3) section 9 of the Act's prohibitions on taking any individual of the species, including taking caused by actions that affect habitat. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. These protections and conservation tools will continue to contribute to recovery of this species. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans (HCPs), or other species conservation planning efforts if new information available at the time of these planning efforts calls for a different outcome.

Physical or Biological Features for the Texas Golden Gladecress

In accordance with section 3(5)(A)(i) and 4(b)(1)(A) of the Act and regulations at 50 CFR 424.12, in determining which areas within the geographical area occupied by the species at the time of listing to designate as critical habitat, we consider the physical or biological features essential to the conservation of the species and which may require special management considerations or protection. These include, but are not limited to:

(1) Space for individual and population growth and for normal behavior;

(2) Food, water, air, light, minerals, or other nutritional or physiological requirements;

(3) Cover or shelter;

(4) Sites for breeding, reproduction, or rearing (or development) of offspring; and

(5) Habitats that are protected from disturbance or are representative of the historical, geographical, and ecological distributions of a species.

We derive the specific physical or biological features essential for Texas golden gladecress from studies of this species' habitat, ecology, and life history as described in the Critical Habitat section of the proposed rule to designate critical habitat published in the **Federal Register** on September 11, 2012 (77 FR 55968), and in the information presented below. Additional information can be found in the final listing rule published today elsewhere in the **Federal Register**. We have determined that Texas golden gladecress requires the following physical or biological features:

Space for Individual and Population Growth and for Normal Behavior

Based on all documented occurrence records, the Texas golden gladecress is endemic to glade habitats in northern San Augustine and northwest Sabine Counties, Texas, where it is a habitat specialist, occurring only on outcrops of the Weches Geologic Formation (Mahler 1987, p. 240; George and Nixon 1990, p. 120; Poole *et al.* 2007, pp. 286–287). The gladecress grows only in glades on shallow, calcium-rich soils that are wet in winter and spring. These occur on ironstone (glauconite or green-stone) outcrops (Poole *et al.* 2007, p. 286). The Texas golden gladecress occurs in open, sunny, herbaceous-dominated plant communities in Weches glades; in some cases in areas that also support another federally listed plant, the white bladderpod (*Lesquerella pallida*) (Bridges 1988, pp. II–7, II–35, and II–35 supplement). Unlike the white bladderpod, which can grow throughout the glade, the gladecress is restricted to the outcrop rock faces within the glades where it occurs (Nemec 1996, p. 8). The Texas golden gladecress shows a tight association with the Weches Formation and associated soils (Singhurst, 2011a, pers. comm., p. 3). The known Texas golden gladecress occurrences are all found on shallow, gravelly soils or almost bare bedrock overlying Trawick, Bub, or Nacogdoches soils.

The Weches Glades form a small patch system of habitats, endemic to the outcrops of marine sediment and glauconitic clays that occur primarily in Nacogdoches, San Augustine, and Sabine Counties (Nature Serve 2009, p. 6). Surface exposures of the Weches Formation are usually on slopes (due to erosion) and typically are small; 16.4–65.6 ft (5–20 m) in width, and generally not exceeding 328 ft (100 m) in length (George and Nixon 1990, p. 118). The average width of the Weches outcrop region varies from 2–5 mi (3.2–8 km) (Sellards *et al.* 1932 in Diggs *et al.* 2006, p. 56) and encompasses the route of SH 21. All known Texas golden gladecress populations occur, or formerly occurred, within 1 mi (1.6 km) of SH 21. Of these populations, three sites where plants have been confirmed as recently as 2012 remain: Caney Creek Glades Site 1 in San Augustine County, just east of the town of San Augustine; the Chapel Hill Site in San Augustine County, adjacent to County Road 151; and adjacent to SH 21 south of the town of Geneva, Sabine County. A fourth site, Caney Creek Glades Site 7, is also considered extant because there is no evidence that the habitat has been destroyed, however, the existence and size of the Texas golden gladecress at this site has not been verified since 1988 because the site is on private property to which access has been denied. Historically, populations in the closest proximity to each other were part of the Caney Creek Glade Complex that contained five of the eight known sites. This entire complex was located within an area that did not exceed 1 mi (1.6 km) from the most northern to most southern plant occurrences, and extended less than 0.32 miles (0.53 km) from east to west. The Chapel Hill and Geneva sites were outliers to the Caney Creek Complex, located 4.5 mi (7.24 km) and 11.4 mi (18.3 km), respectively, to the southeast. Multiple glades in close proximity to one another, as exemplified by the Caney Creek Glade Complex, may have facilitated cross fertilization between populations, enhancing genetic diversity, and perhaps providing space for population expansion.

Potential exists for other areas within the range of the Texas golden gladecress to support glade complexes. Singhurst (2012b, pers. comm.), using aerial photography and maps of geology and soils, has identified clusters of potential glade sites in additional areas within the Weches Formation within 1 mi (1.6 km) to the north and south of SH 21 as it traverses San Augustine County, as well as into Sabine County. We are also aware that areas adjacent to the Chapel Hill and Geneva sites have a high likelihood of suitable habitat.

Due to loss, degradation, and fragmentation of habitat, optimal glade size or density of glade complexes needed to support long-term survival of Texas golden gladecress is not well understood, but monitoring of the extant sites between 1999–2009 showed that the Texas golden gladecress could persist on small, disjunct sites where it is able to grow and reproduce, at least in the short term. Based on the best available scientific and commercial information, a better model of a healthy population and habitat site may be found by looking at the historic Caney Creek Glade Site 6, which supported the largest population ever documented. This former site was contained within an area of approximately 10 ac (4 ha) and supported thousands of plants until the mid–1990's, when it was destroyed by mining excavation. This glade complex consisted of long, sheeted openings that presented a patchwork appearance of soil, rock, and glades (Singhurst 2012d, pers. comm.). This site likely represented ideal special conditions for this species because it supported a healthy and robust population.

The best available scientific and commercial information regarding gene flow between Texas golden gladecress populations is that seed dispersal may be limited. Seeds appear to fall to the ground near the parent plant (Singhurst 2011c, pers. comm., p. 4) and probably stay in place unless water movement, such as flooding, carries them to other suitable habitats. The Weches outcrops occur in a scattered fashion across the landscape with habitat that is unsuitable for Texas golden gladecress lying between outcrops.

Pollinators specific to Texas golden gladecress have not been identified. Native bees in the Families Andrenidae and Halictidae (sweat bees), including the species *Halictus ligatus* (sweat bee), were observed carrying pollen from *Leavenworthia crassa* (fleshyfruit gladecress) and *L. stylosa* (cedar gladecress) in northern Alabama (Lloyd 1965, pp. 106–115). Although representatives of these bee families are found across eastern Texas (Warriner 2012b, pers. comm.), there is no documentation of them visiting Texas golden gladecress. Busch and Urban (2011, p. 18) indicated the efficacy of these pollinators has not been studied in *Leavenworthia.* Texas golden gladecress is believed to be self-compatible and may not rely solely on pollinators for fertilization (see Biology section). Based on this information, close proximity of glade outcrops to one another may help to facilitate cross pollination and seed dispersal.

Therefore, based on the information above, we identify glauconite exposures (outcrops) of the Weches Geologic Formation, found within Weches glades, as an essential physical feature for the species' continued existence. Although these individual exposures can be small in size and scattered throughout a glade or glades, ideally the glades will occur in multiples (a complex).

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

The geology and soils of Texas golden gladecress sites are unique in East Texas, and the species shows a tight association with the Weches Formation and associated soils (Singhurst, 2011a, pers. comm.). The Weches Formation is characterized by the mineral glauconite and contains glauconitic clays, calcareous marls, rich marine fossil deposits, and mudstone (George and Nixon 1990, pp. 117–118). In some areas, leaching of the soluble ingredients in the glauconite has concentrated iron in ironstone (iron-bearing limonite). The Weches Formation affects the local topography

and vegetation, with cap hills and escarpments where the erosion-resistant ironstone layers occur, and more rolling topography where ironstone is not present (Diggs *et al.* 2006, p. 56).

The Weches outcrops create limited areas of relatively thin alkaline soils in a region of mostly sandy soils (USFWS 1992, pp. 3–4) resulting in natural glade communities on the shallow, seasonally saturated, but frequently dry soils (Bezanson 2000 in Diggs *et al.* 2006, p. 56). Soils associated with Weches glades are shallow, rocky, and basic in pH (alkaline), inhibiting the presence of woody species (Nature Serve 2009, p. 6). Soils underlying known Texas golden gladecress sites appear to be inclusions in the Nacogdoches, Trawick, or Bub soils series (U.S. Department of Agriculture 2009, entire). George (1987, p. 18) found that the soil profile of three Weches outcrops had a surface layer of sandy loam or sandy clay loam with impermeable glauconite clay at a depth of about 19.7 inches (50 cm). Measurements of soil pH ranged from 7.6 to 8.1 (George 1987, p. 18). Weches soils contain exceptionally high levels of calcium (2,500–6,000 parts per million (ppm)) from fossilized shells, as well as high levels of potassium (170–250 ppm) and magnesium (250–400 ppm). The basic pH at these sites results from dissolution of the calcareous component of the rich marine fossil fauna of the Weches Formation (George 1987, p. 47). These conditions produce a harsh, variable environment that becomes saturated and seepy in cool moist months and during rainy seasons, but that dries out, becoming parched and hard, during hot summer months (USFWS 1992, pp. 3–4). *Leavenworthia* species are dormant by early summer, helping them to survive the dry period as seed; this dormancy is likely one of the major evolutionary adaptations in this genus enabling its species to endure the extreme droughty conditions of late summer (Quarterman 1950, p. 5).

Texas golden gladecress is dependent on late fall-winter precipitation levels that keep the glade sediments saturated and leave pooled water on the small outcrop ledges. Based on observations of Texas golden gladecress population sites over a 10-year period within the Weches outcrops and glade complexes, Texas golden gladecress appeared to be highly restricted to wet microhabitats and ''even within suitable sites, the species seems limited to only seasonal seep runs and vernal pools within the site'' (Singhurst 2011a, pers. comm., p. 3). The species' apparent requirement for direct contact with seeps and shallow puddles on exposed ledges of outcrop implies reliance on precipitation that falls directly onto the ledges and possibly on down-slope movement of water percolating through the sediment atop the clay layer. George (1987, pp. 2–4) observed that the Weches outcrops were waterlogged in the spring due to the clay stratum, with water percolating until it hit the clay, then moving laterally and exiting on the hillsides where the outcrops are. At the Chapel Hill site, Texas golden gladecress was found on and around a few spots where the glauconite was exposed rather than in the dense cover of the herbaceous matrix (Carr 2005, p. 2). The glauconite exposures at this site were wet from seeps or due to percolating water moving laterally on top of the bedrock.

All known Texas golden gladecress populations have been found on open, sunny exposures on Weches outcrops. Baskin and Baskin (1988, p. 837) indicated that a high light requirement was common among the endemic plants of rock outcrop plant communities in the unglaciated eastern United States. This obligate need for high light is supported by field observations showing that these eastern outcrop endemics, similar to Texas golden gladecress: Grow on well-lighted portion of the outcrops but not in adjacent shaded forests; photosynthesize best in full sun, with a reduction in the presence of heavy shading; and compete poorly with plants that shade them (Baskin and Baskin 1988, p. 837).

Texas golden gladecress apparently persists on its specialized habitat, at least in part, due to a lack of competition from taller or more vigorous plants. Rollins (1963, p. 17) found that, while *Leavenworthia alabamica* and *L. crassa* grew normally and produced seed in a portion of an experimental plot where weeds were removed, plants from both species died in the portion of the plot where *Poa annua* (annual bluegrass) was allowed unrestricted growth. Lloyd (1965, pp. 86–87) observed that plants of these two species competed poorly with the invading weed flora in abandoned agricultural fields.

The Weches outcrops and surrounding glade sites show large seasonal variation in species dominance as a result of the shift from saturated soils in winter-spring to hard, dry soil in summer (George and Nixon 1990, pp. 120–124). Singhurst (2012d, pers. comm.) described the Chapel Hill site as having bare spots on the tops of the glade with seasonal pools of water (similar to vernal pools). At this site the Texas golden gladecress would bloom, seed, dry out, and die back to be replaced in summer by drier, more succulent plants. Quarterman (1986 in George and Nixon 1990, p. 124) found that the thinner soils in Tennessee glades were dominated in spring by *Leavenworthia* spp., *Minuartia patula* (Pitcher's sandwort), and *Sedum pulchellum* (stonecrop), and that *Sporobolus vaginiflorus* (poverty dropseed) would be the dominant grass on these soils in summer. Singhurst observed similar species composition shifts at Texas golden gladecress sites (Singhurst 2012e, pers. comm.; Singhurst 2012h, pers. comm.). Even with this seasonal shift, there are a number of characteristic herbaceous species that occur in association with Texas golden gladecress (Table 1) (Bridges 1988, p. II–35; TNC 2003, p. 4; Carr 2006, p. 4). Carr (2006, p. 2) found that Texas golden gladecress at the Chapel Hill site shared the rocky outcrop ledges with a sparse covering of *Eleocharis* sp. (spike sedge), *Clinopodium arkansanum* (Ozark savory), and an unidentified moss. He described the 40–50 Texas golden gladecress plants as ''growing on or among clumps of moss on these soggy, unshaded glauconite exposures.''

TABLE 1—CHARACTERISTIC FLORA OF WECHES OUTCROPS IN TEXAS

Scientific name	Common name
Primary Characteristic Herbs	
Sedum pulchellum * ..	stonecrop.
Clinopodium arkansanum *.	Ozark savory.
Minuartia patula *	Pitcher's sandwort.
Minuartia drummondii *.	Drummond sandwort.
Valerianella radiata *	beaked cornsalad.
Isoetes butleri	Butler's quillwort.
Allium drummondii * ..	Drummond wild-garlic.
Portulaca oleracea * ..	common purslane.
Phemeranthus parviflorus *.	sunbright.
Eleocharis occulata *	limestone spikerush.
Some Other Potential Species	
Erigeron sp.	fleabane.
Lesquerella pallida	white bladderpod.
Desmanthus illinoensis.	Illinois bundleflower.
Euphorbia dentate	toothed spurge.
Croton monanthogynus.	doveweed.
Dalea purpurea	prairie clover.
Houstonia spp.	Bluetts.
Nassella leucotricha ..	Texas wintergrass.
Boutelous curtipendula.	sideoats grama.
Eleocharis compressa	flat-stemmed spikerush.
*Sporobolus vaginiflorus**.	poverty dropseed.
Thelesperma filifolium	slender greenthread.

TABLE 1—CHARACTERISTIC FLORA OF WECHES OUTCROPS IN TEXAS—Continued

Scientific name	Common name
Arnoglossum plantagineum.	groovestem Indian plantain.
Plantago virginica	Virginia plantain.
Schizachyrium scoparium.	little bluestem.
Polytaenia nuttallii	Nuttall's prairie parsley.
Onosmodium bejariense.	softhair marbleseed.
Liatris mucronata	narrowleaf gayfeather.
Draba cuneifolia	wedgeleaf draba.
Paronychia virginica ..	Whitlow wort.
Camassia scilloides ..	wild hyacinth.
Zigadenus nuttallii	Nuttall's death cama.
Algae	
Nostoc spp. Cyanobacteria.	
Frequent Woody Species	
Juniperus virginiana ..	eastern redcedar.
Pinus taeda	loblolly pine.
Liquidambar styraciflua.	sweetgum.
Cornus drummondii ...	roughleaf dogwood.
Sideroxylon lanuginosum.	gum bumelia.
Sophora affinis	Texas sophora.
Quercus muhlengergii	Chinquapin oak.
Opuntia sp	prickly pear cactus.
Rhus glabra	smooth sumac.
Rhamnus lanceolata	sanceleaf buckthorn.

* Strong association with Texas golden gladecress sites.

Therefore, based on the information above, we identify as essential physical features for Texas golden gladecress the following: Open, sunny exposures of Weches outcrops within Weches glade plant communities that are characterized by the species listed in Table 6, with relatively thin, rocky soils that are classified within Nacogdoches, Trawick, or Bub soils mapping units as identified by the Natural Resources Conservation Service soil survey maps. There must be bare, exposed bedrock on top-level surfaces or rocky ledges with very shallow depressions where rainwater can pool or seepage can collect.

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

In order to undergo successful reproduction, Texas golden gladecress requires sufficient moisture in late fall to germinate, and in winter-spring to support growth, flowering, and fruit production. At sites where the Texas golden gladecress depends on seeps to provide its water, there must be sufficient sediment or slope at elevations above its habitat site in order to catch rainfall and allow its slow percolation down to the plant's location. For those Texas golden gladecress plants growing in what appear to be micro-depressions that occur on fairly level spots in more gently sloping ground, the water supply may be more due to direct rainfall and dew collection. The species appears to be dependent on its seedbank for its continued existence, so habitat should not be subjected to activities that would remove the seedbank. Therefore, based on the information above, we identify as essential physical features needed for Texas golden gladecress' successful reproduction outcrops with intact hydrology and for which the surface features (sufficient sediment or slope at elevations above its habitat site) and gladecress seedbed are undisturbed.

Habitats Protected From Disturbance or Representative of the Historical, Geographic, and Ecological Distributions of the Species

Texas golden gladecress has a restricted geographic distribution. Its historic range did not extend further than approximately 12 miles (19 km) from the most southeastern to the most northwestern documented locations and all documented occurrences were located within a 3.1 mile-wide band (5 km-wide) around SH 21. The gladecress is also an endemic species, highly restricted to a specific habitat type that occurs in a scattered or patchy fashion across the landscape, with large areas of unsuitable habitat interspersed. The extant populations exhibit a high degree of isolation, being separated from each other by distances of 4.5 mi (7.2 km) and 7 mi (11.3 km), respectively, between the northern (Caney Creek Glade Site 1), central (Chapel Hill), and southern (Geneva) populations. All three populations are small in terms of areal extent and number of individual plants. Given their geographic isolation and small size, all of the sites are important for the conservation of the species.

In addition, we have determined that Texas golden gladecress likely persists at the Caney Creek Glade Site 7, even though the species' presence has not been reconfirmed since 1988 due to lack of access onto this private property. Although the species' presence has not been verified since 1988, the glade at this population site was described as being intact in 1996 by a forestry consultant. This individual subsequently revisited the site in 2000 and noted that invasive plants were encroaching into the glade (Walker 2012, pers comm., p. 4). The Caney Creek Glade Site 7 is located approximately 0.75 mi (1.2 km) southeast of Caney Creek Glade Site 1.

Combined, these sites represent the best habitat for the species throughout the geographic range. The loss of any of the known populations would reduce the potential to recover or conserve the species, thereby increasing the likelihood of extinction for the species across its range. Mapping of potential glade sites by TPWD (Singhurst 2012b, pers. comm.) shows that there is suitable habitat near the four extant populations that could provide sites for population expansion, thereby increasing the species' resiliency. These areas are representative of habitat across the species range and provide the potential for populations to spread, thereby enhancing recovery opportunities. Therefore, we do not believe that unoccupied areas outside of the geographic range are needed.

The long-term effects of climate change on the species are less clear with regard to whether any additional areas outside of those discussed above are needed for the species' future. See the Factor A discussion of ''Climate Change'' in the listing determination for the Texas golden gladecress for a summary of projected climate changes in Texas and how these changes may affect the species. The information currently available on the effects of global climate change and increasing temperatures does not make sufficiently precise estimates of the location and severity of the effects. Nor are we currently aware of any climate change information specific to the habitat of Texas golden gladecress that would indicate what areas may become important to the species in the future. We do not believe the species can easily adapt and colonize new habitats due to its habitat specificity. Therefore, based on the best available scientific and commercial information, we are not identifying areas outside of those currently occupied as areas that may be suitable due to the effects of climate change.

Primary Constituent Elements for Texas Golden Gladecress

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

essential to the conservation of the species.

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

(1) Exposed outcrops of the Weches Formation. Within the outcrop sites, there must be bare, exposed bedrock on top-level surfaces or rocky ledges with small depressions where rainwater or seepage can collect. The openings should support Weches Glade native herbaceous plant communities.

(2) Thin layers of rocky, alkaline soils, underlain by glauconite clay (greenstone, ironstone, bluestone), that are found only on the Weches Formation. Appropriate soils are in the series classifications Nacogdoches clay loam, Trawick gravelly clay loam, or Bub clay loam, ranging in slope 1–15 percent.

(3) The outcrop ledges should occur within the glade such that Texas golden gladecress plants remain unshaded for a significant portion of the day and trees should be far enough away from the outcrop(s) that leaves do not accumulate within the Texas golden gladecress habitat. The habitat should be relatively clear of nonnative and native invasive plants, especially woody species, or with only a minimal level of invasion.

With this designation of critical habitat, we intend to identify the physical or biological features essential to the conservation of the species, through the identification of the features' primary constituent elements sufficient to support the life-history processes of the species.

Special Management Considerations or Protections for Texas Golden Gladecress

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

Texas golden gladecress may require special management considerations or protection to reduce the following threats: quarrying or other excavations, including pipeline installations; building over the top of occupied glades; construction or excavation upslope that alters water movement (sheet flow or seepage) downslope to Texas golden gladecress sites; pine tree plantings near glades; and invasive (native and nonnative) plants. Refer to the five-factor analysis in the listing determination for the Texas golden gladecress for more information on these threats.

The features essential to the conservation of Texas golden gladecress may require special management considerations or protection to reduce the following threats:

- Actions that remove the soils and alter the surface geology of the glades;
- Building or paving over the glades;
- Construction or excavation upslope that alters water movement (sheet flow or seepage) downslope to Texas golden gladecress sites;
- Planting trees adjacent to the edges of an outcrop resulting in shading of the glade and accumulations of leaf litter and tree debris;
- Encroachment by nonnative and native invading trees, shrubs, and vines that shade the glade;
- The use and timing of application of certain herbicides that can harm Texas golden gladecress mature plants and seedlings; and
- Fence placement such that livestock are likely to be directed through gladecress sites where habitat and plants may be trampled.

Management activities that could ameliorate these threats include (but are not limited to):

- Avoiding Weches glades when planning the location of quarries, well pads, roads, other facilities or structures, or pipeline routes, through glade complexes;
- Avoiding above-ground construction or excavations in locations that would interfere with natural water movement to Texas golden gladecress habitat sites;
- Locating suitable habitat and determining the presence or absence of the species and identifying areas with glade complexes and protecting or restoring as many complexes as possible;
- Extending outreach to all landowners, including private and State, to raise awareness of the plant and its specialized habitat;
- Providing technical or financial assistance to landowners to help in the design and implementation of management actions that protect the plant and its habitat;
- Avoiding pine tree plantings near glades; and
- Brush removal, to maintain an intact native glade vegetation community.

Criteria Used To Identify Critical Habitat for Texas Golden Gladecress

As required by section 4(b)(2) of the Act, we used the best scientific and commercial data available to designate critical habitat. We reviewed available information pertaining to the habitat requirements of this species. In accordance with the Act and its implementing regulation at 50 CFR 424.12(e), we considered whether designating additional areas—outside those currently occupied as well as those occupied at the time of listing—are necessary to ensure the conservation of the species. We are not designating any areas outside the geographical area occupied by the species because occupied areas are sufficient for the conservation of the species.

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

To guide what would be considered needed for the conservation of the species, we relied upon recommendations in a conservation plan for the San Augustine Glades developed by The Nature Conservancy of Texas (TNC 2003, p. 8). This served as a basis for the number of populations considered necessary for the conservation of Texas golden gladecress. This plan came from The Nature Conservancy's structured conservation planning process that relied on a science team with expertise in the habitats and flora of East Texas. The plan was developed with input from representative experts from academia, botanical institutions, and Federal and State agencies. We consider this plan the best available scientific information to determine what is essential for the conservation of the Texas golden gladecress.

This conservation plan concluded that at least eight viable (self-sustaining, ecologically functioning) populations of Texas golden gladecress, containing an average of 500 individuals each, at least one out of every five years, was the

target conservation goal for the species (TNC 2003, pp. 8, 12). We currently know of three extant populations that have been monitored as recently as 2012, and a fourth population site that we consider to still be in existence because the habitat has not been destroyed, within the areas occupied by the species (see ''Mapping Texas Golden Gladecress Critical Habitat'' section below for how we mapped the occupied areas). We used information provided by a TPWD botanist to evaluate whether the four areas might be sufficient to support eight viable populations of the species (Singhurst 2012a, pers. comm.; Singhurst 2012b, pers. comm.). The maps provided by this species expert identified potential glades within these areas by using: soil map units; a time series of aerial photographs that depicted changes in land cover; and personal experience and expertise with the species, the habitat, and this area of East Texas (Singhurst 2012b, pers. comm.). These sites occur in discrete areas across the entire historic range of the species and include sites that represent the different landscape settings (open, rocky, grazed pasture on seasonally seepy Weches outcrops at Caney Creek Glade Site 1; on very small, scattered exposures of glauconite within a more dense cover of herbaceous species at the Chapel Hill site; and in an open, grazed glade at the Geneva site) and soil types (Nacogdoches, Trawick, and Bub soil series) that have been historically documented at Texas golden gladecress occurrences.

Based on this analysis and our site visits, we determined that the occupied areas contain suitable habitat (with special management) to expand current populations and support additional populations of Texas golden gladecress to meet the conservation goals for the species. We judge there to be suitable sites within the occupied areas that can be used for natural expansion of existing populations or possible future augmentation if needed and advised during future recovery planning and implementation. The habitat in the four occupied areas is sufficient for attaining the goal of eight viable populations throughout the geographic range of the species. Therefore, additional areas as critical habitat outside of the currently occupied geographic areas would not be essential for the conservation of the species, and we have not identified any additional areas.

Areas Occupied by the Texas Golden Gladecress

As required by section 3(5)(A)(i) of the Act, for the purpose of designating critical habitat for Texas golden gladecress, we defined the geographic area currently occupied by the species. Generally, we define occupied areas as those where recent surveys in 2012 confirmed the species was present (Singhurst 2012f, pers. comm.). For one area, occupancy by the species has not been confirmed since 1988 (TXNDD 2012b, entire); however, there have been no recent surveys due to lack of access to the properties. For the purposes of designation of critical habitat, we are considering this area to be currently occupied because the species was known from this area in the past and the habitat conditions that support the species appear intact (based on aerial imagery), except for the growth of some woody vegetation in some areas. In total, we found four areas currently occupied by the Texas golden gladecress at the time it is listed.

Areas Unoccupied at the Time of Listing

We considered whether there were any specific areas outside the geographic area found to be occupied by the Texas golden gladecress that are essential for the conservation of the species as required by section 3(5)(A)(ii) of the Act. We evaluated whether there was sufficient area for the conservation of the species within the occupied areas determined above. As a result of that evaluation, we concluded that the habitat within the four occupied areas is sufficient for attaining the goal of eight viable populations throughout the geographic range of the species. Therefore, additional areas as critical habitat outside of the currently occupied geographic areas would not be essential for the conservation of the species and we have not identified any areas that were unoccupied at the time of listing.

Mapping Texas Golden Gladecress Critical Habitat

To determine the boundaries of critical habitat units around the species areas occupied by the species, we used a geographic information system (GIS) to overlay the appropriate soil maps over the occupied areas. The Texas golden gladecress is restricted to the Weches Formation, being found on only three soil map units: Nacogdoches clay loam 1–5 percent slope (NeE); Trawick gravelly clay loam 5–15 percent slope (TuD); and Bub clay loam 2–5 percent slope (BuB). We drew the boundaries around contiguous segments of these soil mapping units from the online San Augustine and Sabine County's soils survey (*http://WebSoilSurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx*) encompassing the occupied areas to form the boundary of the four critical units by using the edge of the soil type layer.

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

The critical habitat designation is defined by the map or maps, as modified by any accompanying regulatory text, presented at the end of this document in the rule portion. We include more detailed information on the boundaries of the critical habitat designation in the preamble of this document. We will make the coordinates or plot points or both on which each map is based available to the public on *http://www.regulations.gov* at Docket No. FWS–R2–ES–2013–0027, on our Internet sites *http://www.fws.gov/southwest/es/ElectronicLibrary/ElectronicLibrary_Main.cfm,* and at the field office responsible for the designation (see **FOR FURTHER INFORMATION CONTACT** above).

We are designating as critical habitat lands that we have determined are occupied at the time of listing and contain sufficient physical or biological features to support life-history processes essential for the conservation of the Texas golden gladecress.

Four units were designated based on sufficient elements of physical or biological features being present to support Texas golden gladecress life processes. Some units contained all of the identified elements of physical or biological features and supported multiple life processes. Some units contained only some elements of the physical or biological features necessary to support the Texas golden gladecress particular use of that habitat.

Final Critical Habitat Designation for Texas Golden Gladecress

We are designating four units as critical habitat for Texas golden gladecress. The critical habitat areas described below constitute our best assessment at this time of areas that meet the definition of critical habitat. Those four units are: (1) Geneva; (2) Chapel Hill; (3) Southeast Caney Creek Glades; and (4) Northwest Caney Creek Glades. The approximate area of each critical habitat unit is shown in Table 2.

TABLE 2—DESIGNATED CRITICAL HABITAT UNITS FOR TEXAS GOLDEN GLADECRESS

Critical habitat unit	Private ac (ha)	State ac (ha)	Total size of all units ac (ha)
1. Geneva	381 (154)	7(3)	388 (157)
2. Chapel Hill	147 (59)	3 (1)*	150 (61)
3. Southeast Caney Creek Glades	37 (15)	3 (1)	40 (16)
4. Northwest Caney Creek Glades	767 (310)	8 (4)	775 (314)
TOTAL	1,332 (539)	21 (9)	1,353 (548)

*County owned.
Note: Area sizes may not sum due to rounding.

We present brief descriptions of all units, and the reasons why they meet the definition of critical habitat for Texas golden gladecress, below.

Unit 1: Geneva

Unit 1 consists of 388 ac (157 ha) of private and State land located in northwest Sabine County, Texas. The unit is located 1.5 mi (2.3 km) south of Geneva, Texas, and 4.8 mi (7.7 km) north of Milam, Texas, and is bisected by SH 21. This unit is occupied at the time of listing and contains some of the physical or biological features essential to the conservation of the species, including open, sunny areas of Weches outcrops (glauconite exposures); some native Weches glade plant species characteristic of Texas golden gladecress sites (see Table 1); and Nacogdoches and Trawick soils. Approximately 2 percent (7.3 ac (3 ha)) of the land is State-owned and managed TXDOT ROW, and the Geneva Site Texas golden gladecress population occurs, in part, within this ROW. The remaining 98 percent of the land is privately owned. The area directly adjacent to the ROW Texas golden gladecress population has been cleared of woody vegetation within the recent past but is not fenced, so future land use is unknown. The geology and soils (primary constituent element 1 and 2) occur throughout the unit and aerial photography indicates that at least three other small, scattered open glades (as identified by TPWD) occur within the critical habitat unit.

The physical or biological features essential to the conservation of the species in this unit may require special management considerations or protection to address threats of woody plant invasion into open glades, possible changes in land use, including planting of loblolly or long-leaf pine to establish tree plantations, potential agricultural herbicide use to control woody plants, and destruction of the features by excavation, pipeline construction, or buildings.

Unit 2: Chapel Hill

Unit 2 consists of 150 ac (61 ha) of privately owned land, with one county road ROW, in northwestern San Augustine County, Texas. This unit is located 1.0 mi (1.6 km) south of SH 21, due west of the San Augustine-Sabine County line, and lies alongside County Road (CR) 151. This unit is linear in shape, running from southeast to northwest. Aside from CR 151, all other land in Unit 2 is privately owned. Current land cover appears to be approximately 70 percent woody cover; much of the forest being rows of pine trees. This unit was occupied at the time of listing by a population that grows on a privately owned, unfenced tract of land that measures approximately 0.25 ac (0.1 ha) in size. The geology and soils primary constituent elements occur throughout the unit, and aerial photography indicates that at least two other small, scattered, open glades (as identified by TPWD) occur within the critical habitat unit.

The features essential to the conservation of the species in this unit may require special management considerations or protection to address threats of woody plant invasion into open glades throughout the unit, conversion of pasture to pine plantations, pipeline construction, and herbicide application.

Unit 3: Southeast Caney Creek Glades

Unit 3 consists of 39.9 ac (16.2 ha) just southeast of the City of San Augustine, San Augustine County, Texas. Approximately 99 percent of the land within this unit is privately owned, with the other 1 percent being county ROW under the management of TXDOT. This unit is located 0.8 mi (1.2 km) south from SH 21 near San Augustine, Texas, along the north side of FM 3483. This unit is located across Sunrise Road from a glauconite quarry. The presence of the Texas golden gladecress plants at this site was last confirmed in the late 1980's. The glade at this population site was described as being intact in 1996 by a forestry consultant, who subsequently revisited the site in 2000 and noted that invasive plants were encroaching into the glade (Walker 2012, pers comm., p. 4). Based on these records from the site, and the lack of alteration to the substrate as assessed from remote imagery, we determined that the site still contains all the physical or biological features; therefore, we consider the unit occupied at the time of listing.

The features essential to the conservation of the species in this unit may require special management considerations or protection to address threats of woody plant invasion into the natural prairie and glade habitat, and pipeline construction.

Unit 4: Northwest Caney Creek Glades

Unit 4 consists of 775.3 ac (313.7 ha) that extends in a diagonal line from northeast to southwest, to the north and south of SH 21 just east of the City of San Augustine, San Augustine County, Texas. The unit is approximately 0.7 mi (1.1 km) wide. This unit is occupied at the time of listing. The geology and soils primary constituent elements occur throughout the unit and aerial photography indicates that at least five other small, scattered, open glades (as identified by TPWD) occur within the critical habitat unit. Approximately 1

percent (7.8 ac) of the land is State-owned and managed ROW by the TXDOT. The remaining 99 percent is privately owned. Approximately 75–80 percent of the southern portion of Unit 4 is forested. Historically, this unit was occupied by four of the eight known occurrences of Texas golden gladecress; however, three of the four have been lost to glauconite quarrying activities.

The features essential to the conservation of the species in this unit may require special management considerations or protection to address threats of glauconite mining, woody plant invasion into the natural prairie and glade habitat, and pipeline construction.

Physical or Biological Features Neches River Rose-Mallow

We derive the specific physical or biological features essential for Neches River Rose-mallow from studies of this species' habitat, ecology, and life history as described in the Critical Habitat section of the proposed rule to designate critical habitat published in the **Federal Register** on September 11, 2012, (77 FR 55968), and in the information presented below. Additional information can be found in the final listing rule published in today's **Federal Register**. We have determined that Neches River rose-mallow requires the following physical or biological features:

Space for Individual and Population Growth and for Normal Behavior

Neches River rose-mallow is endemic to open habitats in wetlands of the Pineywoods of East Texas (Gould 1975, p. 1; Correll and Johnston 1979, p. 1). The Neches River rose-mallow is found within seasonally flooded river floodplains as described by Diggs *et al.* (2006), where the natural bottomlands occupy flat, broad portions of the floodplains of major rivers and are seasonally inundated. Associated flood-tolerant species in this habitat include of *Quercus* sp. (oak), *Liquidambar styraciflua* (sweetgum), *Ulmus americana* (American elm), *Nyssa biflora* (swamp tupelo), and *Acer rubrum* (red maple) (Diggs *et al.* 2006, p. 103). Habitat is characterized as sloughs, oxbows, terraces, and sand bars, and habitat found along depressional or low-lying areas of the Neches, Sabine, and Angelina River floodplains and Mud and Tantabogue Creek basins (Warnock 1995, p. 11). Sites include both intermittent and perennial wetlands with plants located within 3.2 ft (1.0 m) of standing water, depending on current drought and precipitation levels (Warnock 1995, p. 14). Water levels at each site are variable, depending on proximity to water, amount of rainfall, and floodwaters. Habitat elevations range from 170 to 265 ft (51–80 m) above sea level (Warnock 1995, p. 13).

Warnock (1995) noted that seed dispersal is likely by water and Scott (1997, p. 5) also stated that seed dispersal appears to be entirely water dependent. While water-mediated seed dispersal of the Neches River rose-mallow is highly likely, it is not known that flowing water is required for downstream dispersal of Neches River rose-mallow seeds. Rivers of East Texas tend to overflow onto banks and floodplains (Diggs *et al.* 2006, p. 78), especially during the rainy season, thereby providing an avenue for seed dispersal. Research has not been done to identify methods of seed dispersal upstream; however, avian species may facilitate this process.

Based on the best scientific and commercial data, we identify intermittent and perennial, open waters in the Neches, Sabine, Angelina River basins and Mud and Tantabogue Creeks, with areas of seasonal or permanent inundation with native woody vegetation, as an essential physical or biological feature for the species.

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

The Neches River rose-mallow is typically found in open, flat areas of wetlands with hydric, alluvial soils of the Inceptisol or Entisol orders (Gould 1975, p. 10; Warnock 1995, pp. 11, 13; Diggs *et al.* 2006, pp. 46, 79) that are frequently associated with flooded clay loams. Although the soils are generally water-saturated, they can often be surficially dry. Intermittent wetlands are inundated during the winter months but become dry during the summer months (Warnock 1995, p. 11). Rivers of East Texas tend to overflow onto banks and floodplains (Diggs *et al.* 2006, p. 78), especially during the rainy season, thereby dispersing seed. Precipitation in Texas increases from the west to the east, making East Texas an area with comparatively higher annual precipitation, generally ranging from 35 to 50 in (89–127 cm) (Gould 1975, p. 10).

Many wetland species, including the Neches River rose-mallow, are adapted to highly variable rates of water flow, including seasonal high and low flows, and occasional floods and droughts. Normal habitat conditions include a cyclical pattern of wet winters and dry summers so the Neches River rose-mallow may have some tolerance of drought; however, the species may not be able to thrive in an environment with a higher frequency and intensity of droughts. Periods of drought may increase the susceptibility of sites to soil compaction from hogs and cattle, invasion from nonnative species, and herbivory. Optimal habitat conditions for Neches River rose-mallow include intermittent or perennial wetlands that can be variable throughout the year, often becoming surficially dry during the summer and wet during the winter or might be exposed to water year-round.

Regarding the Neches River rose-mallows' light requirements, an open canopy is typical within Neches River rose-mallow habitat (Warnock 1995, pp. 11, 13), but plants also grow in partial sun (as is the case at SH 204 ROW). Sunlight is needed for blooming as the blooming period may only last 1 day (Snow and Spira 1993, p. 160).

The growth of woody and weedy vegetation was historically maintained by natural fires that would occur every 1 to 3 years in East Texas (Landers *et al.* 1990, p. 136; Landers 1991, p. 73) thereby controlling the overgrowth of longleaf and loblolly pine, as well as nonnative species. Humans later used fire to suppress overgrowth; however, in the more recent past, human's active fire suppression has allowed native species including sweetgum, oaks, *Carya* sp. (hickories), *Diospyros virginiana* (common persimmon), and *Magnolia grandiflora* (southern magnolia) to invade the natural pine forests (Daubenmire 1990, p. 341; Gilliam and Platt 1999, p. 22) and this woody overgrowth has reduced the open canopy needed by the Neches River rose-mallow. Lack of fire increases the opportunity for nonnative species, such as *Triadica sebifera* (Chinese tallow), to invade these sites and this invasion has become one of the most significant threats to the Neches River rose-mallow. Lack of fire has provided increased opportunities for this species to invade all Neches River rose-mallow sites.

Therefore, based on the information above, we identify hydric alluvial soils of seasonally or permanently inundated wetlands and native woody or associated herbaceous vegetation, largely with an open canopy providing partial to full sun exposure with low levels or no nonnative species to be a physical or biological feature for the Neches River rose-mallow.

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

The Neches River rose-mallow likely has similar seed buoyancy and seed dispersal mechanisms to *Hibiscus*

moscheutos whose seeds can remain buoyant for several hours (Warnock 1995, p. 20; Scott 1997, p. 8; Reeves 2008, p. 3) and for which seed dispersal appears to be entirely water dependent (Scott 1997, p. 5). Given this information and that Neches River rose-mallow prefers depressional or palustrine areas, seed dispersal into sloped areas with higher elevations, like uplands, is not anticipated. Downstream or adjacent portions of streams or creeks of occupied Neches River rose-mallow sites may provide connectivity and new opportunities for reproduction. Long-distance seed dispersal ranges and upstream dispersal methods are unknown, but may be facilitated by avian species. Therefore, we identify flowing water as the likely agent for seed dispersal to adjacent or downstream habitat as a physical or biological feature for the Neches River rose-mallow.

The Neches River rose-mallow is a perennial that dies back to the ground every year and resprouts from the base; however, still maintaining aboveground stems. Longevity of the species is unknown, but it may be long-lived. Cross-pollination occurs (Blanchard 1976, p. 38) within the Neches River rose-mallow populations and the species has high reproductive potential (fecundity). The number of flowers and fruits per plant were documented during the TPWD's annual monitoring of the Neches River rose-mallow along SH ROWs. The species produced an average of 50 fruits per plant, but seed viability and survivorship are not known (Poole 2012a, pers. comm.).

Potential pollinators of the Neches River rose-mallow may include, but are not limited to, the common bumblebee (*Bombus pensylvanicus),* Hibiscus bee (*Ptilothrix bombiformis),* moths, and the scentless plant bug *Niesthrea louisianica* (Klips 1995, p. 1471; Warnock 1995, p. 20; Warriner 2011, pers. comm.). Both *H. laevis* and *H. moscheutos* are pollinated by common bumblebees and the Hibiscus bee (Snow and Spira 1993, p. 160; Klips 1999, p. 270). The solitary Hibiscus bee prefers gently sloping or flat areas with sandy or sandy-loam soils for nesting areas (Vaughan *et al.* 2007, pp. 25–26; Black *et al.* 2009, p. 12), and female bees will excavate nest cavities in elevated, hard packed dirt roadways or levees near stands of *Hibiscus* (in this case *H. palustris*) and standing water (Rust 1980, p. 427).

Members of the genus *Bombus* (family Apidae) are social bees, predominantly found in temperate zones, nesting underground (Evans *et al.* 2008, p. 6) in sandy soils (Cane 1991, p. 407). Bumblebees nest in small cavities, often underground in abandoned rodent nests, grass (Black *et al.* 2009, p. 12), or in open, grassy habitat (Warriner 2012a, pers. comm.). Other aboveground-nesting bees that may potentially pollinate the Neches River rose-mallow may include carpenter, mason, and leaf cutter bees that nest in dead snags or twigs or standing dead wood (Warriner 2012a, pers. comm.). Maximum foraging distances of solitary and social bee species are 492 to 1,968 ft (150 to 600 m) (Gathmann and Tscharntke 2002, p. 762) and 263 to 5,413 ft (80 to 1,650 m) (Walther-Hellwig and Frankl 2000, p. 244), respectively. The scentless plant bug is a member of the *Rhopalidae* family found specifically in association with various members of the Malvaceae family. This species is known to deposit eggs on both the vegetative and reproductive parts of mallow plants (Spencer 1988, p. 421). Holes have been eaten in floral parts of Neches River rose-mallow plants suggesting that the scentless plant bug may be a pollinator as well as a consumer of the Neches River rose-mallow. Although we have some anecdotal information on the species' potential habitat as well as other *Hibiscus* species needs for pollination, we do not have specific information for the Neches River rose-mallow. Therefore, the physical or biological features for the Neches River rose-mallow were not based on the current pollinator information.

Habitats Protected From Disturbance or Representative of the Historical, Geographic, and Ecological Distributions of the Species

The natural geographic range of the Neches River rose-mallow is within Trinity, Houston, Harrison, and Cherokee Counties, Texas. In addition, populations of Neches River rose-mallow have been introduced within their natural geographic range on Federal lands in Houston County and on private land in Nacogdoches County. In total, there are 12 occurrences of Neches River rose-mallow; however, 11 of these are within the known geographic range of the species, and, as of October 2011, are considered occupied by the Neches River rose-mallow.

Several Neches River rose-mallow populations are found along SH ROWs, including SH 94 in Trinity County, SH 204 in Cherokee County, and SH 230 in Houston County. These populations are separated from one another and are considered distinct. Adjacent lands to the SH 230 ROW were purchased by the Texas Land Conservancy in 2004 (The Texas Land Conservancy 2011), an organization previously known as the Natural Areas Preservation Association. The Neches River rose-mallow plants in this site, referred to as Lovelady, are part of the population that included the Neches River rose-mallow plants in the SH 230 ROW. In the past, several subpopulations existed along multiple portions of the SH 204 ROW, however several of these subpopulations were not found in 2011 even though recent drought conditions have allowed surveyors to count Neches River rose-mallow plants in parts of sites that were not accessible in the past because the sites were too wet.

The Davy Crockett NF, Houston County, Texas, contains four extant sites of the Neches River rose-mallow; three introduced and one natural. The one natural population is found in Compartment 55 located west of the Neches River. This site is considered the most robust of all known extant populations (Poole 2011c, p. 3) and is almost entirely unaltered from its originally observed state as a seasonally wet, flatwood pond, with vegetation being distinctly zoned (TXNDD 2012a, p. 29).

The remaining Neches River rose-mallow sites are primarily on private land, although in several places they extend onto SH ROW. These include the (1) Mill Creek Gardens (also known as Hayter Blueberry Farm), Nacogdoches County; (2) Harrison County site in Harrison County; (3) Camp Olympia, Trinity County; (4) Champion, Trinity County. Portions of Lovelady (adjacent to SH 230 ROW), Houston County, and Boggy Slough (also part of SH 94 ROW), Trinity County, are also on private land. The Mill Creek Gardens population was introduced by the Stephen F. Austin State University Mast Arboretum who planted 96 Neches River rose-mallow plants at this site (Scott 1997, pp. 6–7). The Boggy Slough site consists of several scattered Neches River rose-mallow subpopulations that are located in close proximity to one another. The Boggy Slough subpopulations and the SH 94 ROW population are separated by no more than 1.0 km (3,280 ft) and these two sites likely constitute a single, larger population, sharing pollinators, and exchanging genetic material (NatureServe 2004, p. 6; Poole 2011c, p. 2). One property was purchased in 2004 by The Texas Land Conservancy (The Texas Land Conservancy 2011), this site is referred to as Lovelady. The site at Harrison County, Camp Olympia, and Champion were not observed in 2011; however, using aerial imagery and the best scientific and commercial data available we determined that these sites contain the physical or biological

features essential to the Neches River rose-mallow.

East Texas is subtropical with a wide range of extremes in weather (Diggs *et al.* 2006, p. 65). The native vegetation of this region evolved with, and is adapted to, recurrent temperature extremes (Diggs *et al.* 2006, p. 67). The Pineywoods region of East Texas is vulnerable to even small climatic shifts because it is ''balanced'' on the eastern edge of a dramatic precipitation gradient. Temperature increases that are projected in climate change scenarios will likely be associated with increases in transpiration and more frequent summer droughts. Decreased rainfall may result in an eastward shift in the forest boundary and replacement of the Pineywoods forest with scrubland (Diggs *et al.* 2006, p. 80). There may also be a northerly shift of southerly species based on climate models that predict increasing temperatures and, therefore, increasing evapotranspiration and decreasing regional precipitation and soil moisture (Diggs *et al.* 2006 p. 73). In October 2011, the Service observed that all known Neches River rose-mallow sites were impacted by extreme drought conditions.

Predictions of climate change are variable, and effects from climate change on the Neches River rose-mallow are not fully understood. The information currently available on the effects of global climate change and increasing temperatures does not make sufficiently precise estimates of the location and severity of the effects specific to East Texas. Further, we are not currently aware of any climate change information specific to the habitat of the Neches River rose-mallow that would indicate what areas may become important to this species in the future. Therefore, we are not identifying any areas outside of those currently occupied as areas that may be suitable for Neches River rose-mallow due to the effects of climate change.

Primary Constituent Elements for Neches River Rose-Mallow

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

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

(1) Intermittent or perennial wetlands within the Neches, Sabine, and Angelina River floodplains or Mud and Tantabogue Creek basins that contain:

(a) Hydric alluvial soils and the potential for flowing water when found in depressional sloughs, oxbows, terraces, side channels, or sand bars;

(b) Native woody or associated herbaceous vegetation, largely with an open canopy providing partial to full sun exposure with low levels or no nonnative species.

With this designation of critical habitat, we intend to identify the physical or biological features essential to the conservation of the species, through the identification of the features' primary constituent elements sufficient to support the life-history processes of the species.

Special Management Considerations or Protection for Neches River Rose-Mallow

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

Threats to those features that define the primary constituent elements for the Neches River rose-mallow include: (1) Alteration of naturalized flow regimes through projects that require channelization; (2) water diversions or hydrologic change to streams and rivers; (3) encroachment from native woody riparian species and nonnative species; (4) detrimental roadside management practices including inappropriate frequency and timing of mowing during the species' blooming period; (5) herbivory and, (6) trampling from hog and cattle; and (7) drought.

Special management considerations or protection are required within critical habitat areas to address these threats. Special management activities that could ameliorate these threats include, but are not limited to:

- Construction of cattle exclusion fencing to remedy herbivory at Lovelady to maintain plant survival and suitable habitat;
- Restoration of the cattle stock pond back to a natural flatwoods pond at Lovelady to restore the sites hydrology;
- Coordination with TXDOT to establish and continue effective management along ROWs for control of native woody species and nonnatives (including, but not limited to mowing, brush-hogging, or other hand-clearing techniques) and completion of these techniques only during the appropriate life stages of the Neches River rose-mallow to maintain open habitat;
- Coordination with the Angelina and Neches River Authority and consultation with the U.S. Army Corps of Engineers on the proposed construction of Lake Columbia Reservoir in Cherokee County to maintain hydrology at the downstream Neches River rose-mallow site;
- Consultation between the Service and the U.S. Army Corps of Engineers for any filling or draining of Federal jurisdictional wetlands to ensure maintenance of hydrology; and
- Clearing or burning on the Davy Crockett NF for control of Chinese tallow and to maintain an adequate level of openness in habitat.

Criteria Used To Identify Critical Habitat for Neches River Rose-Mallow

As required by section 4(b)(2) of the Act, we use the best scientific data available to designate critical habitat. We reviewed all available information pertaining to the habitat requirements of the species. In accordance with the Act and its implementing regulation at 50 CFR 424.12(e), we also considered whether designating additional areas—outside those currently occupied as well as those occupied at the time of listing—are necessary to ensure the conservation of the species. We are not designating any areas outside the geographic area currently occupied by the species because we found that the currently occupied areas are sufficient for the conservation of the species.

Areas Occupied by the Neches River Rose-Mallow

For the purpose of designating critical habitat for the Neches River rose-mallow, we defined the geographic area currently occupied by the species as required by section 3(5)(A)(i) of the Act. Generally, we define occupied areas based on the most recent field surveys available in 2011 and recent reports and survey information from the Davy Crockett NF, TPWD, TXDOT, and observations by species experts (Miller 2011, pers. comm.; TXNDD 2012a, entire). Currently occupied areas for the Neches River rose-mallow are found in Trinity, Houston, Cherokee, Nacogdoches, and Harrison Counties in East Texas.

In total, we found 11 areas currently occupied by the Neches River rose-mallow. Two of these areas have not been verified since the late 1970s and

mid-1990s. However, the best available scientific and commercial data does not indicate that these sites have been modified such that they no longer have the physical or biological features essential for the Neches River rose-mallow, so we consider them still occupied. Four of the critical habitat units currently occupied are introduction sites, three of which are located on Davy Crockett NF compartments and one is located at Mill Creek Gardens. The remaining five units support existing populations of Neches River rose-mallow and the plants were observed at each of these nine areas in 2011 (Creech 2011b, pers. comm.; Miller 2011, pers. comm.; TXNDD 2012a, entire).

To guide what would be considered needed for the conservation of the species, we relied upon Pavlik's 1996 (pp. 127–155) Minimum Viable Population analysis tool, using the best scientific and commercial data on the species' life history and reproductive characteristics and input from a species expert (Poole 2012a, pers. comm.). Based on this analysis, we concluded that at least 10 viable populations of the rose-mallow, containing an average of about 1,400 individuals each, was the conservation goal for the species.

We considered whether the 11 occupied areas contained sufficient habitat to meet these conservation goals. Each area currently has one population, so the occupied areas are sufficient for the ten populations needed. However, the overall estimates of the number of individuals in each population are low, with the largest population estimated to contain 750 individuals at compartment 55 in October 2010 (Allen and Duty 2010, p. 4). All of the known populations currently have much fewer individuals than the conservation goals. Considering the size and amount of suitable habitat in the areas occupied by the species (see ''Mapping Neches River Rose-mallow Critical Habitat'' section below for how we mapped the occupied areas), we found that the 11 areas contain suitable habitat (with special management) to support increased population sizes to meet the conservation goals for the species.

Based on this analysis and our site visits, we determined that the occupied areas contain suitable habitat (with future special management) to support larger populations of Neches River rose-mallow to meet the conservation goals for the species. We judge there to be suitable sites within the occupied areas that can be used for natural expansion of the populations during future recovery planning and implementation. The habitat in the 11 occupied areas is sufficient for attaining the goal of 10 viable populations throughout the geographic range of the species.

Areas Unoccupied by the Neches River Rose-Mallow

We considered whether there were any specific areas outside the geographic area found to be occupied by the rose-mallow that are essential for the conservation of the species, as required by section 3(5)(A)(ii) of the Act. We first evaluated whether there was sufficient area for the conservation of the species within the occupied areas determined above.

We acknowledge there is some contradicting evidence regarding occupancy status for 3 of the 11 Units designated as critical habitat for the Neches River rose-mallow. We maintain Units 2, 9, and 11 are occupied by the species based on the presence of essential features and the absence of noticeable habitat disturbances since the last verifiable record of the species in each area. However, we alternatively designate Units 2, 9, and 11 under section 3(5)(A)(ii) of the Act because we consider them to be essential for the conservation of the Neches River rose-mallow, regardless of occupancy data. Including these units in the designation of critical habitat for the Neches River rose-mallow aligns with the conservation strategy for this species.

Based on the Minimum Viable Population analysis and our site visits to the Neches River rose-mallow sites in 2011, we determined that the occupied areas contain suitable habitat (with future special management) to support larger populations of Neches River rose-mallow to meet the conservation goals for the species. The habitat in the 11 occupied areas is sufficient for attaining the goal of 10 viable populations throughout the geographic range of the species. Therefore, identifying additional areas as critical habitat outside of the currently occupied geographic areas would not be essential for the conservation of the species, and we have not identified any additional areas.

Mapping Neches River Rose-Mallow Critical Habitat

Once we determined the occupied areas, we next delineated the primary constituent elements. We estimated the area of habitat based on several key features determined through our 2011 field surveys and in past reports on habitat requirements. Since the Neches River rose-mallow prefers depressional or palustrine areas, we used topographic maps to identify habitat within uplands or habitat that exhibited changes in slope where the species was not anticipated to occur due to lack of hydric soils and where seeds were not likely to be dispersed due to a lack of flowing water (i.e., the uplands). National Wetland Inventory (NWI) maps were used to determine habitat types within palustrine systems. All areas, when mapped with this layer in GIS, were associated with emergent, forested, or scrub-shrub, with one area having an undetermined bottom (open water). All critical habitat units are seasonally, permanently, or semi-permanently flooded, which is consistent with our observations and available data. Due to the high variation of alluvial and hydric soils of Neches River rose-mallow habitat, specific soil types were not mapped during this analysis but are still a general wetland indicator.

To determine the boundaries of critical habitat units around the areas occupied by the species, we focused primarily on available canopy openness. We used topographic and NWI maps for confirmation of suitable habitat, then used aerial imagery available through Google Earth to determine dense cover in the habitat. We drew boundaries around the open areas that delineate the outer boundary of our critical habitat units. Critical habitat boundaries did not expand into heavily forested areas because those areas are generally too shady for the Neches River rose-mallow and were therefore not included.

When determining critical habitat boundaries, we made every effort to avoid including developed areas covered by manmade structures including: Buildings; bridges; aqueducts; runways; roads; well pads; metering stations; other paved areas; unpaved roads; and the filled areas immediately adjacent to pavement. These structures lack the physical or biological features essential to the Neches River rose-mallow. The scale of the maps we prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed lands, as is the case with Unit 4, where the Neches River rose-mallow is known to occur in habitat beneath the SH 204 ROW overpass in areas that receive some sun. Any such lands inadvertently left inside critical habitat boundaries shown on the maps of this final rule have been excluded by text in the final rule and are not designated as critical habitat. Therefore, a Federal action involving these lands would not trigger section 7 consultation with respect to critical habitat and the requirement of no adverse modification unless the specific action would affect the physical

or biological features in the adjacent critical habitat.

The critical habitat designation is defined by the map or maps, as modified by any accompanying regulatory text, presented at the end of this document in the rule portion. We include more detailed information on the boundaries of the critical habitat designation in the preamble of this document. We will make the coordinates or plot points or both on which each map is based available to the public on *http://www.regulations.gov* at Docket No. FWS–R2–ES–2013–0027, on our Internet sites *http://www.fws.gov/southwest/es/ElectronicLibrary/ElectronicLibrary_Main.cfm,* and at the field office responsible for the designation (see **FOR FURTHER INFORMATION CONTACT** above).

We are designating as critical habitat lands that we have determined are occupied at the time of listing and contain sufficient physical or biological features essential in supporting life-history processes essential in the conservation of the Neches River rose-mallow that may require special management.

Eleven units were designated based on sufficient elements of physical or biological features being present to support the Neches River rose-mallow life processes. Some units contained all of the identified elements of physical or biological features and supported multiple life processes. Some units contained only some elements of the physical or biological features necessary to support the Neches River rose-mallow particular use of that habitat.

Final Critical Habitat Designation for Neches River Rose-mallow

We are designating 11 units as critical habitat for Neches River rose mallow. The critical habitat areas described below constitute our best assessment at this time of areas that meet the definition of critical habitat. Those 11 units are (1) SH 94 ROW, Trinity County; (2) Harrison County; (3) Lovelady, Houston County; (4) SH 204 ROW, Cherokee County; (5) Davy Crockett NF, Compartment 55, Houston County; (6) Davy Crockett NF, Compartment 11, Houston County; (7) Davy Crockett NF, Compartment 20, Houston County; (8) Davy Crockett NF, Compartment 16, Houston County; (9) Champion, Trinity County; (10) Mill Creek Gardens, Nacogdoches County; and (11) Camp Olympia, Trinity County. The approximate area of each critical habitat unit is shown in Table 3.

TABLE 3—CRITICAL HABITAT UNITS FOR THE NECHES RIVER ROSE-MALLOW

Critical habitat unit	Private ac (ha)	State ac (ha)	Federal ac (ha)	Size of Unit ac (ha)
1. SH 94 ROW/Boggy Slough	2.3 (0.9)	1.1 (0.5)	0	3.4 (1.4)
2. Harrison County	20.8 (8.4)	0	0	20.8 (8.4)
3. Lovelady/(Near SH 230 ROW)	6.3 (2.5)	0	0	6.3 (2.5)
4. SH 204 ROW	0	8.7 (3.5)	0	8.7 (3.5)
5. Davy Crockett NF, Compartment 55	0	0	3.8 (1.5)	3.8 (1.5)
6. Davy Crockett NF, Compartment 11	0	0	7.3 (3.0)	7.3 (3.0)
7. Davy Crockett NF, Compartment 20	0	0	3.4 (1.4)	3.4 (1.4)
8. Davy Crockett NF, Compartment 16	0	0	32.8 (13.3)	32.8 (13.3)
9. Champion	2.9 (1.2)	0	0	2.9 (1.2)
10. Mill Creek Gardens (emergency spillway)	95.3 (38. 6)	0	0	95.3 (38. 6)
11. Camp Olympia	0.2 (0.1)	0	0	0.2 (0.1)
Total Acreages for All Critical Habitat Units:	.....	.....	.....	166.5 (67.0)

Note: Area sizes may not sum due to rounding.

We present brief descriptions of all units, and reasons why they meet the definition of critical habitat for the Neches River rose-mallow, below.

Unit 1: SH 94 ROW

Unit 1 consists of 3.4 ac (1.4 ha) on both the 94 ROW and on private land in Trinity County. The unit was occupied at the time of listing and contains the physical or biological features essential to the conservation of the species: a wetland with hydric alluvial soils with the potential for flowing water and in some places, an open canopy with partial to full sun exposure. The unit parallels SH 94 for 0.1 mi (0.2 km) to the north, beginning about 0.06 mi (0.09 km) from the now abandoned rest stop. From the easternmost boundary, Unit 1 then extends onto private lands (about 0.06 mi (0.09 km)) where it ends, abutting a drainage ditch and levee. The unit parallels the ditch for about 0.8 mi (1.3 km) until vegetation becomes thick and the canopy cover increases. SH 94 ROW was first observed in 1955 with only herbarium specimens collected, and in 1968, over 100 plants were counted (TXNDD 2012a, pp. 1–11). A total of 128 plants were counted in October 2011. Unit 1 is optimal habitat for the Neches River rose-mallow as indicated by the abundance of individual plants observed in fall 2011 despite drought conditions.

The features essential to the conservation of the species in Unit 1 may require special management considerations or protection to address the threats of: hydrologic changes on the private lands, management of nonnative species and native woody vegetation, and appropriate timing and frequency of mowing and maintenance along the ROW.

Unit 2: Harrison County

Unit 2 is found at a location between 0.2–0.4 mi (0.3–0.6 km) north of Farm to Market Road 2625 in Harrison County. The unit was occupied at the time of listing and contains the physical or biological features essential to the conservation of the species. A specimen of the Neches River rose-mallow was first collected from the site in 1980 by Elray Nixon from SFASU and was originally thought to be *H. laevis;* however, the specimen was recently reexamined and confirmed as the Neches River rose-mallow (TXNDD 2012a, p. 12). Warnock (1995) provided only generic coordinates for the location of this site, but, using aerial photography, we were able to determine the location of this unit. Unit 2 is composed of 8.4 ha (20.8 ac) of occupied habitat entirely on private land. The physical or biological features

essential to the conservation of the species include the large wetland or pond on hydric alluvial soils and open canopy.

The features essential to the conservation of the species in Unit 2 may require special management considerations or protection to address the threats of management of nonnative species and native woody vegetation, and maintenance of natural hydrology of the wetland.

As noted above, there is contradicting evidence regarding the occupancy of Unit 2. However, Unit 2 contains the physical or biological features essential to the conservation of the Neches River rose-mallow and these features support life-history characteristics of the species (such as palustrine wetland habitat and native woody vegetation with an open canopy). The presence of these traits and the absence of noticeable habitat disturbances makes it likely that this unit remains occupied, despite the last verified record of this species being from the late 1980's, and therefore it meets the definition of critical habitat under section 3(5)(A)(i) of the Act because it is within the geographical area occupied by the species at the time of listing. However, we alternatively designate Unit 2 under section 3(5)(A)(ii) of the Act because we consider the unit to be essential for the conservation of the Neches River rose-mallow, regardless of occupancy data. Including this unit in the designation of critical habitat for the Neches River rose-mallow aligns with the conservation strategy for this species. We have determined that the species requires a minimum of 10 populations and that the occupied areas contain suitable habitat (with future special management) to support larger populations of Neches River rose-mallow to meet the conservation goals for the species. The habitat in the 11 units is sufficient for attaining the goal of 10 viable populations throughout the geographic range of the species. Thus, for the purposes of this rulemaking, we determine that Unit 2 meets the definition of critical habitat under section 3(5)(A)(i) or, alternatively, under section 3(5)(A)(ii) of the Act.

Unit 3: Lovelady

Unit 3 in Houston County, found northwest of Farm to Market 230, extends 0.3 mi (0.5 km) north and contains 6.3 ac (2.5 ha) of private land. The unit was occupied at the time of listing and contains the physical or biological features essential to the conservation of the species. The majority of land in Unit 3 belongs to the Texas Land Conservancy, who purchased the property in 2004 specifically for the conservation of the Neches River rose-mallow. This unit extends northward onto private lands where a known population of the Neches River rose-mallow was re-verified during a 2004 TXDOT survey. Essential biological features within Unit 3 include a depressional creek bed within Tantabogue Creek basin; inundation from overflow of the creek from the northwest or from rain events that may allow ponding in low-lying areas; open habitat with native woody vegetation; and frequently inundated alluvial soils.

The features essential to the conservation of the species in Unit 3 may require special management considerations or protection to address the following threats: Management of nonnative species and native woody vegetation; maintenance of natural hydrology of habitat and adjacent areas, including rebuilding the stock pond to mimic natural flow regimes; construction of a cattle-exclusion fence to restrict grazing; and long-term maintenance of Tantabogue Creek flows by obtaining a conservation easement or agreement.

Unit 4: SH 204 ROW

Unit 4 in Cherokee County contains 8.7 ac (3.5 ha) of occupied habitat along SH 204 ROW and within the Mud Creek basin. The unit was occupied at the time of listing and contains the physical or biological features essential to the conservation of the species. Unit 4 extends about 0.3 mi (0.5 km) from east to west and about 0.01 mi (0.02 km) from SH 204, on both the north and south sides of the highway, up to the private fence. Unit 4 also includes a 0.1 mi (0.2 km) section of the Mud Creek basin where Neches River rose-mallow could expand or where seeds could be dispersed. This site was first observed in 1992 with a single plant and since that time, a maximum number of 75 plants have been counted (in 1997). Since 2003, the Neches River rose-mallow has been observed underneath most of the overpass (TXNDD 2012a, pp. 20–28), in areas that did receive some level of sun (not completely shaded). Essential biological features of Unit 4 include its location within the Mud Creek basin, open habitat with full sun, and association with alluvial, hydric soils.

The features essential to the conservation of the species in Unit 4 may require special management considerations or protection to address the threats of management of nonnative species and native woody vegetation, maintenance of natural hydrology of the wetland, and appropriate timing and frequency of mowing and maintenance along the ROW.

Unit 5: Davy Crockett NF, Compartment 55

Unit 5 is the only unit that contains a natural population of the Neches River rose-mallow on Federal lands within the Davy Crockett NF. The unit was occupied at the time of listing and contains the physical or biological features essential to the conservation of the species. Occupied habitat of Unit 5 includes 3.8 ac (1.5 ha). An open flatwood or forested (Cowardin *et al.* 1979, p. 20) pond is surrounded by pine-oak forest. Unit 5 is 0.09 mi (0.14 km) in diameter and includes a palustrine flatwood pond and the surrounding open habitat. Essential habitat features of Unit 5 include its location within the Neches River basin, adjacent to a flatwood pond where water could be exchanged, surrounding native woody vegetation, and associated alluvial soils.

The features essential to the conservation of the species in Unit 5 may require special management considerations or protection to address the threats of management of nonnative species and native woody vegetation, maintenance and repair of habitat from hog damage, maintenance of natural hydrology of the wetland, and controlled use of herbicides.

Unit 6: Davy Crockett NF, Compartment 11

Unit 6 includes 7.3 ac (3.0 ha) of occupied habitat on Compartment 11 on Federal land in the Davy Crockett NF within Houston County. The unit was occupied at the time of listing and contains the physical or biological features essential to the conservation of the species. The SFASU introduced 200 plants into a seasonally flooded and low-lying wetland. Unit 6 is 0.2 mi (0.3 km) in diameter, and essential habitat features include a partially open, depressional pond surrounded by native vegetation.

The features essential to the conservation of the species in Unit 6 may require special management considerations or protection to address the threats of management of nonnative species and native woody vegetation, maintenance of natural hydrology of the wetland, maintenance and repair of habitat from hog damage, and controlled use of herbicides.

Unit 7: Davy Crockett NF, Compartment 20

Unit 7 includes 3.4 ac (1.4 ha) of Federal land in Compartment 20 of the

Davy Crockett NF, Houston County. The unit was occupied at the time of listing and contains the physical or biological features essential to the conservation of the species. The SFASU introduced 200–250 plants in 2000, and the site was occupied at the time of listing. Essential habitat features in this unit include the hydric alluvial soils, native woody vegetation, natural flows and hydrology of the draining pond, and an open canopy of the perennial wetland where the Neches River rose-mallow is located.

The features essential to the conservation of the species in Unit 7 may require special management considerations or protection to address the threats of management of nonnative species and native woody vegetation, maintenance of natural hydrology of the wetland, maintenance and repair of habitat from hog damage, and controlled use of herbicides.

Unit 8: Davy Crockett NF, Compartment 16

Unit 8 encompasses 32.8 ac (13.3 ha) of occupied Federal habitat in the Davy Crocket NF, Houston County. The SFASU introduced 450 plants at this site in 2000, but only 43 stem clusters were observed in 2011. The unit was occupied at the time of listing and contains the physical or biological features essential to the conservation of the species. Essential habitat and biological features include a partially open depressional wetland within the Neches River floodplain, native riparian plant associates, and alluvial soils.

The features essential to the conservation of the species in Unit 8 may require special management considerations or protection to address the threats of management of nonnative species and native woody vegetation, maintenance of natural hydrology of the wetland, restriction of wetland conversion to beaver dams, and controlled use of herbicides.

Unit 9: Champion

The Champion site, Trinity County, is located on private land approximately 0.7 mi (1.1 km) south-southeast of the Houston County line, about 0.8 mi (1.2 km) north of the confluence of White Rock Creek and Cedar Creek (TXNDD 2012a, p. 55). The unit was occupied at the time of listing and contains the physical or biological features essential to the conservation of the species. Two small polygons are being designated as occupied critical habitat, both encompassing 1.2 ha (2.9 ac). Essential habitat features on the unit include palustrine wetlands with an open canopy.

The features essential to the conservation of the species in Unit 9 may require special management considerations or protection to address the threats of management of nonnative species and native woody vegetation, maintenance of natural hydrology of the entire site, and habitat conversion to planted pine and other hardwoods.

As noted above, there is contradicting evidence regarding the occupancy of Unit 9. However, Unit 9 contains the physical or biological features essential to the conservation of the Neches River rose-mallow and these features support life-history characteristics of the species (such as palustrine wetland habitat with an open canopy). The presence of these traits and the absence of noticeable habitat disturbances makes it likely that this unit remains occupied, despite the last verified record of this species in 2001, and therefore it meets the definition of critical habitat under section 3(5)(A)(i) of the Act because it is within the geographical area occupied by the species at the time of listing. However, we alternatively designate Unit 9 under section 3(5)(A)(ii) of the Act because we consider the unit to be essential for the conservation of the Neches River rose-mallow, regardless of occupancy data. Including this unit in the designation of critical habitat for the Neches River rose-mallow aligns with the conservation strategy for this species. We have determined that the species requires a minimum of 10 populations and that the occupied areas contain suitable habitat (with future special management) to support larger populations of Neches River rose-mallow to meet the conservation goals for the species. The habitat in the 11 units is sufficient for attaining the goal of 10 viable populations throughout the geographic range of the species. Thus, for the purposes of this rulemaking, we determine that Unit 9 meets the definition of critical habitat under section 3(5)(A)(i) or, alternatively, under section 3(5)(A)(ii) of the Act.

Unit 10: Mill Creek Gardens

Unit 10 is an introduced site at Mill Creek Gardens, Nacogdoches County. Stephen F. Austin State University Mass Arboretum purchased the land and created the gardens in 1995 as part of a conservation agreement. The unit was occupied at the time of listing and contains the physical or biological features essential to the conservation of the species. Plants grown from cuttings by SFASU were introduced within research plots in an area that overflows from an adjacent pond. According to a commenter, this site is along an emergency spillway of a dam where the soil is much different than at any of the natural population sites. However, vegetation around the site is well adapted to full and partial water inundation (TXNDD 2012a, p. 50), both of which are essential habitat features. The unit contains 95.3 ac (38. 6 ha) of occupied habitat.

The features essential to the conservation of the species in Unit 10 may require special management considerations or protection to address the threats of management of nonnative species and native woody vegetation, maintaining natural hydrology of the entire site, maintenance and repair of habitat from hog damage, and maintaining the natural hydrology of the adjacent pond.

Unit 11: Camp Olympia

Unit 11 is located on private property in Trinity County. The unit contains 0.2 ac (0.1 ha) of palustrine wetland habitat north of Lake Livingston. The documented presence of the Neches River rose-mallow at this site is based on voucher specimens collected in 1977 and in 1978. The site has only been visited by a species expert twice since 1978. Although site was surveyed by Klips in 1992 and Warnock in 1993 without success, leading Warnock (1995, p. 6) to list the site as extirpated or historical, there is reason to believe that the plants may still be there. In addition to site conditions that can change with fluctuations in water level; resulting in shifting of the plants' location, Warnock's 1993 site survey was conducted from the water (canoe), not from the land, and the presence of the Neches River rose-mallow may have been hidden from view by dense vegetation at the water's edge. The site could have been overgrown, the plant may not have been in bloom at the time of the survey, and environmental factors could have hindered the production of flowers at the time of the survey. Warnock (1995, p. 6) suggested that the Neches River rose-mallow was highly dependent on the water levels of Lake Livingston; therefore, complete inundation of the site may cause extirpation of this population. The unit was occupied at the time of listing and contains the physical or biological features essential to the conservation of the species including the potential for flowing water and an open canopy providing full to partial sun exposure.

The features essential to the conservation of the species in Unit 11 may require special management considerations or protection to address the threats of management of nonnative species and native woody vegetation to maintain openness, and hydrological

changes through potential site alteration or construction projects.

As noted above, there is contradicting evidence regarding the occupancy of Unit 11. However, Unit 11 contains the physical or biological features essential to the conservation of the Neches River rose-mallow and these features support life-history characteristics of the species (such as palustrine wetland habitat with an open canopy). The presence of these traits and the absence of noticeable habitat disturbances makes it likely that this unit remains occupied, despite the last verified record of this species in 1978, and therefore it meets the definition of critical habitat under section 3(5)(A)(i) of the Act because it is within the geographical area occupied by the species at the time of listing. However, we alternatively designate Unit 11 under section 3(5)(A)(ii) of the Act because we consider the unit to be essential for the conservation of the Neches River rose-mallow, regardless of occupancy data. Including this unit in the designation of critical habitat for the Neches River rose-mallow aligns with the conservation strategy for this species. We have determined that the species requires a minimum of 10 populations and that the occupied areas contain suitable habitat (with future special management) to support larger populations of Neches River rose-mallow to meet the conservation goals for the species. The habitat in the 11 units is sufficient for attaining the goal of 10 viable populations throughout the geographic range of the species. Thus, for the purposes of this rulemaking, we determine that Unit 11 meets the definition of critical habitat under section 3(5)(A)(i) or, alternatively, under section 3(5)(A)(ii) of the Act.

Effects of Critical Habitat Designation for the Texas Golden Gladecress and the Neches River Rose-Mallow

Section 7 Consultation

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

Decisions by the 5th and 9th Circuit Courts of Appeals have invalidated our regulatory definition of ''destruction or adverse modification'' (50 CFR 402.02) (see *Gifford Pinchot Task Force* v. *U.S. Fish and Wildlife Service,* 378 F. 3d 1059 (9th Cir. 2004) and *Sierra Club* v. *U.S. Fish and Wildlife Service et al.,* 245 F.3d 434, 442 (5th Cir. 2001)), and we do not rely on this regulatory definition when analyzing whether an action is likely to destroy or adversely modify critical habitat. Under the statutory provisions of the Act, we determine destruction or adverse modification on the basis of whether, with implementation of the proposed Federal action, the affected critical habitat would continue to serve its intended conservation role for the species.

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

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

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

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

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

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

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

(3) Are economically and technologically feasible, and

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

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

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

Application of the ''Adverse Modification'' Standard

The key factor related to the adverse modification determination is whether, with implementation of the proposed Federal action, the affected critical habitat would continue to serve its intended conservation role for the species. Activities that may destroy or adversely modify critical habitat are those that alter the physical or biological features to an extent that appreciably reduces the conservation value of critical habitat for Texas golden gladecress and Neches River rose-mallow. As discussed above, the role of critical habitat is to support life-history needs of the species and provide for the conservation of the species.

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

Texas Golden Gladecress

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

Actions that would disturb or alter the natural vegetation community or the underlying geology supporting the species to the extent that the critical habitat would be adversely modified, and would also result in the decline of most, or even all, of the plants due to the small areal extent of their populations. Such activities could include, but are not limited to, removal of plant cover, soil, and underlying geology; construction of buildings or new roads or road improvements atop or directly upslope of population sites; application of herbicides that kill above ground plants or seedlings; plantings of pine trees in close proximity to small glade habitats that results in shading and accumulation of leaf litter; and land use practices that directly or indirectly encourage overgrowth by nonnative and native woody species. These activities could adversely affect the primary constituent elements, and in some cases where the primary constituent elements directly underlie the populations and their immediate surroundings, also likely constitute jeopardy to the species.

Neches River Rose-Mallow

Activities that may affect critical habitat, when carried out, funded, or authorized by a Federal agency, should result in consultation for the Neches River rose-mallow. These activities include, but are not limited to the following.

Actions that would by themselves, or in conjunction with other land activities, disturb or alter the vegetation community, underlying substrate, and hydrology to the extent that Neches River rose-mallow's critical habitat would be adversely modified, usually resulting in the decline or loss of the plants themselves. Such activities could include, but are not limited to, channelization projects that alter natural flow regimes, changes to site hydrology due to water diversions from streams and rivers, allowing nonnative and native woody riparian species to encroach into occupied sites, grazing during times of drought stress, detrimental roadside management practices including inappropriate frequency and timing of mowing (during blooming), herbicide applications in close proximity to plants, lack of management of feral hog population that causes trampling of habitat and damage to plants, and herbivory by cattle. These activities could adversely affect the primary constituent elements that are required by the species.

Exemptions

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

Section 4(a)(3)(B)(i) of the Act (16 U.S.C. 1533(a)(3)(B)(i)) provides that: ''The Secretary shall not designate as critical habitat any lands or other geographic areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan [INRMP] prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is designated.'' There are no Department of Defense lands with a completed INRMP within the critical habitat designation.

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

Exclusions

Section 4(b)(2) of the Act states that the Secretary shall designate and make revisions to critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species. In making that determination, the statute on its face, as well as the legislative history, are clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor.

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

Exclusions Based on Economic Impacts

Under section 4(b)(2) of the Act, we consider the economic impacts of specifying any particular area as critical habitat. In order to consider economic impacts, we prepared a draft economic analysis of the proposed critical habitat designation and related factors (Industrial Economics 2013a). The draft analysis, dated April 16, 2013, (78 FR 22506) was made available for public review from April 16, 2013, through May 16, 2013. Following the close of the comment period, a final analysis (dated June 27, 2013) of the potential economic effects of the designation was developed taking into consideration the public comments and any new information (Industrial Economics 2013b).

The intent of the final economic analysis (FEA) is to quantify the economic impacts of all potential conservation efforts for Texas golden gladecress and the Neches River rose-mallow; some of these costs will likely be incurred regardless of whether we designate critical habitat (baseline). The economic impact of the final critical habitat designation is analyzed by comparing scenarios both ''with critical habitat'' and ''without critical habitat.'' The ''without critical habitat'' scenario represents the baseline for the analysis, considering protections already in place for the species (e.g., under the Federal listing and other Federal, State, and local regulations). The baseline, therefore, represents the costs incurred regardless of whether critical habitat is designated. The ''with critical habitat'' scenario describes the incremental impacts associated specifically with the designation of critical habitat for the species. The incremental conservation efforts and associated impacts are those not expected to occur absent the designation of critical habitat for the species. In other words, the incremental costs are those attributable solely to the designation of critical habitat above and beyond the baseline costs; these are the costs we consider in the final designation of critical habitat. The analysis looks retrospectively at baseline impacts incurred since the species was listed, and forecasts both baseline and incremental impacts likely to occur with the designation of critical habitat.

The FEA also addresses how potential economic impacts are likely to be distributed, including an assessment of any local or regional impacts of habitat conservation and the potential effects of conservation activities on government agencies, private businesses, and

individuals. The FEA measures lost economic efficiency associated with residential and commercial development and public projects and activities, such as economic impacts on water management and transportation projects, Federal lands, small entities, and the energy industry. Decision-makers can use this information to assess whether the effects of the designation might unduly burden a particular group or economic sector. Finally, the FEA considers those costs that may occur in the 20 years following the designation of critical habitat, which was determined to be the appropriate period for analysis because limited planning information was available for most activities to forecast activity levels for projects beyond a 20-year timeframe.

The final economic analysis quantifies economic impacts of Texas golden gladecress and the Neches River rose-mallow conservation efforts associated with the following categories of activity: (1) Transportation (minor road widening and maintenance) and energy infrastructure projects, (2) land management, and (3) water management. The total present value impacts anticipated to result from the designation of all areas designated as Texas golden gladecress and Neches River rose-mallow critical habitat are approximately $32,000 for Neches River rose-mallow and $478,000 for Texas golden gladecress over 20 years, assuming a 7 percent discount rate. For the Neches River rose-mallow, all incremental costs are likely limited to the additional administrative cost of considering adverse modification during section 7 consultations. For the Texas golden gladecress, incremental costs are associated with consultations that consider adverse modification, as well as expected project modifications and project costs. Please refer to the final economic analysis for a comprehensive discussion of the potential impacts.

Our economic analysis did not identify any disproportionate costs that are likely to result from the designation. Consequently, the Secretary is not exerting her discretion to exclude any areas from this designation of critical habitat for the Texas golden gladecress and the Neches River rose-mallow based on economic impacts.

A copy of the final economic analysis with supporting documents may be obtained by contacting the Texas Coastal Ecological Services Field Office (see **ADDRESSES**) or by downloading from the Internet at *http://www.regulations.gov* (Docket No. FWS–R2–ES–2013–0027) and also at *http://www.fws.gov/southwest/es/ElectronicLibrary/ElectronicLibrary_Main.cfm.*

Exclusions Based on National Security Impacts

Under section 4(b)(2) of the Act, we consider whether there are lands owned or managed by the Department of Defense where a national security impact might exist.

In preparing this final rule, we have determined that the lands within the designation of critical habitat for the Texas golden gladecress and the Neches River rose-mallow are not owned or managed by the Department of Defense or Department of Homeland Security, and, therefore, we anticipate no impact on national security. Consequently, the Secretary is not exerting her discretion to exclude any areas from this final designation based on impacts on national security.

Exclusions Based on Other Relevant Impacts

Under section 4(b)(2) of the Act, we consider any other relevant impacts, in addition to economic impacts and impacts on national security. We consider a number of factors, including whether the landowners have developed any HCPs or other management plans for the area, or whether there are conservation partnerships that would be encouraged by designation of, or exclusion from, critical habitat. In addition, we look at any tribal issues, and consider the government-to-government relationship of the United States with tribal entities. We also consider any social impacts that might occur because of the designation.

In preparing this final rule, we have determined that there are currently no HCPs or other management plans for the Texas golden gladecress or the Neches River rose-mallow, and the final designation does not include any tribal lands or trust resources. We anticipate no impact on tribal lands, partnerships, or HCPs from this critical habitat designation. Accordingly, the Secretary is not exercising her discretion to exclude any areas from this final designation based on other relevant impacts.

Required Determinations

Regulatory Planning and Review (Executive Orders 12866 and 13563)

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

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

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

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

According to the Small Business Administration, small entities include small organizations, such as independent nonprofit organizations; small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents; as well as small businesses. Small businesses include manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service businesses with less than $5 million in annual sales, general and heavy

construction businesses with less than $27.5 million in annual business, special trade contractors doing less than $11.5 million in annual business, and agricultural businesses with annual sales less than $750,000. To determine if potential economic impacts on these small entities are significant, we consider the types of activities that might trigger regulatory impacts under this rule, as well as the types of project modifications that may result. In general, the term ''significant economic impact'' is meant to apply to a typical small business firm's business operations.

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

Designation of critical habitat only affects activities authorized, funded, or carried out by Federal agencies. Some kinds of activities are unlikely to have any Federal involvement and so will not be affected by critical habitat designation. In areas where the species is present, Federal agencies already are required to consult with us under section 7 of the Act on activities they authorize, fund, or carry out that may affect the Texas golden gladecress or the Neches River rose-mallow. Federal agencies also must consult with us if their activities may affect critical habitat. Designation of critical habitat, therefore, could result in an additional economic impact on small entities due to the requirement to reinitiate consultation for ongoing Federal activities (see ''Application of the 'Adverse Modification Standard' '' section).

Importantly, the incremental impacts of a rule must be both significant and substantial to prevent certification of the rule under the RFA and to require the preparation of an initial regulatory flexibility analysis. If a substantial number of small entities are affected by the critical habitat designation, but the per-entity economic impact is not significant, the Service may certify. Likewise, if the per-entity economic impact is likely to be significant, but the number of affected entities is not substantial, the Service may also certify.

The Service's current understanding of recent case law is that Federal agencies are only required to evaluate the potential impacts of rulemaking on those entities directly regulated by the rulemaking; therefore, they are not required to evaluate the potential impacts to those entities not directly regulated. The designation of critical habitat for an endangered or threatened species only has a regulatory effect where a Federal action agency is involved in a particular action that may affect the designated critical habitat. Under these circumstances, only the Federal action agency is directly regulated by the designation, and, therefore, consistent with the Service's current interpretation of RFA and recent case law, the Service may limit its evaluation of the potential impacts to those identified for Federal action agencies. Under this interpretation, there is no requirement under the RFA to evaluate the potential impacts to entities not directly regulated, such as small businesses. However, Executive Orders 12866 and 13563 direct Federal agencies to assess costs and benefits of available regulatory alternatives in quantitative (to the extent feasible) and qualitative terms. Consequently, it is the current practice of the Service to assess to the extent practicable these potential impacts if sufficient data are available, whether or not this analysis is believed by the Service to be strictly required by the RFA. In other words, while the effects analysis required under the RFA is limited to entities directly regulated by the rulemaking, the effects analysis under the Act, consistent with the EO regulatory analysis requirements, can take into consideration impacts to both directly and indirectly impacted entities, where practicable and reasonable.

In conclusion, we believe that, based on our interpretation of directly regulated entities under the RFA and relevant case law, this designation of critical habitat will only directly regulate Federal agencies, which are not by definition small business entities. And as such, we certify that, if promulgated, this designation of critical habitat would not have a significant economic impact on a substantial number of small business entities. Therefore, a regulatory flexibility analysis is not required. However, though not necessarily required by the RFA, in our final economic analysis for this rule we considered and evaluated the potential effects to third parties that may be involved with consultations with Federal action agencies related to this action.

Designation of critical habitat only affects activities authorized, funded, or carried out by Federal agencies. Some kinds of activities are unlikely to have any Federal involvement and so will not be affected by critical habitat designation. In areas where the species is present, Federal agencies already are required to consult with us under section 7 of the Act on activities they authorize, fund, or carry out that may affect the Texas golden gladecress or the Neches River rose-mallow. Federal agencies also must consult with us if their activities may affect critical habitat. Designation of critical habitat, therefore, could result in an additional economic impact on small entities due to the requirement to reinitiate consultation for ongoing Federal activities (see *Application of the ''Adverse Modification Standard''* section).

In our final economic analysis of the critical habitat designation, we evaluated the potential economic effects on small business entities resulting from conservation actions related to the listing of the Texas golden gladecress or the Neches River rose-mallow and the designation of critical habitat. The analysis is based on the estimated impacts associated with the rulemaking as described in Chapters 4 through 5 and Appendix A of the analysis and evaluates the potential for economic impacts related to: (1) Routine transportation projects, utility related activities, and oil and gas development, including interstate natural gas pipelines; (2) land management; and (3) water management.

To determine if the designation of critical habitat for the Texas golden gladecress or the Neches River rose-mallow would affect a substantial number of small entities, we considered the number of small entities affected within the categories of economic activities listed above. In order to determine whether it was appropriate for our agency to certify that this final rule would not have a significant economic impact on a substantial number of small entities, we considered each industry or category individually. In estimating the numbers of small entities potentially affected, we also considered whether their activities have any Federal involvement. Critical

habitat designation will not affect activities that do not have any Federal involvement; designation of critical habitat affects only activities conducted, funded, permitted, or authorized by Federal agencies. In areas where the Texas golden gladecress or the Neches River rose-mallow is present, Federal agencies already are required to consult with us under section 7 of the Act on activities they fund, permit, or implement that may affect the species. Critical habitat designation means that consultations to avoid the destruction or adverse modification of critical habitat will be incorporated into the existing consultation process.

To ensure broad consideration of impacts on small entities, the Service's economic analysis assessed potential economic effects on small entities resulting from implementation of conservation actions related to the designation of critical habitat for the Texas golden gladecress and the Neches River rose-mallow. For the Neches River rose-mallow, no incremental conservation measures to avoid adverse modification of critical habitat over and above those recommended to avoid jeopardy to the species were foreseen, and as such the economic analysis forecast was for few incremental economic impacts as a result of the designation of critical habitat for this species. Incremental impacts forecast were solely related to administrative costs for adverse modification analyses in section 7 consultations. The final economic analysis projected that 16 such consultations would occur. The Service and the Federal action agencies (U.S. Department of Transportation, U.S. Forest Service, Rural Utilities Services and the U.S. Army Corps of Engineers) are not small entities. The TXDOT, the third party participant in four of these consultations, is not a small entity. For ten of these consultations, the third party participant is an electric cooperative. Electric cooperatives may be considered independently owned and operated establishments that are not dominant in their field, thus falling under protection of the RFA. As calculated in this analysis, however, the costs to these entities are *de minimis* and would not be expected to have significant impact.

For the Texas golden gladecress, the incremental costs of this designation included the administrative costs of considering adverse modification during section 7 consultations, the costs of any recommended project modifications, and the costs of new land management projects occurring as a result of the critical habitat designation. Approximately 23 section 7 consultations were projected for this species; three formal and 20 informal, over the next 20 years. As is the case with the Neches River rose-mallow, the Service, Rural Utilities Services, U.S. Department of Transportation, and TXDOT are not small entities. For five of the consultations, two electric cooperatives serve as third party participants. As concluded above for the Neches River rose-mallow, the costs anticipated to be incurred by these entities are *de minimis* (less than $1,000 annually) and would not be projected to result in significant impacts.

We assumed that these consultations would have an equal probability of occurring at any time during the 20-year timeframe and considered these estimates to be conservative because we assumed that all projects could occur independently; that is, we assumed separate consultations for each project. Based on the consultation history, most consultations are unlikely to involve a third party. Electric cooperatives may be considered independently owned and operated establishments that are not dominant in their field, thus falling under protection of the RFA. As calculated in this analysis, however, the costs to these entities are *de minimis* and would not be expected to have significant impact. In conclusion, while two small electric cooperatives are anticipated to incur costs as a result of the designation of critical habitat for Texas golden gladecress and Neches River rose-mallow, the costs are not expected to result in significant impacts to these entities. Consequently, no small entities are anticipated to incur costs as a result of the designation of critical habitat for Texas golden gladecress and Neches River rose-mallow.

In summary, we considered whether this designation would result in a significant economic effect on a substantial number of small entities. Based on the above reasoning and currently available information, we concluded that this rule would not result in a significant economic impact on a substantial number of small entities. Therefore, we are certifying that the designation of critical habitat for Texas golden gladecress or the Neches River rose-mallow will not have a significant economic impact on a substantial number of small entities, and a regulatory flexibility analysis is not required.

Energy Supply, Distribution, or Use—Executive Order 13211

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

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

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

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

(1) This rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, or tribal governments, or the private sector, and includes both ''Federal intergovernmental mandates'' and ''Federal private sector mandates.'' These terms are defined in 2 U.S.C. 658(5)–(7). ''Federal intergovernmental mandate'' includes a regulation that ''would impose an enforceable duty upon State, local, or tribal governments'' with two exceptions. It excludes ''a condition of Federal assistance.'' It also excludes ''a duty arising from participation in a voluntary Federal program,'' unless the regulation ''relates to a then-existing Federal program under which $500,000,000 or more is provided annually to State, local, and tribal governments under entitlement authority,'' if the provision would ''increase the stringency of conditions of assistance'' or ''place caps upon, or otherwise decrease, the Federal Government's responsibility to provide funding,'' and the State, local, or tribal governments ''lack authority'' to adjust accordingly. At the time of enactment, these entitlement programs were: Medicaid; Aid to Families with Dependent Children work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support

Enforcement. ''Federal private sector mandate'' includes a regulation that ''would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance or (ii) a duty arising from participation in a voluntary Federal program.''

The designation of critical habitat does not impose a legally binding duty on non-Federal Government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply, nor would critical habitat shift the costs of the large entitlement programs listed above onto State governments.

(2) We do not believe that this rule will significantly or uniquely affect small governments. As stated in the proposed rule, the designation of critical habitat does not impose a legally binding duty on non-Federal Government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Therefore, this rule does not place an enforceable duty upon State, local, or Tribal governments, or the private sector. The majority of lands designated for critical habitat are owned by private landowners, although the Federal Government and the State of Texas own small portions. None of these government entities fit the definition of small governmental jurisdiction. Therefore, a Small Government Agency Plan is not required.

Takings—Executive Order 12630

In accordance with Executive Order 12630 (Government Actions and Interference with Constitutionally Protected Private Property Rights), we have analyzed the potential takings implications of designating critical habitat for the Texas golden gladecress and the Neches River rose-mallow in a takings implications assessment. Executive Order 12630, ''Governmental Actions and Interference with Constitutionally Protected Property Rights,'' issued March 15, 1988, requires agencies to adhere to certain principals in rulemakings that have takings implications and provide certain information to Office of Management and Budget for any actions with identified takings implications. Section 2(a) of the Executive Order defines takings implications to include any ''regulations that propose or implement licensing, permitting, or other requirements or limitations on private property use, or that require dedications or exactions from owners of private property.'' Our economic analysis found that the incremental effects of the critical habitat designations are largely limited to additional administrative costs. Activities taking place on private property are not likely to be affected. The takings implications assessment concludes that this designation of critical habitat for the Texas golden gladecress and the Neches River rose-mallow does not pose significant takings implications for lands within or affected by the designation.

Federalism—Executive Order 13132

In accordance with Executive Order 13132 (Federalism), this final rule does not have significant Federalism effects. A federalism summary impact statement is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of, this final critical habitat designation with appropriate State resource agencies in Texas. We received comments from TPWD, Governor's Office, and TXDOT and have addressed them in the Summary of Comments and Recommendations section of the rule. From a federalism perspective, the designation of critical habitat directly affects only the responsibilities of Federal agencies. The Act imposes no other duties with respect to critical habitat, either for States and local governments, or for anyone else. As a result, the rule does not have substantial direct effects either on the States, or on the relationship between the national government and the States, or on the distribution of powers and responsibilities among the various levels of government. The designation may have some benefit to these governments because the areas that contain the features essential to the conservation of the species are more clearly defined, and the physical or biological features of the habitat necessary to the conservation of the species are specifically identified. This information does not alter where and what federally sponsored activities may occur. However, it may assist these local governments in long-range planning (because these local governments no longer have to wait for case-by-case section 7 consultations to occur).

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

Civil Justice Reform—Executive Order 12988

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

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

This rule does not contain any new collections of information that require approval by Office of Management and Budget under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*). This rule will not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. An agency

may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid Office of Management and Budget control number.

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

It is our position that, outside the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit, we do not need to prepare environmental analyses pursuant to the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq.*) in connection with designating critical habitat under the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This position was upheld by the U.S. Court of Appeals for the Ninth Circuit (*Douglas County* v. *Babbitt,* 48 F.3d 1495 (9th Cir. 1995), cert. denied 516 U.S. 1042 (1996)).

Government-to-Government Relationship With Tribes

In accordance with the President's memorandum of April 29, 1994 (Government-to-Government Relations with Native American Tribal Governments; 59 FR 22951), Executive Order 13175 (Consultation and Coordination With Indian Tribal Governments), and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with tribes in developing programs for healthy ecosystems, to acknowledge that tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to tribes.

We determined that there are no tribal lands occupied by the Texas golden gladecress and the Neches River rose-mallow at the time of listing that contain the physical or biological features essential to conservation of the species, and no tribal lands unoccupied by the Texas golden gladecress and the Neches River rose-mallow that are essential for the conservation of the species. Therefore, we are not designating critical habitat for the Texas golden gladecress and the Neches River rose-mallow on tribal lands.

References Cited

A complete list of references cited in this rulemaking is available on the Internet at *http://www.regulations.gov* at Docket No. FWS–R2–ES–2012–0064 and Docket No. FWS–R2–ES–2013–0027 and upon request from the Corpus Christi Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this package are the staff members of the Corpus Christi Ecological Services Field Office.

List of Subjects in 50 CFR Part 17

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

Regulation Promulgation

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

PART 17—[AMENDED]

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

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

■ 2. In § 17.96, amend paragraph (a) by adding an entry for ''*Leavenworthia texana* (Texas golden gladecress)'' in alphabetical order under the family Brassicaceae and an entry for ''*Hibiscus dasycalyx* (Neches River rose-mallow)'' in alphabetical order under the family Malvaceae, to read as follows:

§ 17.96 Critical habitat—plants.

* * * * *

(a) *Flowering plants.*

* * * * *

Family Brassicaceae: *Leavenworthia texana* (Texas golden gladecress)

(1) Critical habitat units are depicted for San Augustine and Sabine Counties, Texas, on the maps below.

(2) Within these areas, the primary constituent elements of the physical or biological features essential to the conservation of *Leavenworthia texana* consist of the three primary constituent elements identified for the species:

(i) Exposed outcrops of the Weches Formation within Weches prairies. Within the outcrop sites, there must be bare, exposed bedrock on top-level surfaces or rocky ledges with small depressions where rainwater or seepage can collect. The openings should support Weches Glade native herbaceous plant communities.

(ii) Thin layers of rocky, alkaline soils, underlain by glauconite clay (greenstone, ironstone, bluestone), that are found only on the Weches Formation. Appropriate soils are in the series classifications Nacogdoches clay loam, Trawick gravelly clay loam, or Bub clay loam, ranging in slope from 1–15 percent.

(iii) The outcrop ledges should occur within the glade such that Texas golden gladecress plants remain unshaded for a significant portion of the day, and trees should be far enough away from the outcrop(s) that leaves do not accumulate within the gladecress habitat. The habitat should be relatively clear of nonnative and native invasive plants, especially woody species, or with only a minimal level of invasion.

(3) Critical habitat does not include manmade structures (such as buildings, bridges, aqueducts, runways, well pads, metering stations, roads and the filled areas immediately adjacent to pavement, and other paved areas) and the land on which they are located existing within the legal boundaries on October 11, 2013.

(4) *Critical habitat map units.* Soil Survey Geographic Dataset (SSURGO) was used as a base map layer. The SSURGO is an updated digital version of the Natural Resources Conservation Service county soil surveys. The SSURGO uses recent digital orthophotos and fieldwork to update the original printed surveys. Data layers defining map units were created using the Texas golden gladecress' restriction to the Weches Formation and its tight association with the three soil map units: Nacogdoches clay loam 1–5 percent slope, Trawick gravelly clay loam 5–15 percent slope, or Bub clay loam 2–5 percent slope. In San Augustine and Sabine Counties, these soil types are restricted to the Weches Formation. Locations of all known gladecress populations, as well as potential glade sites, were overlaid on the three afore-named soil mapping units from the San Augustine and Sabine County's soils survey. Potential glade sites were identified using soil map units and a time series of aerial photographs that depicted changes in land cover. The maps in this entry, as modified by any accompanying regulatory text, establish the boundaries of the critical habitat designation. The coordinates or plot points or both on which each map is based are available to the public at the Service's internet site, at *http://www.fws.gov/southwest/es/ElectronicLibrary/ElectronicLibrary_Main.cfm,* at *http://www.regulations.gov* at Docket No. FWS–R2–ES–2013–0027, and at the field office responsible for this designation. You may obtain field office

location information by contacting one of the Service regional offices, the addresses of which are listed at 50 CFR 2.2.

(5) Index map follows:

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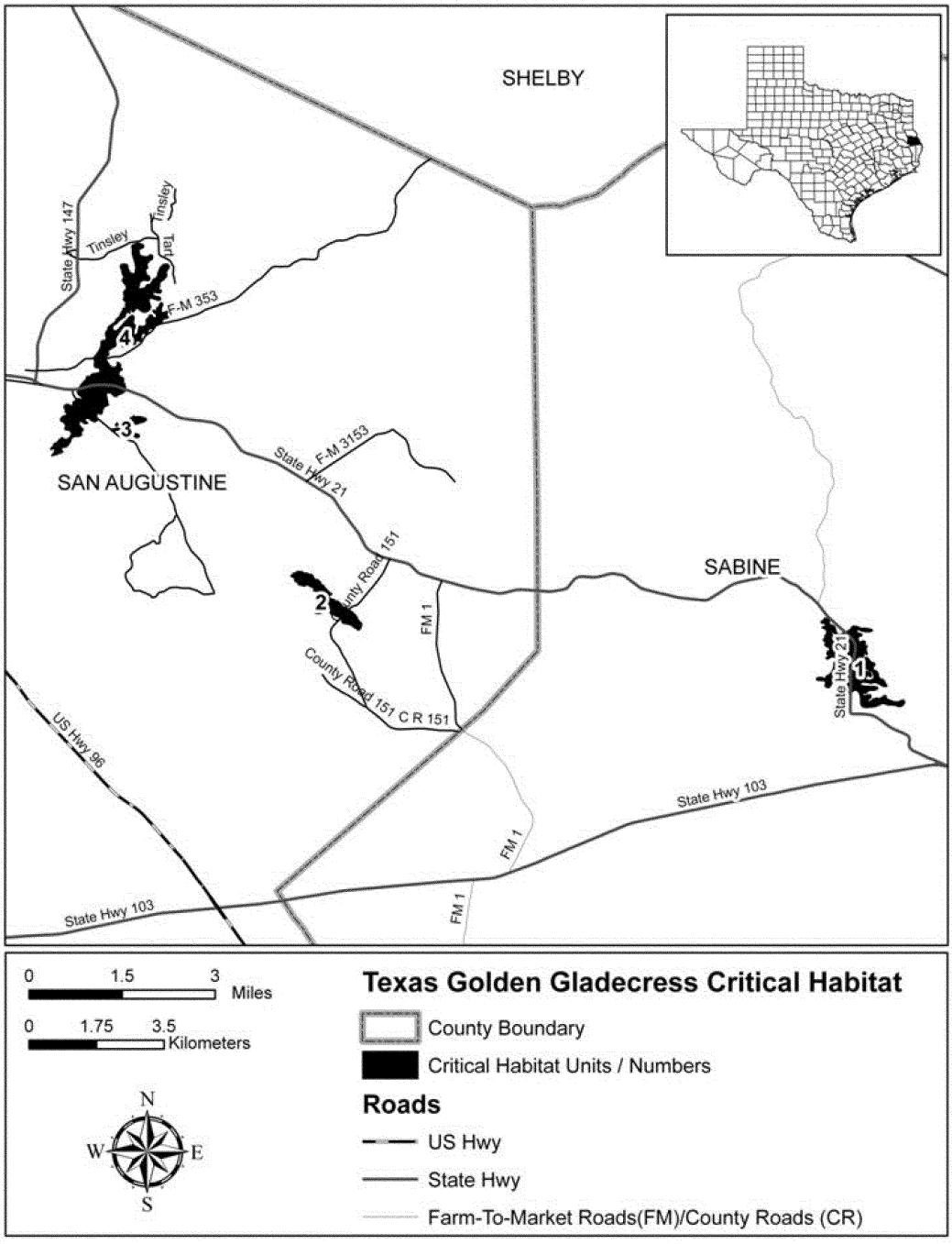
Index Map

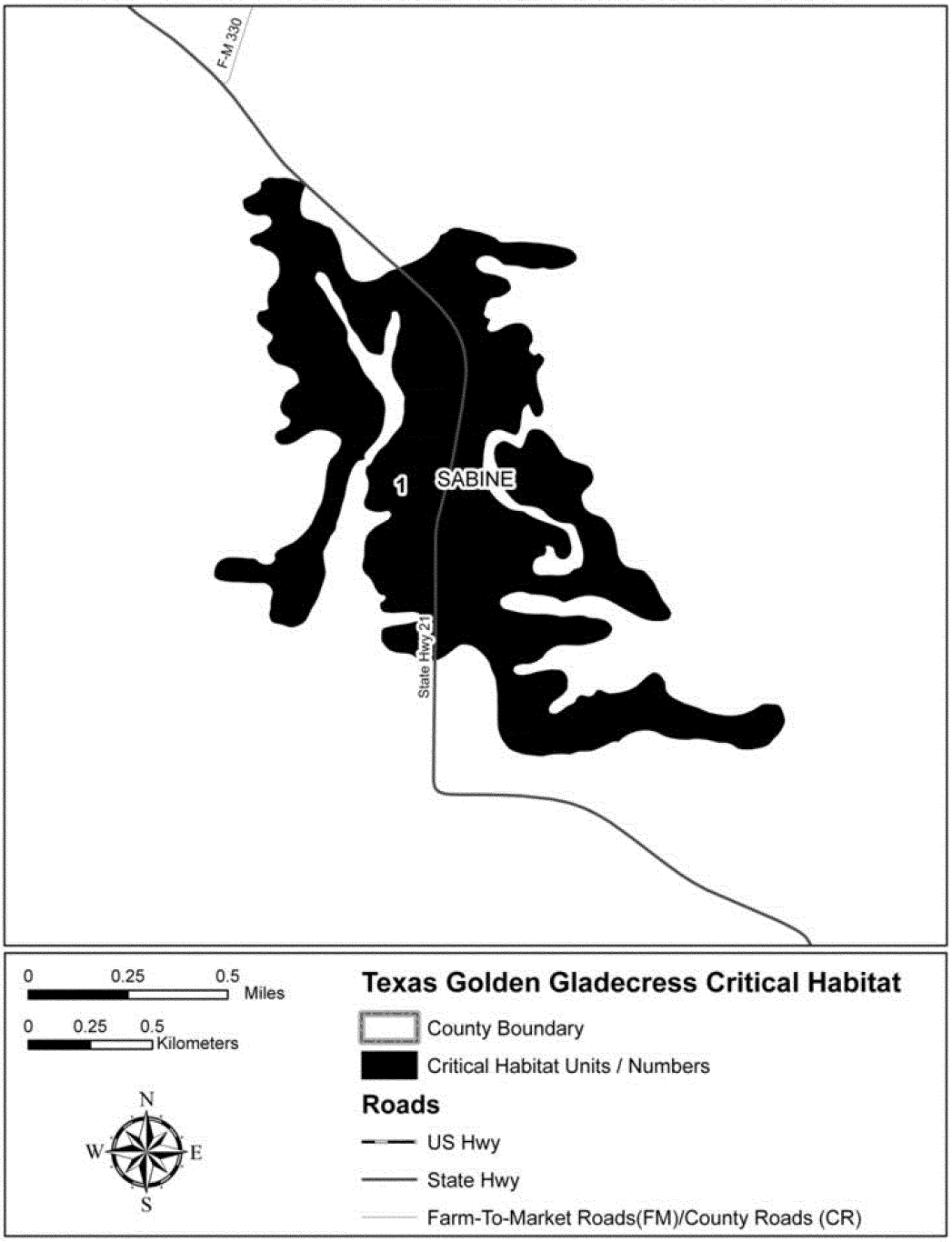
Critical Habitat for *Leavenworthia texana* (Texas golden gladecress)



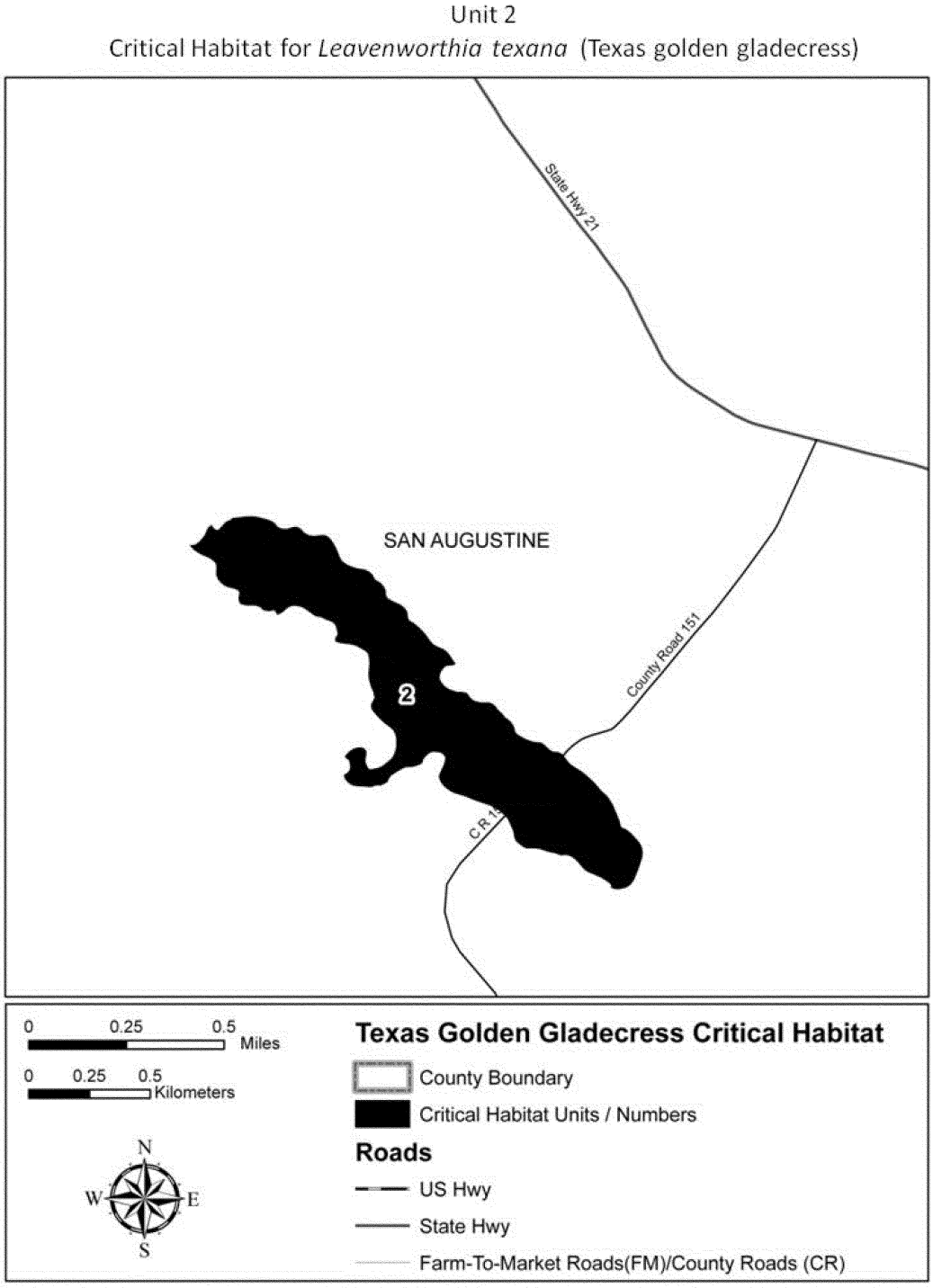
(6) Unit 1: Geneva Unit, Sabine County, Texas. Map of Unit 1 follows:

Unit 1

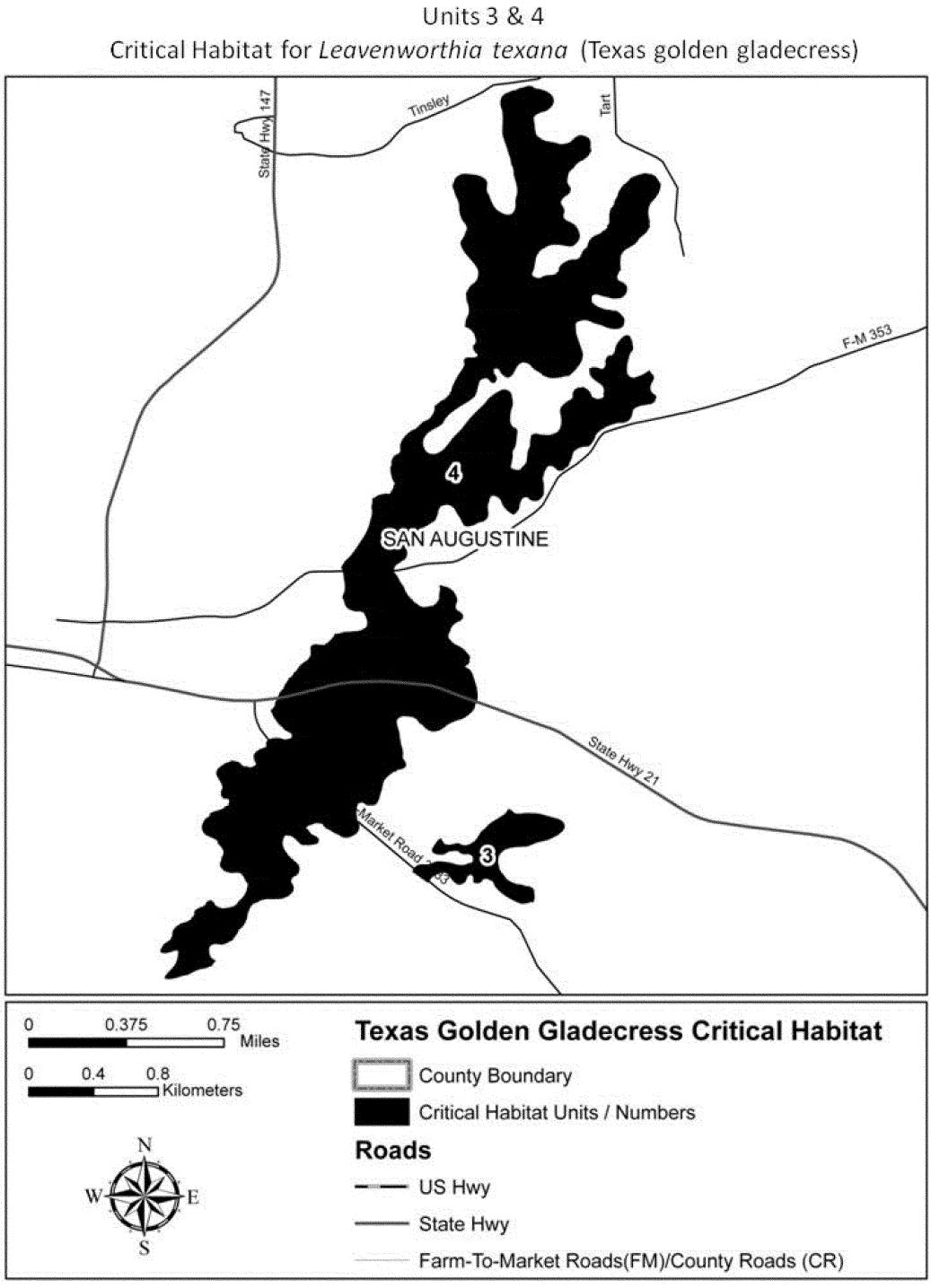
Critical Habitat for *Leavenworthia texana* (Texas golden gladecress)



(7) Unit 2: Chapel Hill, San Augustine County. Map of Unit 2 follows:



(8) Unit 3: Southeast Caney Creek Glades, San Augustine County, Texas. Map of Units 3 and 4 follows:



(9) Unit 4: Northwest Caney Creek Glades, San Augustine County, Texas. Map of Unit 4 is depicted in paragraph (8) of this entry.

* * * * *

Family Malvaceae: *Hibiscus dasycalyx* (Neches River rose-mallow)

(1) Critical habitat units are depicted for Cherokee, Harrison, Houston, Nacogdoches, and Trinity Counties, Texas, on the maps below.

(2) Within these areas, the primary constituent element of the physical or biological features essential to the conservation of *Hibiscus dasycalyx* is intermittent or perennial wetlands within the Neches, Sabine, and Angelina River floodplains or Mud and Tantabogue Creek basins that contain:

(i) Hydric alluvial soils and the potential for flowing water when found in depressional sloughs, oxbows,

terraces, side channels, or sand bars; and

(ii) Native woody or associated herbaceous vegetation, largely with an open canopy providing partial to full sun exposure with few to no nonnative species.

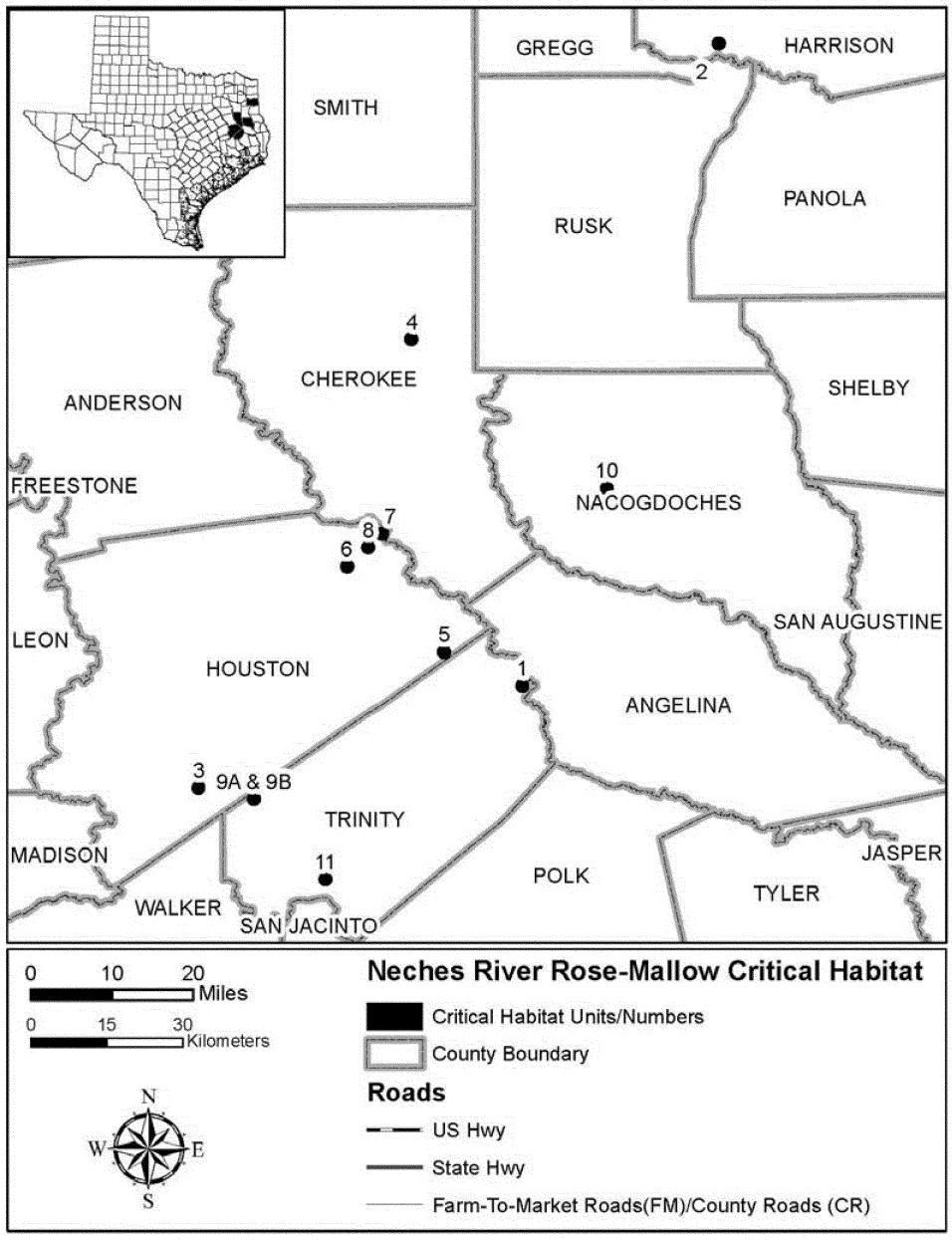
(3) Critical habitat does not include manmade structures (such as buildings; bridges; aqueducts; runways; roads; well pads; metering stations; other paved areas; unpaved roads; and the filled areas immediately adjacent to pavement) and the land on which they are located existing within the legal boundaries on October 11, 2013.

(4) *Critical habitat map units.* Data layers defining map units were created on a base of Strategic Mapping Program (StratMap) digital orthophoto quarter-quadrangles (DOQQs), with layers for boundaries and roads. The Service's National Wetlands Inventory maps for the appropriate USGS quads were also downloaded as layers. Critical habitat units were mapped using Geographic Coordinate System (GCS), North American, 1983. The maps in this entry, as modified by any accompanying regulatory text, establish the boundaries of the critical habitat designation. The coordinates or plot points or both on which each map is based are available to the public at the Service's internet site, at *http://www.fws.gov/southwest/es/ElectronicLibrary/ElectronicLibrary_Main.cfm,* at *http://www.regulations.gov* at Docket No. FWS–R2–ES–2013–0027, and at the field office responsible for this designation. You may obtain field office location information by contacting one of the Service regional offices, the addresses of which are listed at 50 CFR 2.2.

(5) Index map follows:

Index Map

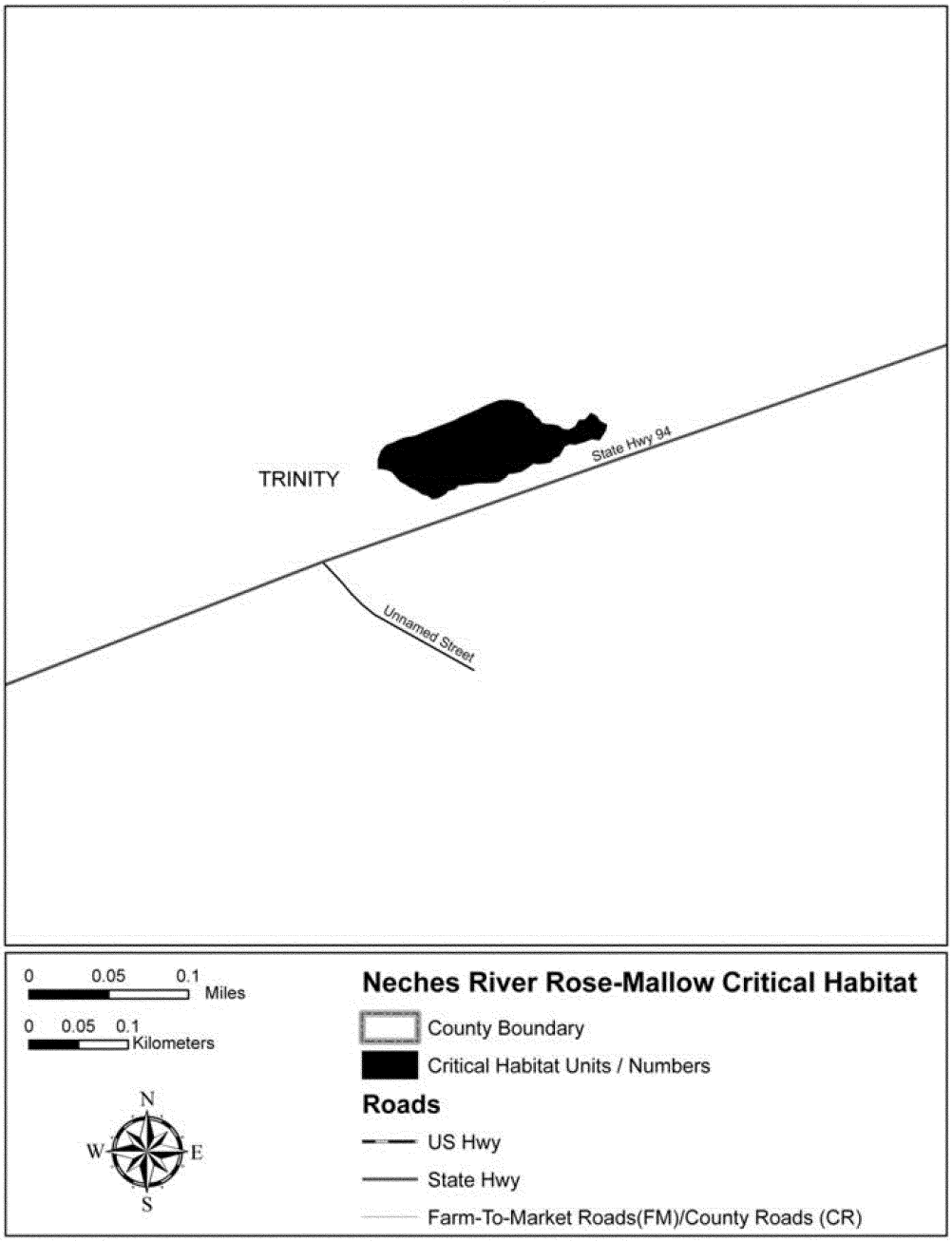
Critical Habitat for *Hibiscus dasycalyx* (Neches River rose-mallow)



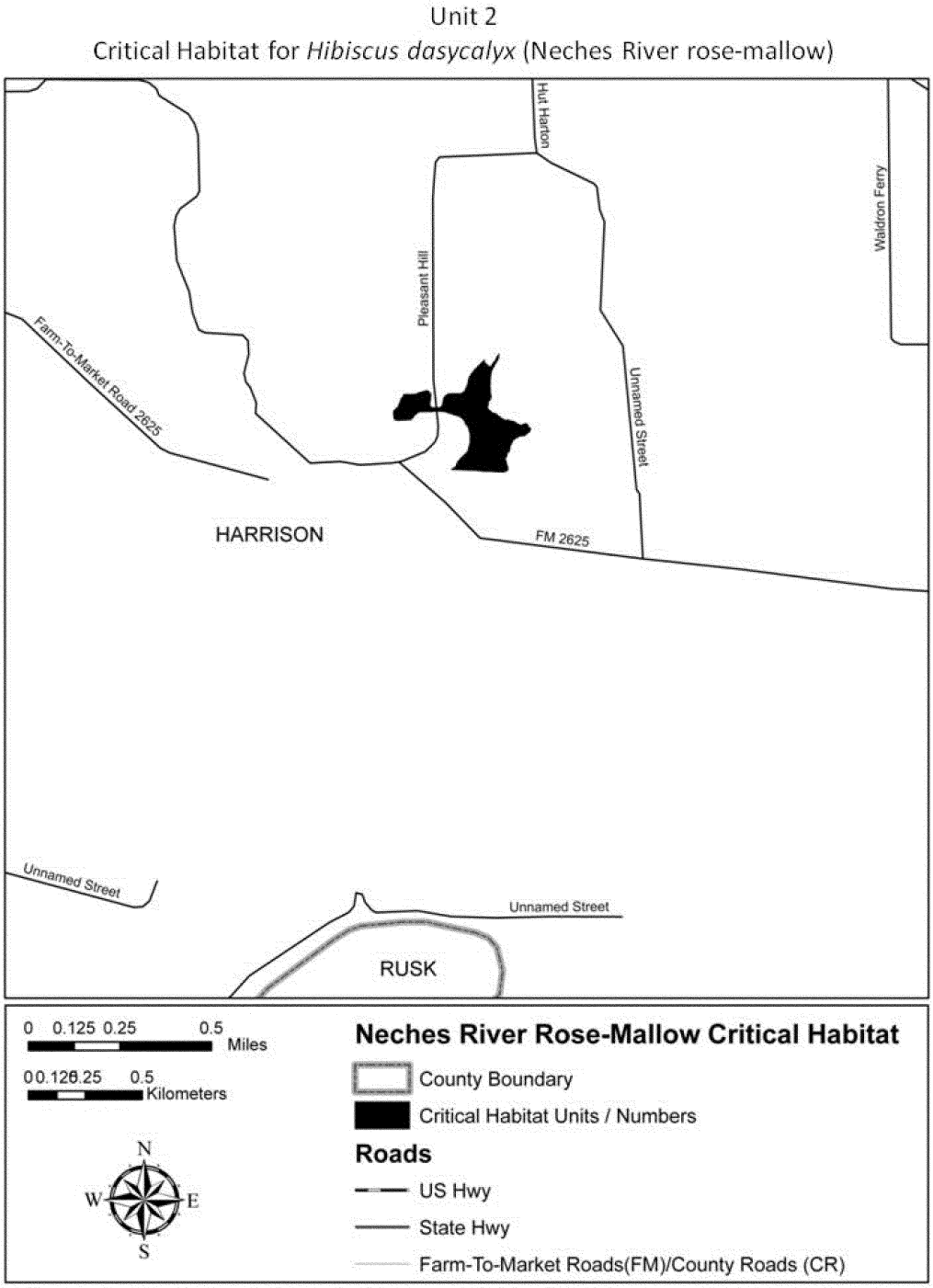
(6) Unit 1: State Highway 94 right-of-way, Trinity County, Texas. Map of Unit 1 follows:

Unit 1

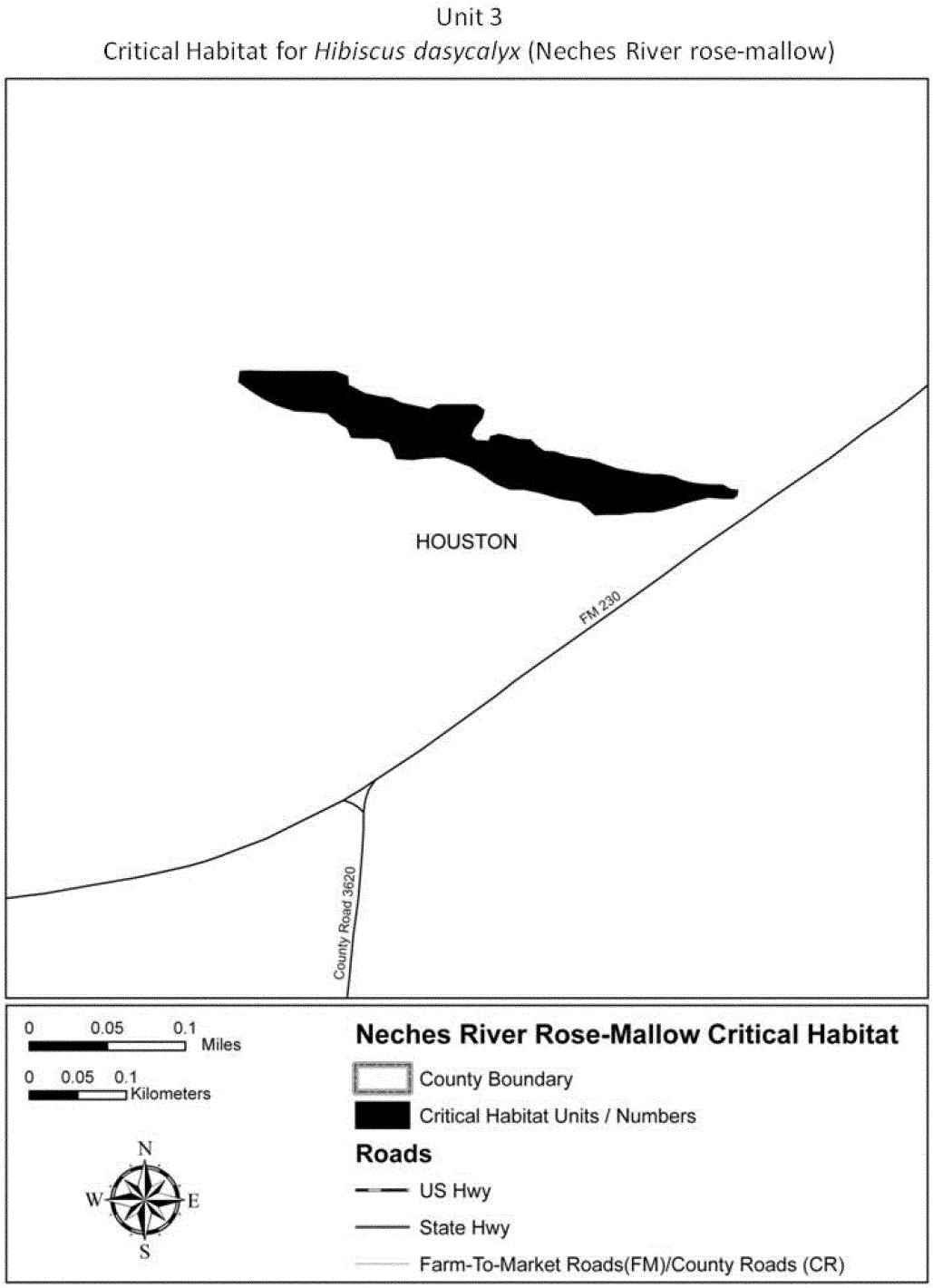
Critical Habitat for *Hibiscus dasycalyx* (Neches River rose-mallow)



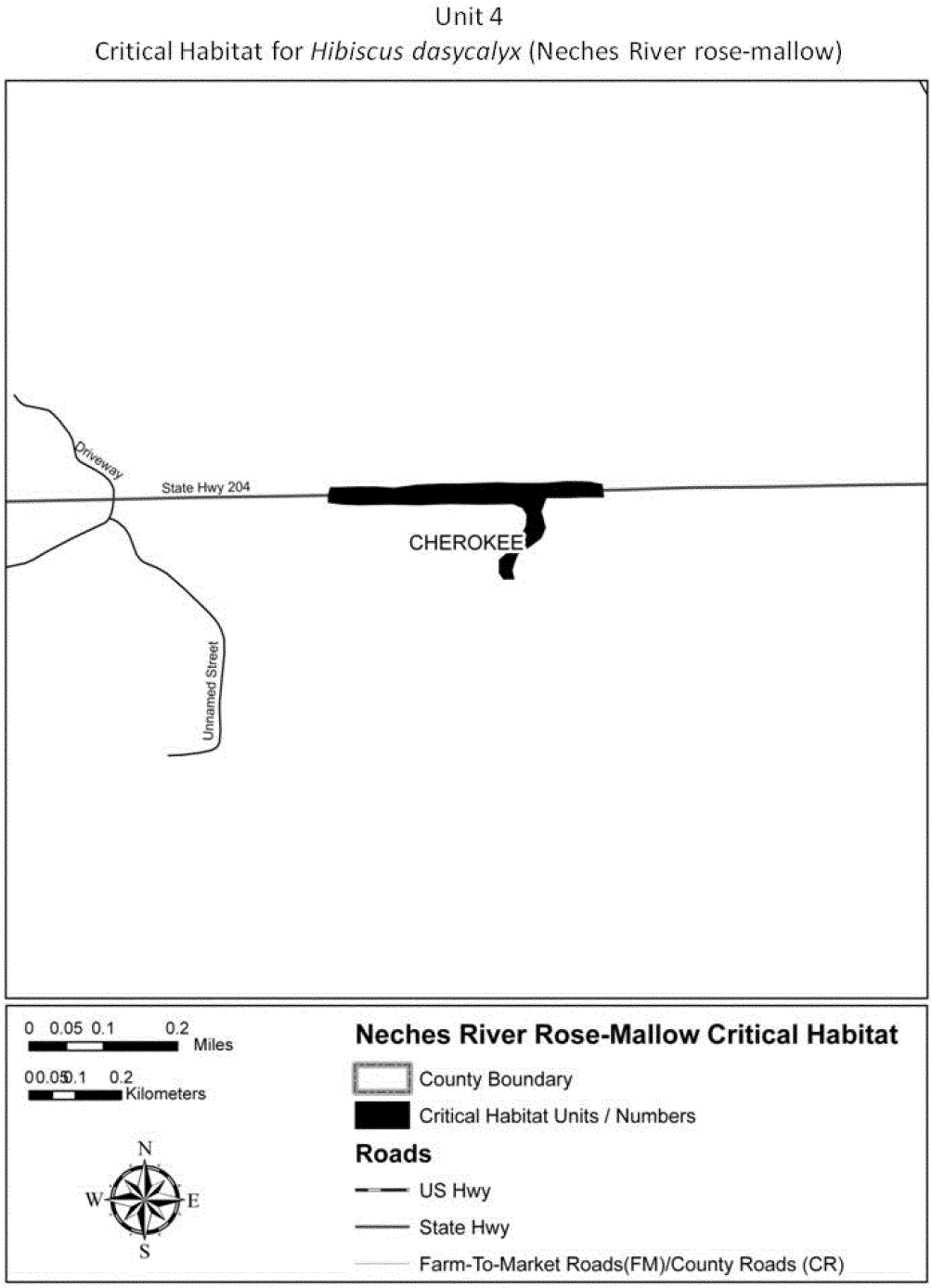
(7) Unit 2: Harrison site, Harrison County, Texas. Map of Unit 2 follows:



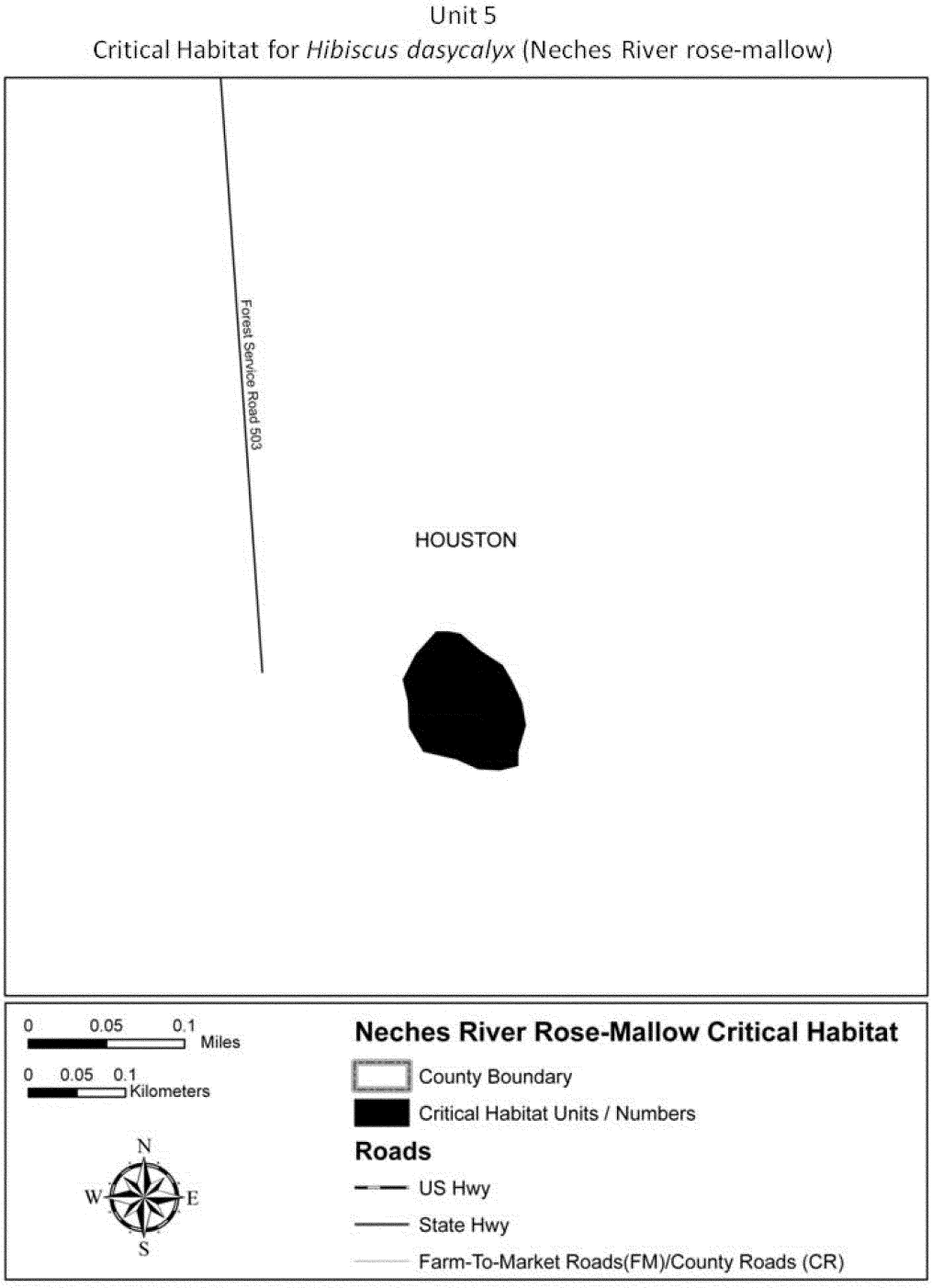
(8) Unit 3: Lovelady, Houston County, Texas. Map of Unit 3 follows:



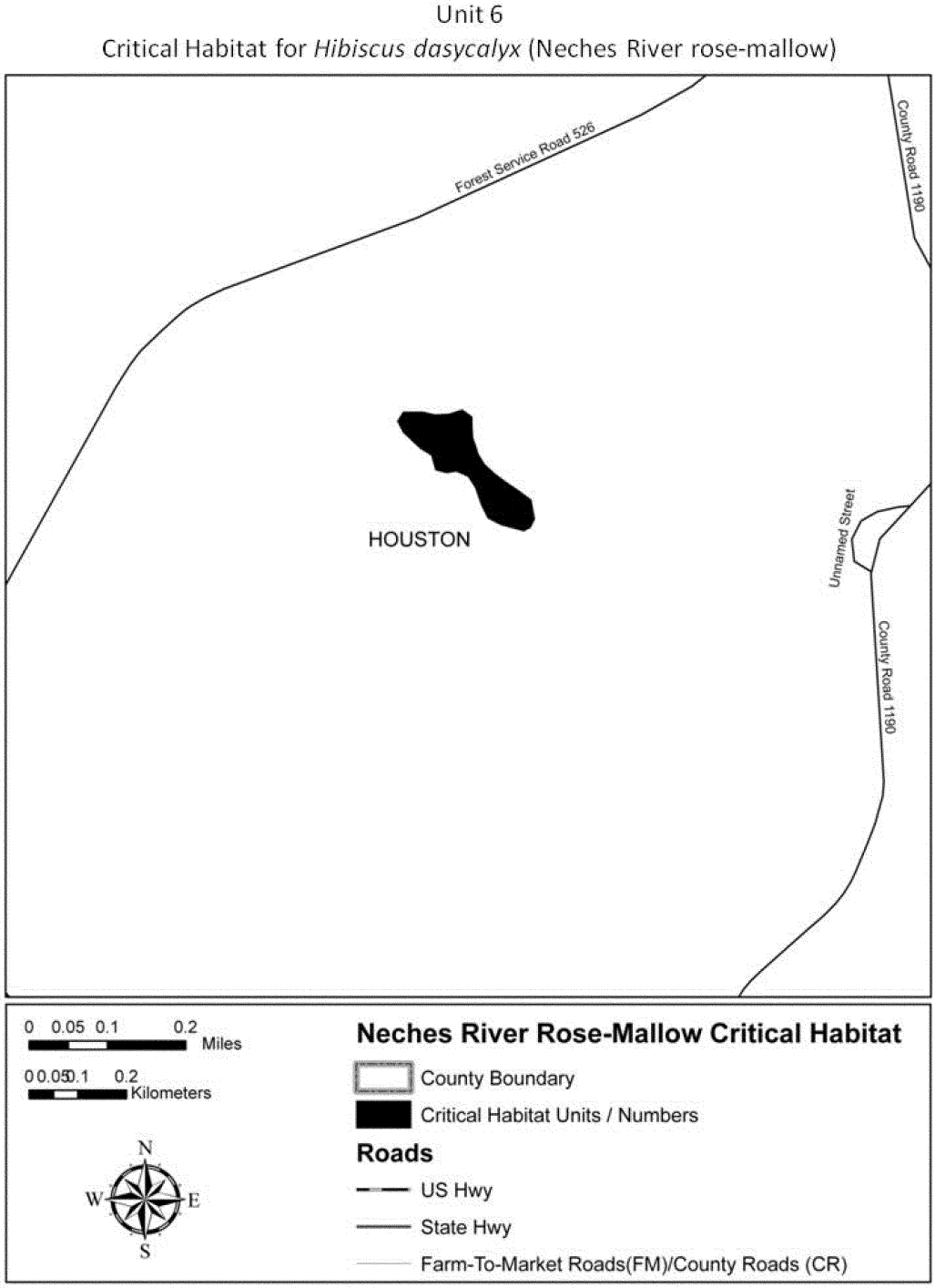
(9) Unit 4: State Highway 204 right-of-way, Cherokee County, Texas. Map of Unit 4 follows:



(10) Unit 5: Davy Crockett National Forest, Compartment 55, Houston County, Texas. Map of Unit 5 follows:



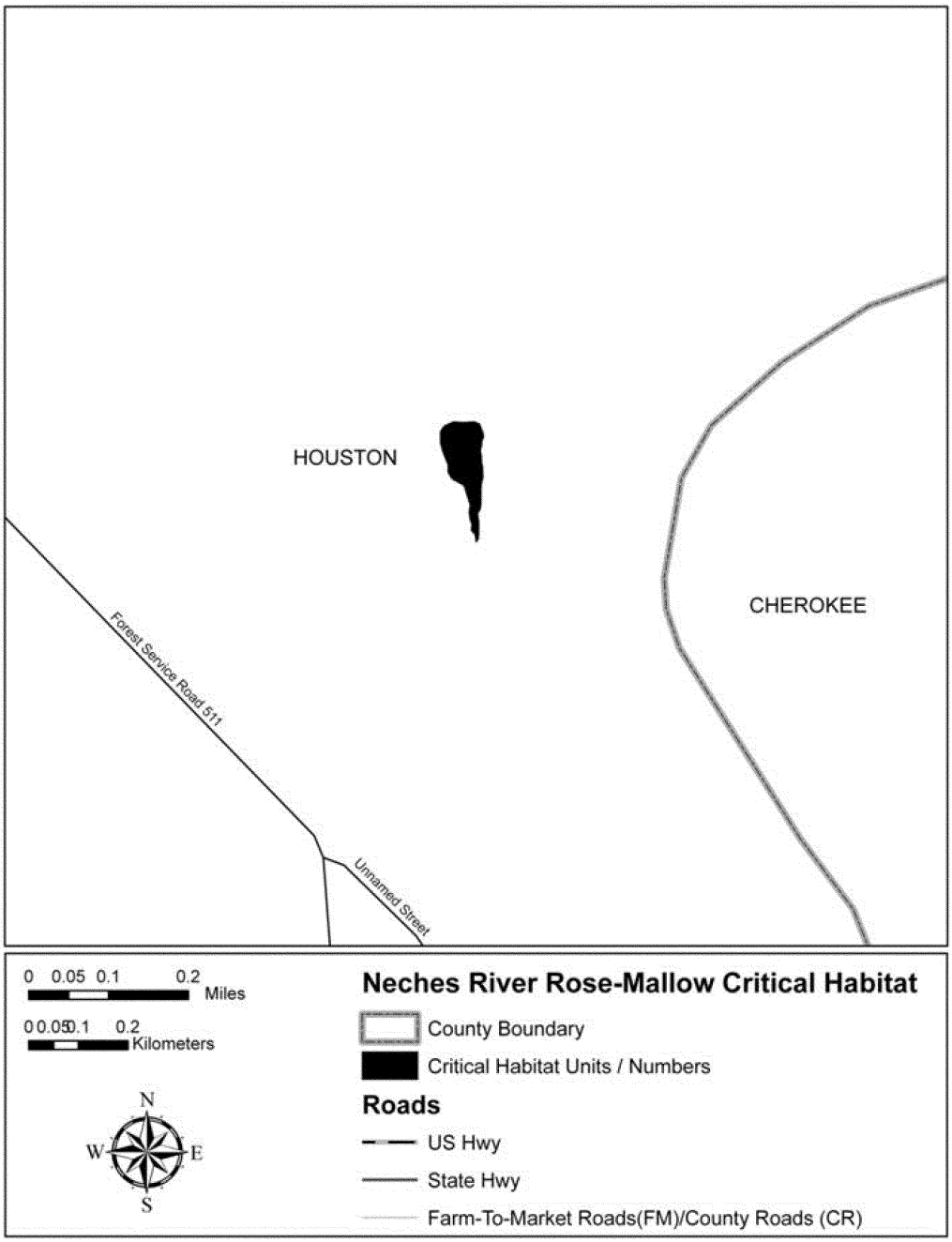
(11) Unit 6: Davy Crockett National Forest, Compartment 11, Houston County, Texas. Map of Unit 6 follows:



(12) Unit 7: Davy Crockett National Forest, Compartment 20, Houston County, Texas. Map of Unit 7 follows:

Unit 7

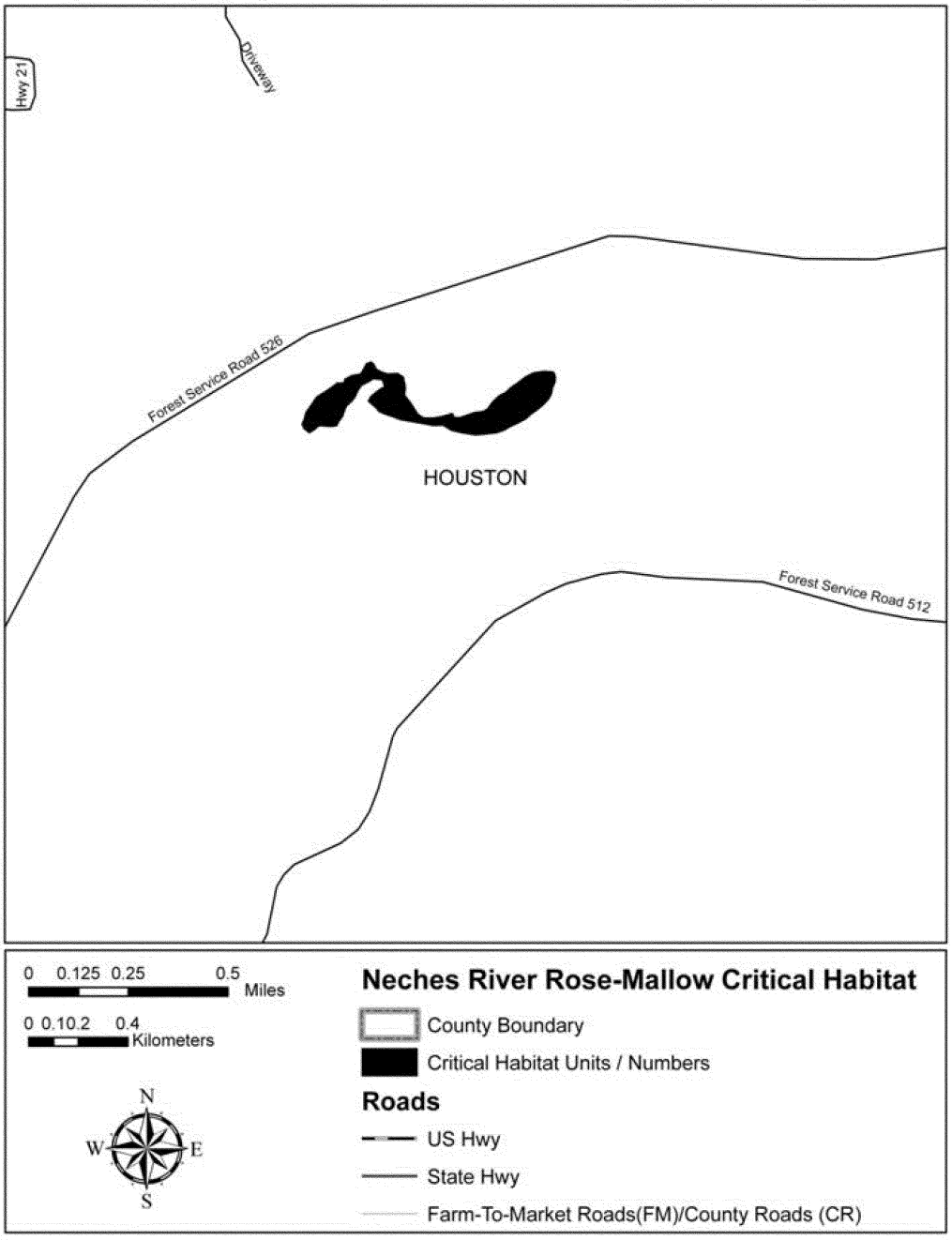
Critical Habitat for *Hibiscus dasycalyx* (Neches River rose-mallow)



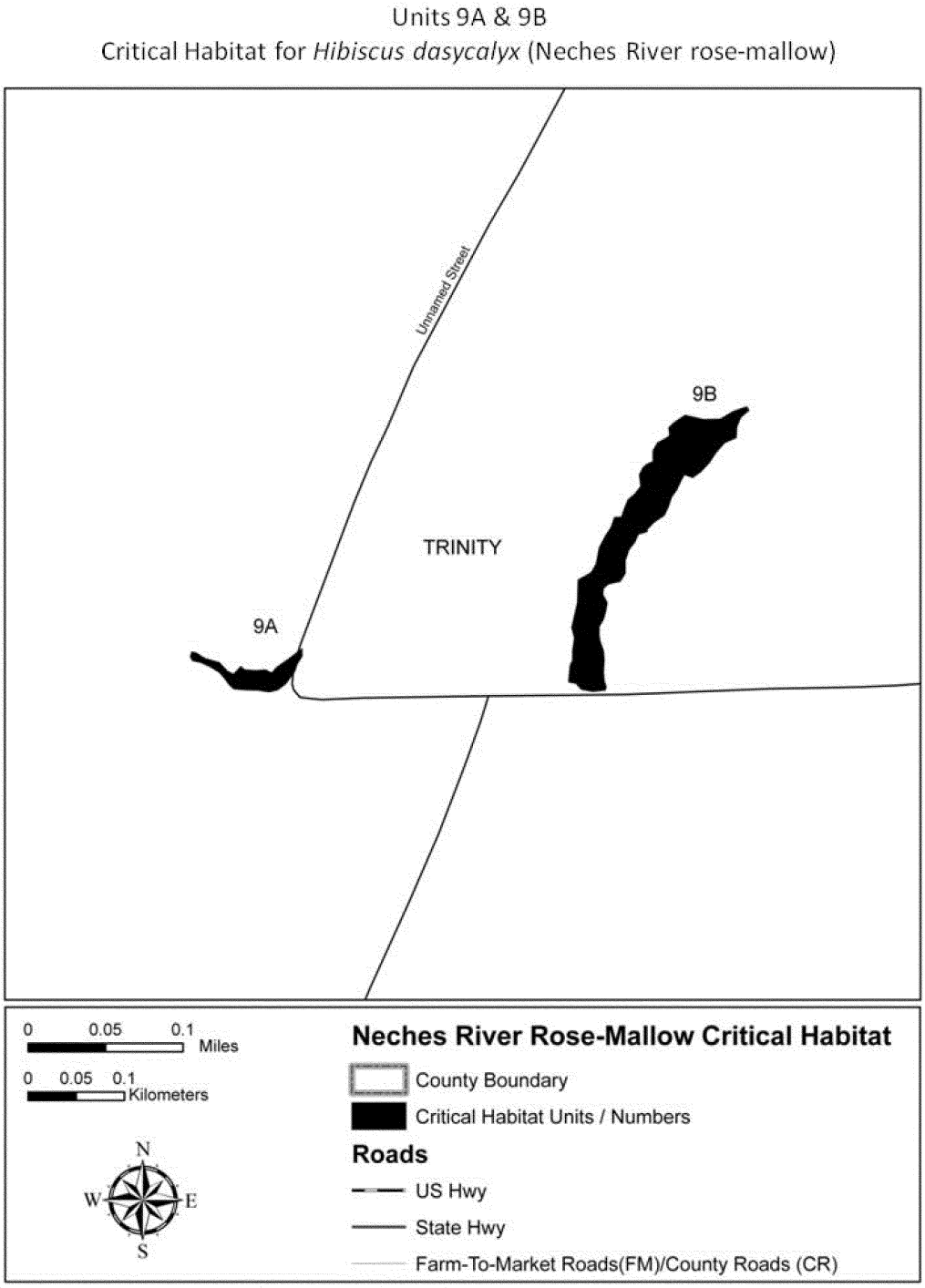
(13) Unit 8: Davy Crockett National Forest, Compartment 16, Houston County, Texas. Map of Unit 8 follows:

Unit 8

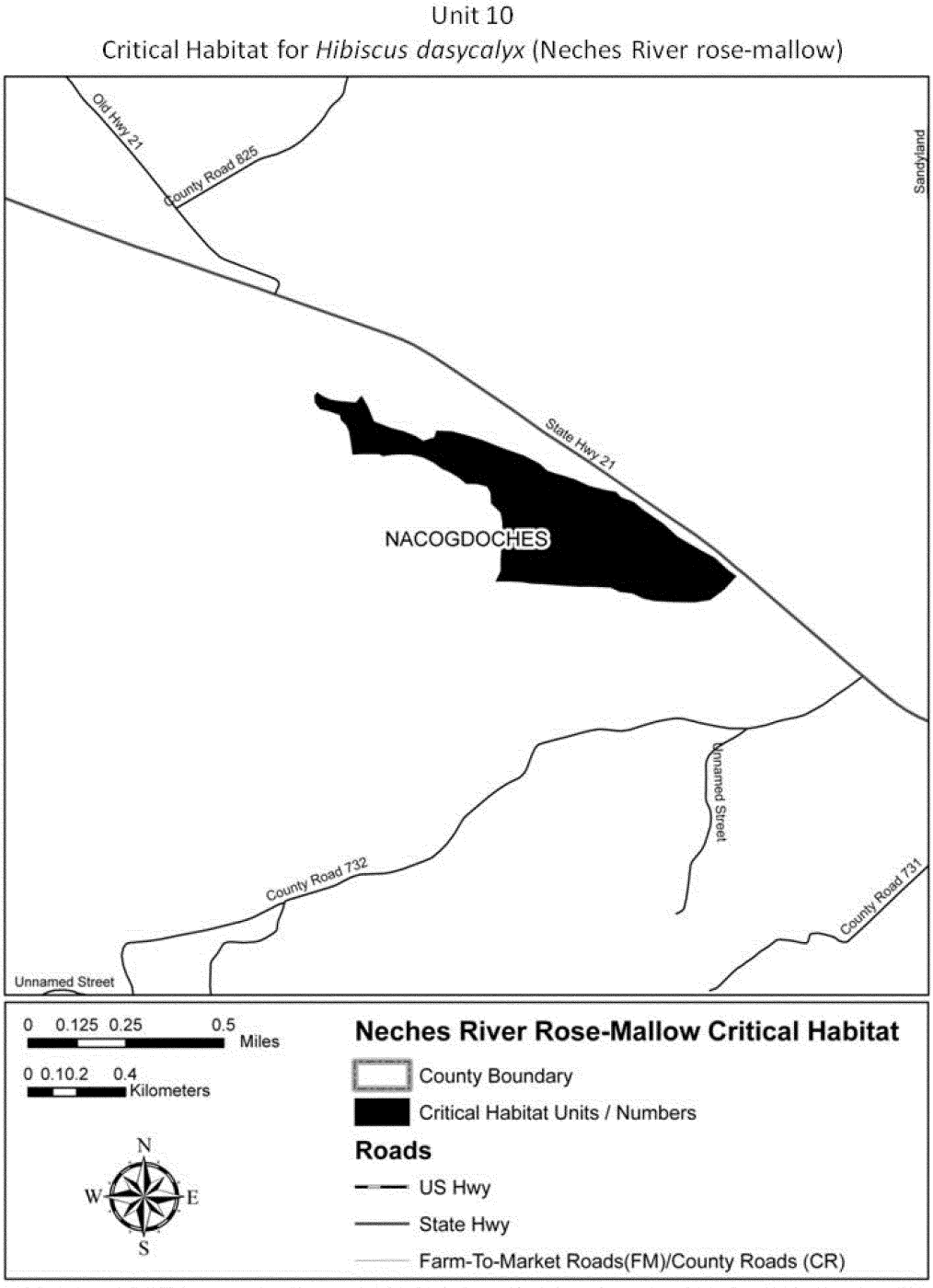
Critical Habitat for *Hibiscus dasycalyx* (Neches River rose-mallow)



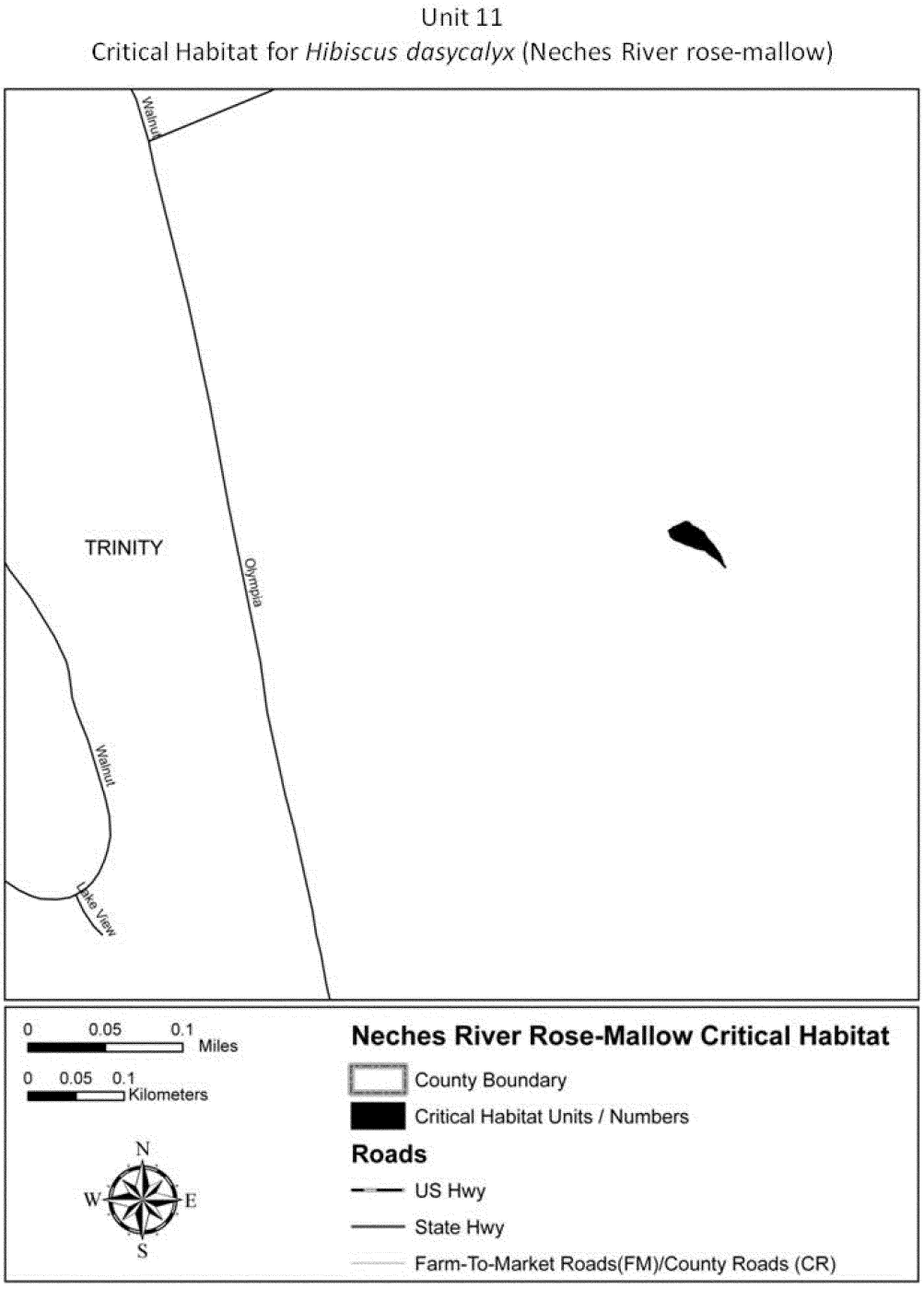
(14) Unit 9: Champion site, Trinity County, Texas. Map of Unit 9 follows:



(15) Unit 10: Mill Creek Gardens, Nacogdoches County, Texas. Map of Unit 10 follows:



(16) Unit 11: Camp Olympia, Trinity County, Texas. Map of Unit 11 follows:



* * * * *

Dated: September 5, 2013.

Michael Bean,

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

[FR Doc. 2013–22083 Filed 9–10–13; 8:45 am]

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