Dated: June 16, 2020.

**Cosmo Servidio,**

*Regional Administrator, EPA Region III.*

For the reasons stated in the preamble, the Environmental Protection Agency amends 40 CFR part 300 as follows:

## PART 300—NATIONAL OIL AND HAZARDOUS SUBSTANCES POLLUTION CONTINGENCY PLAN

■ 1. The authority citation for part 300 continues to read as follows:

**Authority:** 33 U.S.C. 1251 *et seq.*

### Appendix B to Part 300—[Amended]

■ 2. Table 1 of Appendix B to part 300 is amended by removing ''VA,'' ''First Piedmont Rock Quarry (Route 719)'', ''Pittsylvania County''.

[FR Doc. 2020–13459 Filed 6–22–20; 8:45 am]

**BILLING CODE 6560–50–P**

## DEPARTMENT OF THE INTERIOR

### Fish and Wildlife Service

### 50 CFR Part 17

**[Docket No. FWS–R2–ES–2017–0014; FF09E21000 FXES11110900000 201]**

**RIN 1018–BD53**

## Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for Sonoyta Mud Turtle

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Final rule.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), designate critical habitat for the Sonoyta mud turtle (*Kinosternon sonoriense longifemorale*) under the Endangered Species Act (Act). In total, 12.28 acres (4.97 hectares) in Pima County, Arizona, located entirely within the Organ Pipe Cactus National Monument, fall within the boundaries of the critical habitat designation. This rule extends the Act's protections to this subspecies' designated critical habitat.

**DATES:** This rule is effective on July 23, 2020.

**ADDRESSES:** This final rule is available on the internet at *http://www.regulations.gov* and *https://www.fws.gov/southwest/es/arizona/.* Comments and materials we received, as well as some supporting documentation we used in preparing this final rule, are available for public inspection at *http://www.regulations.gov.* All of the comments, materials, and documentation that we considered in this rulemaking are available by appointment, during normal business hours, at: U.S. Fish and Wildlife Service, Arizona Ecological Services Field Office, 9828 North 31st Ave. #C3, Phoenix, AZ 85051–2517; 602–242–2513.

The coordinates or plot points or both from which the map is generated are included in the administrative record for this critical habitat designation and are available at *http://www.regulations.gov* at Docket No. FWS–R2–ES–2017–0014, and at the Arizona Ecological Services Field Office (*https://www.fws.gov/southwest/es/arizona/*) (see **FOR FURTHER INFORMATION CONTACT**). Any additional tools or supporting information that we developed for this critical habitat designation will also be available at the Fish and Wildlife Service website and Field Office set out above, and may also be included in the preamble and at *http://www.regulations.gov.*

**FOR FURTHER INFORMATION CONTACT:** Jeff Humphrey, Field Supervisor, U.S. Fish and Wildlife Service, Arizona Ecological Services Field Office, 9828 North 31st Ave. #C3, Phoenix, AZ 85051–2517; 602–242–0210. If you use a telecommunications device for the deaf (TDD), call the Federal Relay Service at 800–877–8339.

**SUPPLEMENTARY INFORMATION:**

### Executive Summary

*Why we need to publish a rule.* Under the Endangered Species Act (Act), if we determine that a species is an endangered or threatened species, we must designate critical habitat to the maximum extent prudent and determinable. We published a final rule to list the Sonoyta mud turtle as endangered on September 20, 2017 (82 FR 43897). In that rule, we found that critical habitat for the Sonoyta mud turtle was not determinable at that time. The Act then allows the Service an additional year to publish a critical habitat designation (16 U.S.C. 1533(b)(6)(C)(ii)). On December 6, 2018, we published a proposed critical habitat designation for the Sonoyta mud turtle (83 FR 62778). Designations and revisions of critical habitat can only be completed by issuing a rule.

*Basis for this rule.* Section 4(b)(2) of the Act states that the Secretary shall designate critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The critical habitat areas we are designating in this rule constitute our current best assessment of the areas that meet the definition of critical habitat for the Sonoyta mud turtle.

*This rule* designates 12.28 acres (4.97 hectares) in one unit as critical habitat for the Sonoyta mud turtle, and makes available the final economic analysis for that designation.

### Previous Federal Actions

We published a final rule to list the Sonoyta mud turtle as endangered on September 20, 2017 (82 FR 43897). In that rule, we found that critical habitat for the Sonoyta mud turtle was not determinable at that time. The Act then allows the Service an additional year to publish a critical habitat designation (16 U.S.C. 1533(b)(6)(C)(ii)). On December 6, 2018, we published a proposed critical habitat designation for the Sonoyta mud turtle (83 FR 62778). All other previous Federal actions are described in the proposed rule to list Sonoyta mud turtle as an endangered species under the Act, published in the **Federal Register** on September 21, 2016 (81 FR 64829).

### Summary of Comments and Recommendations

On December 6, 2018, we published a proposed critical habitat designation for the Sonoyta mud turtle (83 FR 62778). The public comment period for the proposed rule lasted 60 days, from December 6, 2018, to February 4, 2019. During the comment period, we received 20 comment letters directly addressing the proposed critical habitat designation; we did not receive any requests for a public hearing. All substantive information provided during comment periods has either been incorporated directly into this final determination or is addressed below. Comments we received were grouped into general issues specifically relating to the proposed critical habitat designation for the Sonoyta mud turtle, and are addressed in the following summary and incorporated into the final rule as appropriate.

*Peer Review*

In accordance with our peer review policy published on July 1, 1994 (59 FR 34270), we solicited expert opinions from eight knowledgeable individuals with scientific expertise with the Sonoyta mud turtle and its habitat, biological needs, and threats, or the nominate subspecies Sonora mud turtle (*Kinosternon sonoriense sonoriense*); the geographic region in which the subspecies occurs; and conservation biology principles. Specifically, the peer reviewers reviewed the Sonoyta mud

turtle species status assessment (SSA). Our proposed designation of critical habitat was based upon this SSA. We received responses from six of the peer reviewers. We reviewed all comments we received from the peer reviewers for substantive issues and new information regarding the designation of critical habitat for the Sonoyta mud turtle. Peer reviewer comments were addressed in the SSA report and the final rule listing the Sonoyta mud turtle as an endangered species (82 FR 43897; September 20, 2017). The peer reviewers generally concurred with our methods and conclusion, and provided additional and pertinent information, clarifications, and suggestions to improve the SSA report and, therefore, this final designation of critical habitat. We also considered all comments and information we received from the public during the comment period for the proposed designation of critical habitat.

*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.'' We did not receive comments from the State regarding our proposal to designate critical habitat for the Sonoyta mud turtle.

*Comments From Tribes*

We received comments from two Tribes declaring their support for the designation of critical habitat for the Sonoyta mud turtle.

*Comments From Federal Agencies*

We did not receive comments from any Federal agencies regarding the proposal to designate critical habitat for the Sonoyta mud turtle. We did, however, receive comments from the National Park Service on the SSA report and the proposed listing rule (81 FR 64829; September 21, 2016). Those comments were addressed, during our listing process, in the SSA report. This final rule to designate critical habitat for the Sonoyta mud turtle is based on the SSA report.

*Comments From Public*

(1) *Comment:* Three commenters stated that additional critical habitat should be designated to serve as refugia to account for future climate change impacts to the Sonoyta mud turtle, prevent adverse modification from groundwater pumping, and ensure the Sonoyta mud turtle's survival. One commenter stated that regulations be put on any actions that could hinder critical habitat (*e.g.,* groundwater pumping).

*Our Response:* As we state in the proposed critical habitat rule (83 FR 62778; December 6, 2018), 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 ensure their actions are not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat of such 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.

There are four additional populations of Sonoyta mud turtles in Mexico. Although additional populations of Sonoyta mud turtles in the United States may be needed to ensure the viability of the subspecies, permanent water bodies and sources in southern Arizona with the specific life-history needs of the Sonoyta mud turtle are limited and could not be identified, so no other areas in the United States meet the definition of critical habitat at this time. Areas outside the geographical area occupied by the subspecies lack the aquatic habitat physical or biological features essential to the conservation of the subspecies and that may require special management considerations or protection, as described below (see *Physical or Biological Features Essential to the Conservation of the Sonoyta Mud Turtle*); therefore, no areas outside the geographical area occupied by the subspecies provide a reasonable certainty of contributing to the Sonoyta mud turtle's conservation.

(2) *Comment:* One commenter stated that the critical habitat should be designated strictly as Sonoyta mud turtle habitat (*i.e.,* with restricted use/access) and protection under the Act should be extended to all lands that the Sonoyta mud turtle inhabits. Four commenters stated human interaction and traffic in critical habitat should be limited or restricted.

*Our Response:* The Organ Pipe Cactus National Monument allows multiple public uses stipulated through regulations (see National Park Service regulations in chapter I of title 36 of the Code of Federal Regulations). Consequently, they must manage human use and environmental conservation. The National Park Service is required to consult with the Service on any action they fund, authorize, or carry out that may affect a listed species or critical habitat. Based on this consultation requirement and the National Park Service's past actions to conserve the Sonoyta mud turtle (for further discussion, see the final listing rule (September 20, 2017, 82 FR 43897)), we anticipate that public use of the critical habitat unit will be managed in a manner consistent with the conservation of the Sonoyta mud turtle.

We are designating 12.28 acres (4.97 hectares) in one unit as critical habitat for the Sonoyta mud turtle because this is the only known population in the United States. The Act's policies and regulations do not require that all known habitat for a species should necessarily be designated as critical habitat. However, this critical habitat includes all lands that are known to be used by the Sonoyta mud turtle in the United States.

(3) *Comment:* One commenter stated that management practices should be researched to increase the population. Four commenters stated that recovery actions should be implemented, such as monitoring and evaluation of critical habitat and of the population of the Sonoyta mud turtle; these commenters also stated that alternative water supplies, backup sources of water, and stock tanks should be provided. One commenter stated that a recovery plan should be developed in conjunction with the critical habitat designation.

*Our Response:* As we state in the proposed critical habitat rule (83 FR 62778; December 6, 2018), section 4(f) of the Act calls for the Service to develop and implement recovery plans for the conservation of endangered and threatened species. The recovery planning process involves the identification of actions that are necessary to halt or reverse the species' decline by addressing the threats to its survival and recovery. The goal of this process is to restore listed species to a point where they are secure, self-sustaining, and functioning components of their ecosystems. The specific management actions needed to recover the Sonoyta mud turtle will be addressed in a recovery plan.

Critical habitat designations are made on the basis of the best available

information at the time of designation and do 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.

(4) *Comment:* Two commenters stated that additional border security actions or enhancements are planned for this area, including electronic upgrades, new or upgraded fencing, and other border control activities (not specified). One of these commenters stated that the U.S. Supreme Court recently overruled the Service on a case regarding border fencing and critical habitat, and the Service is obligated to consider national security issues over critical habitat.

*Our Response:* 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. This rule takes into account any relevant national security impacts of the designation of critical habitat for the Sonoyta mud turtle. We consulted with the Department of Defense and Department of Homeland Security on the proposed designation. Neither agency requested an exclusion from critical habitat based on potential national security impacts. We note that Congress has provided to the Secretary of Homeland Security a number of authorities necessary to carry out the Department's border security mission. One of those authorities is found at section 102 of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, as amended (''IIRIRA''). In section 102(a) of IIRIRA, Congress provided that the Secretary of Homeland Security shall take such actions as may be necessary to install additional physical barriers and roads (including the removal of obstacles to detection of illegal entrants) in the vicinity of the United States border to deter illegal crossings in areas of high illegal entry into the United States. In section 102(b) of IIRIRA, Congress mandated the installation of additional fencing, barriers, roads, lighting, cameras, and sensors on the southwest border. Finally, in section 102(c) of IIRIRA, Congress granted to the Secretary of Homeland Security the authority to waive all legal requirements that he determines are necessary to ensure the expeditious construction of barriers and roads authorized by section 102 of IIRIRA. On May 15, 2019, the Secretary of Homeland Security issued waivers for legal requirements covering border barrier activities directly in the vicinity of the Sonoyta mud turtle's known range and proposed critical habitat (84 FR 21798).

(5) *Comment:* One commenter stated that a more substantial economic impact evaluation be conducted to include the costs of designating and protecting the Sonoyta mud turtle and the possibility of necessity of captive reproduction.

*Our Response:* As part of the rulemaking process, the Service must consider the economic impacts, including costs and benefits, of the proposed rule in the context of three separate requirements: Regulatory Planning and Review (Executive Orders 12866 and 13563), which define a ''significant'' regulatory action, require ''significant'' regulatory actions to be reviewed by the Office of Information and Regulatory Affairs (OIRA) of the Office of Management and Budget (OMB), and encourage Federal agencies to consider regulatory approaches that reduce the burden of regulation while maintaining flexibility and freedom of choice for the public; section 4(b)(2) of the Act, which states that the Secretary must make the designation on the basis of the best scientific data available and after taking into consideration the economic impact, the impact on national security, and any other relevant impacts of specifying any particular area as critical habitat; and the Regulatory Flexibility Act, which requires Federal agencies either to prepare and make available for public comment an initial regulatory flexibility analysis that describes the effect of a proposed rule on small entities or to certify, with a statement of the factual basis, that the rule will not have a significant economic impact on a substantial number of small entities. We have developed this rule in a manner consistent with these requirements.

Captive reproduction is a recovery action, not an action associated with the designation of critical habitat.

## Summary of Changes From Proposed Rule

We are making final, without change, the critical habitat designation we proposed on December 6, 2018 (83 FR 62778). We did not receive comments or information that resulted in redefining our designation of critical habitat for the Sonoyta mud turtle.

## 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.

Our regulations at 50 CFR 424.02 define the geographical area occupied by the species as an area that may generally be delineated around species' occurrences, as determined by the Secretary (*i.e.,* range). Such areas may include those areas used throughout all or part of the species' life cycle, even if not used on a regular basis (*e.g.,* migratory corridors, seasonal habitats, and habitats used periodically, but not solely by vagrant individuals). On August 27, 2019, we published a final rule in the **Federal Register** (84 FR 45020) revising portions of our regulations that implement section 4 of the Act. The revisions to the regulations clarify, interpret, and implement portions of the Act concerning the procedures and criteria used for adding species to or removing species from the Lists of Endangered and Threatened Wildlife and Plants and for designating critical habitat. These final regulations became effective on September 26, 2019. These revised regulations apply to classification and critical habitat rules for which a proposed rule was published after September 26, 2019. Consequently, these new regulations do not apply to this final rule.

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. Designation also does not allow the government or public to access private lands, nor does designation 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 Federal agency would be required to consult with the Service under section 7(a)(2) of the Act. However, even if the Service were to conclude that the proposed activity would result in destruction or adverse modification of the critical habitat, the Federal action agency and the landowner are not required to abandon the proposed activity, or to restore or recover the species; instead, they must 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 that occur in specific occupied areas, we focus on the specific features that are essential to support the life-history needs of the species, including, but not limited to, water characteristics, soil type, geological features, prey, vegetation, symbiotic species, or other features. A feature may be a single habitat characteristic, or a more-complex combination of habitat characteristics. Features may include habitat characteristics that support ephemeral or dynamic habitat conditions. Features may also be expressed in terms relating to principles of conservation biology, such as patch size, distribution distances, and connectivity.

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. When designating critical habitat, the Secretary will first evaluate areas occupied by the species. The Secretary will only consider unoccupied areas to be essential where a critical habitat designation limited to geographical areas occupied by the species would be inadequate to ensure the conservation of the species. In addition, for an unoccupied area to be considered essential, the Secretary must determine that there is a reasonable certainty both that the area will contribute to the conservation of the species and that the area contains one or more of those physical or biological features essential to the conservation of the species.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific 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 from the SSA report and information developed during the listing process for the species. Additional information sources may include any generalized conservation strategy, criteria, or outline that may have been developed for the species; 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 ensure their actions are not likely to jeopardize the continued existence of any endangered or threatened species, and (3) section 9 of the Act's prohibitions on taking any individual of the species, including taking caused by actions that affect habitat. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. These protections and conservation tools will continue to contribute to recovery of this species. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans (HCPs), or other species conservation planning efforts if new information available at the time of these planning efforts calls for a different outcome.

On August 27, 2019, we published a final rule in the **Federal Register** (84 FR 45020) to amend our regulations concerning the procedures and criteria we use to designate and revise critical habitat. That rule became effective on September 26, 2019, but, as stated in that rule, the amendments it sets forth apply to ''rules for which a proposed rule was published after September 26, 2019.'' We published our proposed critical habitat designation for the Sonoyta mud turtle on December 6, 2018 (83 FR 62778); therefore, the amendments set forth in the August 27, 2019, final rule at 84 FR 45020 do not apply to this final designation of critical habitat for the Sonoyta mud turtle.

*Physical or Biological Features Essential to the Conservation of the Sonoyta Mud Turtle*

In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12(b), in determining which areas we will designate as critical habitat from within the geographical area occupied by the species at the time of listing, we

consider the physical or biological features that are essential to the conservation of the species and that may require special management considerations or protection. The regulations at 50 CFR 424.02 define ''physical or biological features essential to the conservation of the species'' as the features that occur in specific areas and that are essential to support the life-history needs of the species, including, but not limited to, water characteristics, soil type, geological features, sites, prey, vegetation, symbiotic species, or other features. A feature may be a single habitat characteristic, or a more complex combination of habitat characteristics. Features may include habitat characteristics that support ephemeral or dynamic habitat conditions. Features may also be expressed in terms relating to principles of conservation biology, such as patch size, distribution distances, and connectivity.

For example, physical features might include gravel of a particular size required for spawning, alkali soil for seed germination, protective cover for migration, or susceptibility to flooding or fire that maintains necessary early-successional habitat characteristics. Biological features might include prey species, forage grasses, specific kinds or ages of trees for roosting or nesting, symbiotic fungi, or a particular level of nonnative species consistent with conservation needs of the listed species. The features may also be combinations of habitat characteristics and may encompass the relationship between characteristics or the necessary amount of a characteristic needed to support the life history of the species. In considering whether features are essential to the conservation of the species, the Service may consider an appropriate quality, quantity, and spatial and temporal arrangement of habitat characteristics in the context of the life-history needs, condition, and status of the species. These characteristics include, but are not limited to, space for individual and population growth and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, or rearing (or development) of offspring; and habitats that are protected from disturbance.

We conducted a SSA for the Sonoyta mud turtle, which is an evaluation of the best available scientific and commercial data on the status of the subspecies. The species status assessment report (SSA report; Service 2017, which is available at *https://www.fws.gov/southwest/es/arizona/Sonoyta.html* and at *http://www.regulations.gov* under Docket No. FWS–R2–ES–2017–0014) is based on a thorough review of the natural history, habitats, ecology, populations, and range of the Sonoyta mud turtle, and risks to the subspecies. The SSA report provides the scientific information upon which this final critical habitat designation is based.

The Sonoyta mud turtle is a freshwater turtle encountered in or near water in an otherwise arid environment that commonly experiences drought and extreme heat (ambient temperatures can exceed 45 degrees Celsius (°C) (113 degrees Fahrenheit (°F)). Sonoyta mud turtles depend on aquatic habitat with adjacent terrestrial habitat for life-history functions. Aquatic habitat consists of streams and natural and manmade ponds with perennial or near-perennial (water present more than 11 months of the year for multiple years) sources of water. Terrestrial habitat consists of riparian areas along water sources that maintain moist soil and a cooler environment than adjacent uplands. Much of the information on resource needs of the Sonoyta mud turtle subspecies is inferred from work on the nominate subspecies, Sonora mud turtle (*Kinosternon sonoriense sonoriense*), and noted accordingly in the text that follows.

Aquatic habitat in ponds and streams is usually shallow water to 2 meters (m) (7 feet (ft)) deep, with a rocky, muddy, or sandy substrate, and emergent or submergent vegetation, or both (National Park Service 2015, p. 2; Paredes-Aguilar and Rosen 2003, pp. 5–7; Rosen 2003, p. 5; Rosen *et al.* 207, p. 14). Sonoyta mud turtles need perennial or near-perennial surface water for feeding, for protection from predators, to prevent desiccation, and for mating. Hatchling, juvenile, and sub-adult turtles prefer aquatic habitat with shallow water and dense emergent vegetation that provides foraging opportunities as well as protection from predators (Rosen 1986, pp. 14, 36; Rosen and Lowe 1996, p. 11). Emergent aquatic vegetation includes plants such as cattail (*Typha domingensis*), spikerush (*Eleocharis geniculata*), and travelling spikerush (*Eleocharis rostellata*) (Felger *et al.* 1992, pp. 33, 36). Adults will also use shallow water habitat, but prefer aquatic habitat with deeper (up to 2 m (7 ft)) open water (with no or little vegetation growing in the water column), and submerged vegetation for feeding on benthic and plant-crawling invertebrates along the substrate (Rosen 1986, pp. 14, 16; Rosen and Lowe 1996, p. 11). American bulrush (*Schoenoplectus americanus*), an introduced nonnative plant species, and the native cattails can encroach into open water used by Sonoyta mud turtles. Historically, Sonoyta mud turtles occurred in rivers or cienegas within a natural ecosystem that maintained aquatic vegetation suitable to the Sonoyta mud turtle's needs. However, habitat at some Sonoyta mud turtle locations has been altered from this natural ecosystem to ponded water maintained by water control structures. American bulrush and cattails encroach these ponded sites such that open water is eliminated. Consequently, mechanical removal of American bulrush and cattails may be needed periodically to maintain patches of open water. The submerged aquatic vegetation required for prey includes plants such as holly-leaved water nymph (*Najas marina*), slender pondweed (*Potamogeton pectinatus*), ditch-grass (*Ruppia maritima*), and horned pondweed (*Zannichellia palustris*) (Felger *et al.* 1992, p. 36).

Reduced water levels would reduce overall habitat amount (water and vegetation) and quality, causing crowding and increased competition for remaining, limited resources such as cover and prey (Stanila 2009, p. 45). A reduction in water and emergent vegetation would likely reduce the amount of space and invertebrate prey for Sonoyta mud turtles. Large adult Sonora mud turtles have exhibited site fidelity to specific pools in a stream channel (Hall and Steidl 2007, p. 410), and although not studied, this could also be true for the Sonoyta mud turtle. As a result, lower water levels could reduce carrying capacity and increase overlap of adult Sonoyta mud turtle territory. Adequate prey allows juvenile turtles to grow rapidly and allows adults to have sufficient lipid content to support reproduction. Poor body condition (*i.e.,* low lipids) may be associated with lower clutch size (total number of eggs produced) and, therefore, lower population growth (Rosen and Lowe 1996, pp. 40–43). Sonoyta mud turtles in dry or low surface water reaches would burrow in channels to escape desiccation for a short period of time. Over time, however, burrows themselves may become too dry; turtles will lose fat reserves due to lack of foraging opportunity. If adult Sonoyta mud turtles mate during or after losing fat reserves, females may not have viable eggs due to lack of nutrition and fat reserves, and eventually turtles will die from either starvation or desiccation. Potential population-level impacts include lower reproductive rates,

reduced recruitment, reduced population growth rate, and changes in distribution.

Sonoyta mud turtles are opportunistic carnivores, feeding primarily on aquatic invertebrates that live on emergent and submergent vegetation or the substrate of ponds and streams (Rosen 1986, pp. 14, 31; Rosen and Lowe 1996, pp. 32–35). Sonoyta mud turtle hatchlings and juveniles feed on littoral invertebrate fauna, while subadults and adults prefer benthic and plant-crawling invertebrates (Hulse 1974, pp. 197–198; Lovich *et al.* 207, pp. 135–136; Rosen 1986, pp. 14, 31; Rosen and Lowe 1996, pp. 32–35; Stanila *et al.* 2008, p. 42). In habitats with poor aquatic invertebrate faunas, Sonoyta mud turtles will shift to omnivorous feeding, including plants and vertebrates such as fish (Rosen and Lowe 1996, pp. 32–35). However, where fish are abundant, Sonoyta mud turtles catch few of them (Rosen and Lowe 1996, p. 32). Sonora mud turtles are also known to consume other vertebrates including toads, and even reptiles and birds when available for capture (Ligon and Stone 2003, entire; Stone *et al.* 2005, entire). Analysis of stomach contents of the Sonora mud turtle revealed animal material represented 69.0–93.6 percent total volume, with plant material making up the remaining volume (Hulse 1974, p. 197). Aquatic invertebrates found in the stomach contents of Sonora mud turtles included members of 11 invertebrate orders such as dragonflies (Anisoptera), caddisflies (Trichoptera), flies (Diptera), beetles (Coleoptera), and aquatic snail species (Basommatophora). Aquatic invertebrates require submergent or emergent vegetation and a variety of prey, such as algae, diatoms, and other microorganisms.

Sonoyta mud turtles need aquatic habitat free of nonnative predators and competitors. Aquatic habitat with nonnative predators, including crayfish (*Orconectes* spp. and *Cherax* spp.), American bullfrogs (*Lithobates catesbeianus*), and sunfish (centrarchids), could decrease population stability or potentially decimate populations of the Sonoyta mud turtle (Drost *et al.* 207, pp. 33–34; Hensley *et al.* 207, pp. 186–187; Fernandez and Rosen 1996, pp. 39–41). These species, along with black bullheads (*Ameiurus melas*), African cichlid fishes (tilapia), western mosquitofish (*Gambusia affinis*), and exotic turtles, compete with mud turtles for food or disrupt the food chain, which could alter the invertebrate community (Taylor *et al.* 1984, pp. 330–331; Fernandez and Rosen 1996, pp. 39–40; Duncan 2013, p. 1). Such competition, in turn, could decrease type and amount of aquatic invertebrate prey available to Sonoyta mud turtles (Fernandez and Rosen 1996, pp. 39–40).

Because high average annual juvenile survivorship is required for populations of long-lived organisms to maintain population stability (Congdon *et al.* 1993, pp. 831–832; Congdon *et al.* 1994, pp. 405–406), nonnative predators that reduce recruitment into Sonoyta mud turtle populations could cause population declines. Bullfrogs and crayfish are known predators of hatchling and juvenile turtles of the Sonora mud turtle (Fernandez and Rosen 1996, pp. 33–43; Akins and Jones 207, p. 343; Hensley *et al.* 207, pp. 186–187; Schwendiman 2001, p. 39), and would likely eat hatchling Sonoyta mud turtles if introduced. Populations of the Sonora mud turtle have coexisted with moderate and high densities of bullfrogs (Rosen and Schwalbe 2002, p. 230). However, a high density of bullfrogs may reduce population density of mud turtles (van Lobel Sells 1997, p. 343). Crayfish are detrimental to populations of the Sonora mud turtle and not only prey on small mud turtles, but likely compete with them for native aquatic invertebrate food sources (Fernandez and Rosen 1996, pp. 39–40). One study documented cessation of Sonora mud turtle recruitment 2 years after crayfish introduction to an area that had supported a population of approximately 1,000 Sonora mud turtles (Fernandez and Rosen 1996, pp. 40–41). Large sunfish, such as largemouth bass (*Micropterus salmoides*), also have the potential to reduce recruitment in populations of Sonoyta mud turtles because their large gape (external mouth width) makes it possible for them to prey on hatchling and juvenile Sonoyta mud turtles (Stanila 2009, p. 50). Largemouth bass are known to eat other aquatic turtle species, and Rosen (1987, p. 6) reported the lowest population densities of Sonora mud turtles in habitats with largemouth bass.

Adult and juvenile Sonoyta mud turtles use aquatic habitat with complex structure that provides protection from predators such as root masses, rock features, and undercut banks (Rosen 1986, pp. 14, 16; Rosen and Lowe 1996, p. 11). Shallow water areas with dense emergent vegetation also provide protection from predators for hatchlings, juveniles, and adults. Overhanging riparian vegetation along the stream channel or pond margin and soil burrows under overhanging banks provide some protection from predators for turtles in the water near the shoreline. Riparian vegetation may also provide some level of protection from terrestrial predators while turtles are out of the water.

Terrestrial habitat that maintains soil moisture for Sonoyta mud turtles occurs in riparian areas along the banks of ponds and streams, and in intermittently dry sections of stream channels. Riparian habitat provides shadier, cooler, and moister conditions than the adjacent upland areas. Sonoyta mud turtles require moist soil for nesting to prevent desiccation of eggs and for estivation (a state of dormancy) sites to prevent desiccation of hatchlings, juveniles, and adults. Riparian vegetation includes plants such as Fremont cottonwood (*Populus fremontii*), Goodding willow (*Salix gooddingii*), honey mesquite (*Prosopis glandulosa*), screwbean mesquite (*P. pubescens*), seepwillow (*Baccharis salicifolia*), greythorn (*Ziziphus obtusifolia*), wolfberry (*Lycium* spp.), salt grass (*Distichlis spicata*), and arrowweed (*Pluchea sericea*) (Felger *et al.* 1992, p. 4).

Sonoyta mud turtles need accessible shoreline without insurmountable rock or artificial vertical barriers to allow for movement between wetted sites, between aquatic habitat and terrestrial nest sites, and between water and estivation (dormancy during drought) sites. Sonora mud turtles in dry or low surface water conditions may either travel along dry intermittent sections of a stream to find water or they will estivate (Hall and Steidl 2007, p. 406; Hensley *et al.* 207, pp. 181–182; Ligon and Stone 2003, pp. 752–753; Stone 2001, pp. 46–49). Sonora mud turtles that live in permanent bodies of water have shown highly aquatic behavior with little terrestrial behavior or movement between water sources, while Sonora mud turtles in more ephemeral habits have been documented moving through or out of dry stream beds to reach wetted pools, for winter hibernation, or for estivation during drought as a drought-survival strategy (Hall and Steidl 2007, pp. 406–408; Hensley *et al.* 207, pp. 181–182; Ligon and Stone 2003, pp. 752–753; Stone 2001, pp. 46–51).

Sonora mud turtles can endure lack of surface water for a short time and have been documented estivating in the wild for 11 to 34 days (Ligon and Stone 2003, p. 752), and once for up to 68 days (Ligon and Stone 2002, entire; Ligon and Stone 2003, p. 753). However, prolonged and recurrent estivation is expected to reduce fitness and increase mortality (Peterson and Stone 2000, pp. 692–698). Terrestrial estivation sites consisted of depressions under vegetation, soil, or organic matter; in rock crevices; or in soil burrows under

overhanging banks of streams or ponds. One study found Sonora mud turtles estivating up to 79 m (259 ft) from a streambed during summer even when water was available, with mud turtles using clumps of vegetation or spaces under large rocks in the terrestrial environment (Ligon and Stone 2003, pp. 752–753).

Estivation has not been verified in the Sonoyta mud turtle, and physiological tolerances for estivation are unknown. However, Sonoyta mud turtles have been found in burrows up to 1 m (3.3 ft) deep in stream banks, presumably using these burrows to escape from predators (Paredes-Aguilar and Rosen 2003, p. 8) or for drought refuge. Further, based on the physiological requirements of the Sonora mud turtle and the arid environment in which the Sonoyta mud turtle lives, we believe that they estivate during times of little or no surface water.

Long-distance movements of Sonora mud turtles exceeding 7 kilometers (5 miles) in straight-line distance occurred between aquatic habitats. Such movements may reduce reproductive isolation and lower the probability of extirpation of populations (Hall and Steilde 2007, p. 408; Hensley *et al.* 207, pp. 181–182; Stone *et al.* 2015, p. 736). Although not well-studied, no movement of Sonoyta mud turtles of these magnitudes has been documented, and restrictions associated with their extreme arid environment may reduce such movements (P. Rosen 2016, pers. comm.). Dispersal habitat along drainages is likely needed to maintain connectivity between populations of the Sonoyta mud turtle on a rangewide scale.

The Sonora mud turtle is known to mate from April to October, and female Sonora and Sonoyta mud turtles lay eggs from mid to late July through September in vegetation litter, soil burrows, and rock crevices up to 52 m (171 ft) away from water (Rosen and Lowe 1996, pp. 21, 23; Stone *et al.* 2015, p. 735; D. Hall 2016, pers. comm.; Rosen 1986, p. 7; A. Owens 2007, pers. comm.; P. Holm 2016, pers. comm.). Eggs may undergo embryonic diapause in the nest for 11 months after being laid, with hatchlings emerging the following year (van Loben Sels *et al.* 1997, p. 343; Ernst and Lovich 2009, p. 497; Stone *et al.* 2015, p. 735). In mid to late July through September, females leave the water briefly to lay eggs in terrestrial nests that maintain some level of moisture. Three presumed nest sites have been observed for the Sonoyta mud turtle that indicate this subspecies uses nest sites similar to the Sonora mud turtle. The only potential nesting behavior of the Sonoyta mud turtle observed was a gravid female, ''apparently preparing to lay eggs,'' digging 15 centimeters (cm) (6 inches (in)) into the soil in a mesquite bosque (cluster of trees along a stream) 9 m (30 ft) from the edge of the pond at Quitobaquito Springs (Rosen and Lowe 1996, p. 23). A second turtle nest site was found in a small cavity (5 by 5 cm (2 by 2 in)) within a 3 m (10 ft) high soil bank that runs next to the spring-fed channel leading to the pond at Quitobaquito Springs (A. Owens 2007, pers. comm.). The third nest site was found in a small depression in soil beneath a piece of tree bark on top of an undercut bank at the edge the pond at Quitobaquito Springs (P. Holm 2016, pers. comm.).

Summary of Essential Physical or Biological Features

We derive the specific physical or biological features essential to the conservation of the Sonoyta mud turtle from studies of its habitat, ecology, and life history as described above. Additional information can be found in the final listing rule published in the **Federal Register** on September 20, 2017 (82 FR 43897) and the SSA report published on *http://www.regulations.gov.* We have determined that the following physical or biological features are essential to the conservation of the Sonoyta mud turtle:

(1) Aquatic habitat, such as streams and natural or manmade ponds, with perennial or near-perennial sources of water, containing or including:

(a) Surface water to 2 m (7 ft) deep, with a rocky, muddy, or sandy substrate, and emergent or submergent vegetation, or both;

(b) Surface water free of nonnative predators and competitors, including crayfish, American bullfrogs, and large sunfish;

(c) Shallow water areas with dense emergent vegetation (*e.g.,* cattail, spikerush, and travelling spikerush);

(d) Access to deeper open water in ponds, and submerged vegetation (*e.g.,* holly-leaved water nymph, slender pondweed, ditch-grass, and horned pondweed); and

(e) Areas with complex structure, including protective shelter sites such as root masses, rock features, and undercut banks.

(2) Aquatic invertebrate prey base (*e.g.,* Anisoptera, Trichoptera, Diptera, Coleoptera, aquatic snail species) and their corresponding habitat, including submergent or emergent vegetation and a variety of forage, and prey such as algae, diatoms, other microorganisms.

(3) Terrestrial, riparian habitat, adjacent to suitable aquatic habitat, containing or including:

(a) Accessible shoreline for Sonoyta mud turtles without insurmountable rock or artificial vertical barriers to allow movement between wetted sites, between aquatic habitat and terrestrial nest sites, and between aquatic habitat and estivation sites;

(b) Riparian areas that maintain soil moisture to prevent desiccation of eggs and provide estivation sites, located along the banks of ponds and streams with riparian vegetation (*e.g.,* cottonwood, willow, seepwillow, mesquite, greythorn, wolfberry, salt grass, arrowweed); and

(c) Estivation and nesting sites, including depressions under vegetation, soil, or organic matter; rock crevices; and soil burrows under overhanging banks of streams or ponds, that are available year-round.

*Special Management Considerations or Protection*

When designating critical habitat, we assess whether the specific areas within the geographical area occupied by the species at the time of listing contain features that are essential to the conservation of the species and which may require special management considerations or protection. The features essential to the conservation of the Sonoyta mud turtle may require special management considerations or protection to reduce the following threats: (1) Water loss; (2) loss of riparian habitat; (3) reduction of invertebrate prey; (4) presence of nonnative species; and (5) land management activities incompatible with maintaining needed habitat (such as dredging).

Management activities that could ameliorate these threats and protect the quantity and quality of the aquatic and riparian habitat include, but are not limited to: (1) Maximizing surface water and aquatic habitat available through structure maintenance, such as berms, lining ponds and spring runs, and removing sediment; (2) decreasing groundwater pumping to maintain surface water that supports aquatic and riparian habitat, as well as the invertebrate prey base; (3) controlling and removing introduced nonnative plant species, such as American bulrush, to maintain aquatic habitat; and (4) controlling and removing introduced nonnative predators and competitors, such as crayfish, American bullfrogs, and large sunfish.

*Areas Occupied at the Time of Listing*

We are designating as critical habitat lands that we have determined are occupied at the time of listing (in this case, the date we published the final listing rule: September 20, 2017) and contain one or more of the physical or biological features to support life-history processes essential to the conservation of the Sonoyta mud turtle. For purposes of this final rule, we define ''occupied habitat'' for the Sonoyta mud turtle as areas with positive survey records since 2000. The Sonoyta mud turtle has been recorded from this unit every year since 2000.

*Criteria Used To Identify Critical Habitat*

As required by section 4(b)(2) of the Act, we use the best scientific data available to designate critical habitat. In accordance with the Act and our implementing regulations at 50 CFR 424.12(b), we review available information pertaining to the habitat requirements of the species and identify specific areas within the geographical area occupied by the species at the time of listing and any specific areas outside the geographical area occupied by the species to be considered for designation as critical habitat. We are not designating any areas outside the geographical area occupied by the subspecies because we have not identified any relevant areas that have a reasonable certainty of contributing to the conservation of the subspecies. If we receive additional information, either through our recovery planning efforts or other conservation efforts, that demonstrates areas not currently occupied by the subspecies could be essential for the conservation of the Sonoyta mud turtle, we will consider amending this determination at that time.

Sources of occupancy data on the Sonoyta mud turtle are monitoring data from Organ Pipe Cactus National Monument (National Park Service 2002–2016, p. 1). We obtained information on ecology and habitat requirements of the Sonoyta mud turtle from multiple sources, as identified in the SSA report (Service 2017, entire). For mapping of this final critical habitat, we used Organ Pipe Cactus National Monument geo-referenced data of the water features used by Sonoyta mud turtles at Quitobaquito. In addition, we used satellite imagery available in ArcGIS to delineate riparian areas surrounding the surface water habitat.

When determining final critical habitat boundaries, we made every effort to avoid including developed areas such as lands covered by buildings, pavement, and other structures because such lands typically lack physical or biological features necessary for the Sonoyta mud turtle. However, manmade water conveyance structures within the designated critical habitat are part of the designation and are needed to manage the existing habitat. The current occupied unit includes a manmade spring enclosure and spring channel that convey water to a manmade pond surrounded by a manmade berm. The spring channel not only conveys water to the pond but also serves as habitat for the subspecies. Therefore, all of these manmade features are considered critical habitat.

We are designating as critical habitat lands that we have determined are occupied at the time of listing and contain physical or biological features to support life-history processes essential to the conservation of the Sonoyta mud turtle. This critical habitat designation includes the only known extant population of Sonoyta mud turtles in the United States, within the Organ Pipe Cactus National Monument. We are designating one critical habitat unit based on one or more of the physical or biological features being present to support the life-history processes of the Sonoyta mud turtle.

The critical habitat designation is defined by the map, as modified by any accompanying regulatory text, presented below under Regulation Promulgation. We include more detailed information on the boundaries of the critical habitat designation under *Final Critical Habitat Designation,* below. We will make the coordinates or plot points or both on which the map is based available to the public on *http://www.regulations.gov* at Docket No. FWS–R2–ES–2017–0014, on our internet site at *http://www.fws.gov/southwest/es/arizona,* and at the field office responsible for the designation (see **FOR FURTHER INFORMATION CONTACT**, above).

*Final Critical Habitat Designation*

We are designating 12.28 acres (4.97 hectares) in one unit as critical habitat for Sonoyta mud turtle. The critical habitat area we describe below constitutes our current best assessment of the area that meets the definition of critical habitat for the Sonoyta mud turtle.

TABLE OF OCCUPANCY, LAND OWNERSHIP, AND SIZE OF SONOYTA MUD TURTLE FINAL CRITICAL HABITAT

| Unit name | Occupied at time of listing? | Currently occupied? | Land ownership | Size of unit in acres | Size of unit in hectares |
|---|---|---|---|---|---|
| Quitobaquito | Yes | Yes | National Park Service | 12.28 | 4.97 |

We present a brief description of the unit, and reasons why it meets the definition of critical habitat for Sonoyta mud turtle, below.

Quitobaquito Unit

This unit consists of 12.28 acres (4.97 hectares) in the Rio Sonoyta watershed of Organ Pipe Cactus National Monument. This unit is within the geographic area occupied by the subspecies at the time of listing and contains at least one of the physical or biological features essential to the conservation of the Sonoyta mud turtle. Aquatic habitat within this unit consists of the two Quitobaquito springs, the piped water that connects the two springs, a manmade spring channel that connects the springs to Quitobaquito pond, and a manmade pond with a perennial source of water. The spring channel and pond both have shallow water habitat, an aquatic invertebrate prey base, and no nonnative predators. The pond includes surface water up to 107 cm (42 in) deep with a muddy substrate; dense emergent and submergent vegetation; access to deeper open water in a pond for feeding along the substrate; and areas with complex structure and protective shelter sites, including root masses and undercut banks. Terrestrial habitat within this unit consists of adjacent, accessible shoreline along the stream channel and around Quitobaquito pond without insurmountable rock or artificial vertical barriers to movement of the Sonoyta mud turtle, as well as riparian areas, located along the banks of the pond, stream channel, and berm around the pond. These terrestrial habitat components maintain soil moisture to prevent desiccation of eggs and estivating turtles, and include estivation and nesting sites, including depressions under vegetation, soil, organic matter,

and soil burrows under overhanging banks of the pond, that are available year-round. The physical or biological features in this unit may require special management considerations or protection to address threats from loss of surface water due to groundwater pumping, berm leaking, aquatic vegetation control, and sedimentation removal in the pond. This unit is entirely within the Organ Pipe Cactus National Monument, and the National Park Service manages the habitat to support the Sonoyta mud turtle population.

**Effects of Critical Habitat Designation**

*Section 7 Consultation*

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

We published a final regulation with a revised definition of destruction or adverse modification on August 27, 2019 (84 FR 44976). Destruction or adverse modification means a direct or indirect alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of a listed 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 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, authorized, or carried out by a Federal agency—do not require section 7 consultation.

Compliance with the requirements of section 7(a)(2), is documented through our issuance of:

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

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

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

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

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

(3) Are economically and technologically feasible, and

(4) Would, in the Service 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 set forth requirements for Federal agencies to reinitiate formal consultation on previously reviewed actions. These requirements apply when the Federal agency has retained discretionary involvement or control over the action (or the agency's discretionary involvement or control is authorized by law) and, subsequent to the previous consultation, we have listed a new species or designated critical habitat that may be affected by the Federal action, or the action has been modified in a manner that affects the species or critical habitat in a way not considered in the previous consultation. In such situations, Federal agencies sometimes may need to request reinitiation of consultation with us, but the regulations also specify some exceptions to the requirement to reinitiate consultation on specific land management plans after subsequently listing a new species or designating new critical habitat. See the regulations for a description of those exceptions.

*Application of the ''Destruction or Adverse Modification'' Standard*

The key factor related to the destruction or adverse modification determination is whether implementation of the proposed Federal action directly or indirectly alters the designated critical habitat in a way that appreciably diminishes the value of the critical habitat as a whole for the conservation of the listed species. As discussed above, the role of critical habitat is to support physical or biological features essential to the conservation of a listed species and provide for the conservation of the species.

Section 4(b)(8) of the Act requires us to briefly evaluate and describe, in any proposed or final regulation that designates critical habitat, activities involving a Federal action that may violate section 7(a)(2) of the Act by destroying or adversely modifying such habitat, or that may be affected by such designation.

Activities that the Services may, during a consultation under section 7(a)(2) of the Act, find are likely to destroy or adversely modify critical habitat include, but are not limited to:

(1) Actions that would decrease the amount of water available to ponds and streams used by Sonoyta mud turtles. Such actions could include, but are not limited to, groundwater pumping. Groundwater pumping could decrease the amount of groundwater that infiltrates streamflow so that streams become smaller, intermittent, or dry, and thereby could reduce the amount of space, prey, nest sites, and cover available for Sonoyta mud turtles.

**Exemptions**

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

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

lands with a completed INRMP within the critical habitat designation.

**Exclusions**

*Consideration and Application of Impacts Under Section 4(b)(2) of the Act*

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

*Consideration of Economic Impacts*

Section 4(b)(2) of the Act and its implementing regulations require that we consider the economic impact that may result from a designation of critical habitat. In order to consider economic impacts, we developed an incremental effects memorandum (IEM, Service 2017) considering the probable incremental economic impacts that may result from this designation of critical habitat. The information contained in our IEM was then used to develop a draft screening analysis of the probable effects of the designation of critical habitat for the Sonoyta mud turtle (Industrial Economics, Inc. (IEc) 2017). This draft screening analysis, combined with the information contained in our IEM, are what we considered our draft economic analysis of the proposed critical habitat designation for the Sonoyta mud turtle (see 83 FR 62778; December 6, 2018). The draft screening analysis, dated February 7, 2017, was made available for public review and comment from December 6, 2018, through February 4, 2019 (83 FR 62778; December 6, 2018). A summary of the IEM and draft screening analysis can be found in the proposed rule to designate critical habitat for the Sonoyta mud turtle (83 FR 62778; December 6, 2018) and is available at *http://www.regulations.gov.* Following the close of the proposed rule's comment period, we reviewed and evaluated all information submitted to us during the comment period that may pertain to our consideration of the probable incremental economic impacts of this critical habitat designation and used it to develop a final screening analysis of the probable effects of the designation of critical habitat for the Sonoyta mud turtle (Industrial Economics, Inc. (IEc) 2019). Information relevant to the probable incremental economic impacts of the critical habitat designation for the Sonoyta mud turtle is summarized below and available in the final economic analysis (FEA, or screening analysis) for the Sonoyta mud turtle (IEc 2019), available at *http://www.regulations.gov.*

The intent of the FEA is to quantify the economic impacts generated by the critical habitat designation for the Sonoyta mud turtle. 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 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.

The FEA considers those costs likely to occur in the 20 years following the designation of critical habitat, which was determined to be the appropriate period for analysis because limited planning information was available for most activities to forecast activity levels for projects beyond a 20-year timeframe. The FEA identifies that the probable incremental economic impacts that may result from the designation of critical habitat for the Sonoyta mud turtle are associated with the following categories of activities: (1) Federal lands management (National Park Service, Organ Pipe Cactus National Monument); (2) groundwater pumping; and (3) Customs and Border Protection. We considered each industry or category individually. The FEA estimates the present value of the total incremental cost of critical habitat designation is $28,000 over the next 20 years (assuming a 3 percent discount rate), or $1,900 on an annualized basis. The incremental impacts of critical habitat designation in the one unit of critical habitat will be limited to additional administrative costs to the Service, Federal agencies, and private third parties.

The Service considered the economic impacts of the critical habitat designation. The Secretary is not exercising his discretion to exclude any areas from this designation of critical habitat for the Sonoyta mud turtle based on economic impacts. A copy of the IEM and screening analysis with supporting documents may be obtained by contacting the Arizona Ecological Services Field Office (see **ADDRESSES**) or by downloading from the internet at *http://www.regulations.gov.*

*Consideration of National Security Impacts*

Section 4(a)(3)(B)(i) of the Act may not cover all Department of Defense (DoD) lands or areas that pose potential national-security concerns (*e.g.,* a DoD installation that is in the process of revising its INRMP for a newly listed species or a species previously not covered). If a particular area is not covered under section 4(a)(3)(B)(i), national-security or homeland-security concerns are not a factor in the process of determining what areas meet the definition of ''critical habitat.'' Nevertheless, when designating critical habitat under section 4(b)(2) of the Act, the Service must consider impacts on national security, including homeland security, on lands or areas not covered by section 4(a)(3)(B)(i). Accordingly, we will always consider for exclusion from the designation areas for which DoD, Department of Homeland Security, or another Federal agency has requested exclusion based on an assertion of

national-security or homeland-security concerns.

We consulted with DoD and Department of Homeland Security on this designation. Neither agency identified any potential national-security impact, nor requested an exclusion from critical habitat based on potential national-security impacts. Consequently, the Secretary is not exercising his discretion to exclude any areas from this designation based on impacts on national security.

*Consideration of 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 there are permitted conservation plans covering the species in the area such as HCPs, safe harbor agreements, or candidate conservation agreements with assurances, or whether there are non-permitted conservation agreements and partnerships that would be encouraged by designation of, or exclusion from, critical habitat. In addition, we look at the existence of tribal conservation plans and partnerships 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.

We are not excluding any areas from critical habitat. In preparing this final rule, we have determined that there are currently no permitted conservation plans or other non-permitted conservation agreements or partnerships for the Sonoyta mud turtle, and this designation does not include any tribal lands or tribal trust resources. We anticipate no impact on tribal lands, partnerships, permitted or non-permitted plans or agreements from this critical habitat designation. Accordingly, the Secretary is not exercising his discretion to exclude any areas from this 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 waived their review regarding their significance determination of this rule.

Executive Order (E.O.) 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.

*Executive Order 13771*

We do not believe this rule is an E.O. 13771 (''Reducing Regulation and Controlling Regulatory Costs'') (82 FR 9339, February 3, 2017) regulatory action because we believe this rule is not significant under E.O. 12866; however, the Office of Information and Regulatory Affairs has waived their review regarding their E.O. 12866 significance determination of this rule.

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

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

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

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

During the development of this final rule, we reviewed and evaluated all information submitted to us during the proposed rule's comment period that may pertain to our consideration of the probable incremental economic impacts of this critical habitat designation. Based on this information, we affirm our certification that this final critical habitat designation will not have a significant economic impact on a

substantial number of small entities, and a regulatory flexibility analysis is not required.

*Energy Supply, Distribution, or Use—Executive Order 13211*

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

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

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

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

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

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

(2) We do not believe that this rule will significantly or uniquely affect small governments because it will not produce a Federal mandate of $100 million or greater in any year; that is, it is not a ''significant regulatory action'' under the Unfunded Mandates Reform Act. The designation of critical habitat imposes no obligations on State or local governments. By definition, Federal agencies are not considered small entities, although the activities they fund or permit may be proposed or carried out by small entities. Consequently, we do not believe that the critical habitat designation will significantly or uniquely affect small government entities. As such, a Small Government Agency Plan is not required.

*Takings—Executive Order 12630*

In accordance with E.O. 12630 (Government Actions and Interference with Constitutionally Protected Private Property Rights), we have analyzed the potential takings implications of designating critical habitat for the Sonoyta mud turtle in a takings implications assessment. The Act does not authorize the Service to regulate private actions on private lands or confiscate private property as a result of critical habitat designation. Designation of critical habitat does not affect land ownership, or establish any closures, or restrictions on use of or access to the designated areas. Furthermore, the designation of critical habitat does not affect landowner actions that do not require Federal funding or permits, nor does it preclude development of habitat conservation programs or issuance of incidental take permits to permit actions that do require Federal funding or permits to go forward. However, Federal agencies are prohibited from carrying out, funding, or authorizing actions that would destroy or adversely modify critical habitat. A takings implications assessment has been completed and concludes that this designation of critical habitat for the Sonoyta mud turtle does not pose significant takings implications for lands within or affected by the designation.

*Federalism—Executive Order 13132*

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

(because these local governments no longer have to wait for case-by-case section 7 consultations to occur).

Where State and local governments require approval or authorization from a Federal agency for actions that may affect critical habitat, consultation under section 7(a)(2) will 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 Sonoyta mud turtle, the rule identifies the elements of physical or biological features essential to the conservation of the Sonoyta mud turtle. The designated areas of critical habitat are presented on a map, 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 information collection requirements, and a submission to the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*) is not required. We may not conduct or sponsor and you are not required to respond to a collection of information unless it displays a currently valid OMB control number.

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

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

*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 were no tribal lands occupied by the Sonoyta mud turtle at the time of listing (2017) that contain the physical or biological features essential to conservation of the species, and no tribal lands unoccupied by the Sonoyta mud turtle that are essential for the conservation of the species. Therefore, we are not designating critical habitat for the Sonoyta mud turtle on tribal lands.

**References Cited**

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

**Authors**

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

**List of Subjects in 50 CFR Part 17**

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

**Regulation Promulgation**

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

## PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

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

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

■ 2. Amend § 17.11(h) by revising the entry for ''Turtle, Sonoyta mud'' under ''REPTILES'' in the List of Endangered and Threatened Wildlife to read as follows:

**§ 17.11 Endangered and threatened wildlife.**

* * * * *

(h) * * *

| Common name | Scientific name | Where listed | Status | Listing citations and applicable rules |
|---|---|---|---|---|
| * | * | * | * | * |
| **Reptiles** | | | | |
| * | * | * | * | * |
| Turtle, Sonoyta mud ..... | *Kinosternon sonoriense longifemorale.* | Wherever found ..... | E | 82 FR 43897, 9/20/2017; 50 CFR 17.95(c).CH |
| * | * | * | * | * |

■ 3. Amend § 17.95(c) by adding an entry for ''Sonoyta Mud Turtle (*Kinosternon sonoriense longifemorale*)'', immediately following the entry for ''Plymouth Red-bellied

Turtle (*Chrysemys rubriventris bangsi*)'', to read as follows:

**§ 17.95 Critical habitat—fish and wildlife.**

* * * * *

(c) *Reptiles.*

* * * * *

Sonoyta Mud Turtle (*Kinosternon sonoriense longifemorale*)

(1) Critical habitat unit is depicted for Pima County, Arizona, on the map below.

(2) Within this area, the physical or biological features essential to the conservation of the Sonoyta mud turtle consist of the following components:

(i) Aquatic habitat, such as streams and natural or manmade ponds, with perennial or near-perennial sources of water, containing or including:

(A) Surface water to 2 meters (7 feet) deep, with a rocky, muddy, or sandy substrate, and emergent or submergent vegetation, or both;

(B) Surface water free of nonnative predators and competitors, including crayfish, American bullfrogs, and large sunfish;

(C) Shallow water areas with dense emergent vegetation (*e.g.,* cattail, spikerush, and travelling spikerush);

(D) Access to deeper open water in ponds, and submerged vegetation (*e.g.,* holly-leaved water nymph, slender pondweed, ditch-grass, and horned pondweed); and

(E) Areas with complex structure, including protective shelter sites such as root masses, rock features, and undercut banks.

(ii) Aquatic invertebrate prey base (*e.g.,* Anisoptera, Trichoptera, Diptera, Coleoptera, aquatic snail species) and their corresponding habitat, including submergent or emergent vegetation and a variety of forage, and prey such as algae, diatoms, and other microorganisms.

(iii) Terrestrial, riparian habitat, adjacent to suitable aquatic habitat, containing or including:

(A) Accessible shoreline for Sonoyta mud turtles without insurmountable rock or artificial vertical barriers to allow movement between wetted sites, between aquatic habitat and terrestrial nest sites, and between aquatic habitat and estivation sites;

(B) Riparian areas that maintain soil moisture to prevent desiccation of eggs and provide estivation sites, located along the banks of ponds and streams with riparian vegetation (*e.g.,* cottonwood, willow, seepwillow, mesquite, greythorn, wolfberry, salt grass, and arrowweed); and

(C) Estivation and nesting sites, including depressions under vegetation, soil, or organic matter; rock crevices; and soil burrows under overhanging banks of streams or ponds, that are available year-round.

(3) Critical habitat does not include most manmade structures (such as buildings, aqueducts, runways, roads, and other paved areas) and the land on which they are located existing within the legal boundaries on July 23, 2020. However, the spring enclosure, the manmade pond, the manmade channel that connects the springs to the pond, and the piped water that connects the two springs within the designated critical habitat are part of the designation.

(4) *Critical habitat map units.* Data layers defining map unit were developed using ESRI ArcGIS mapping software along with various spatial layers. We used ground-truthed data provided by Organ Pipe Cactus National Monument staff that depicts all aquatic habitat used by the Sonoyta mud turtle, including Quitobaquito Pond and moat, the two Quitobaquito springs, the manmade channel that connects the springs to the pond, and the piped water that connects the two springs. For terrestrial, we used satellite imagery available in ArcGIS to delineate the riparian areas surrounding the surface water habitat. World Imagery used from ArcGIS provides 1 meter or better satellite and aerial imagery in many parts of the world and lower resolution satellite imagery worldwide. The map includes 15m TerraColor 0.3m resolution imagery at this map scale of 1:6,000. Additionally, imagery at different resolutions has been contributed by the GIS User Community. ArcGIS was also used to calculate area hectares and acres, and was used to determine longitude and latitude coordinates in decimal degrees. The coordinate system used in mapping and calculating area and locations within the unit was Universal Transverse Mercator (UTM) conformal projection with 1983 North American Datum in Zone 12. The map in this entry, as modified by any accompanying regulatory text, establishes the boundaries of the critical habitat designation. The coordinates or plot points or both on which the map is based are available to the public at *http://www.fws.gov/southwest/es/arizona/*, at *http://www.regulations.gov* at Docket No. FWS–R2–ES–2017–0014, 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) Quitobaquito Unit, Pima County, Arizona.

(i) *General description:* This unit consists of 12.28 acres (4.97 hectares) in the Rio Sonoyta watershed in Pima County, and is composed entirely of Federal land owned by the National Park Service on Organ Pipe Cactus National Monument. The unit includes Quitobaquito Pond, the two Quitobaquito springs, the manmade channel that connects the springs to the pond, and the piped water that connects the two springs and surrounding riparian habitat.

(ii) Unit map follows:

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**Aurelia Skipwith,**

*Director, U.S. Fish and Wildlife Service.*

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