Billing Code

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[FXES1111090FEDR–256–FF09E21000]

Endangered and Threatened Wildlife and Plants; Five Species Not Warranted for Listing as Endangered or Threatened Species

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notification of findings.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce findings that five species are not warranted for listing as endangered or threatened species under the Endangered Species Act of 1973, as amended (Act). After a thorough review of the best available scientific and commercial data available, we find that it is not warranted at this time to list the Jackson Prairie crayfish (*Procambarus barbiger*), Ozark shiner (*Notropis ozarcanus*), speckled burrowing crayfish (*Creaserinus danielae*), spiny scale crayfish (*Cambarus jezerinaci*), and spotted turtle (*Clemmys guttata*). However, we ask the public to submit to us at any time any new information relevant to the status of any of the species mentioned above or their habitats.

DATES: The findings in this document were made on [**INSERT DATE OF PUBLICATION IN THE *FEDERAL REGISTER***].

ADDRESSES: Detailed descriptions of the bases for these findings are available on the internet at https://www.regulations.gov under the following docket numbers:

Species	**Docket Number**
Jackson Prairie crayfish	FWS–R4–ES–2025–0341
Ozark shiner	FWS–R4–ES–2025–0342
Speckled burrowing crayfish	FWS–R4–ES–2025–0343
Spiny scale crayfish	FWS–R5–ES–2025–0344
Spotted turtle	FWS–R5–ES–2024–0108

Those descriptions are also available by contacting the appropriate person, as specified under **FOR FURTHER INFORMATION CONTACT**. Please submit any new information, materials, comments, or questions concerning these findings to the appropriate person, as specified under **FOR FURTHER INFORMATION CONTACT**.

FOR FURTHER INFORMATION CONTACT:

Species	Contact Information
Jackson Prairie crayfish & speckled burrowing crayfish	James Austin, Field Office Supervisor, Mississippi Ecological Services Field Office, 601–540–2576, james_austin@fws.gov
Ozark shiner	Jason Hight, Field Supervisor, Arkansas Ecological Services Field Office, 501–513–4473, jason_hight@fws.gov
Spiny scale crayfish	Troy Andersen, Field Office Supervisor, Virginia Ecological Services Field Office, 804–728–0695, troy_andersen@fws.gov
Spotted turtle	Genevieve LaRouche, Field Supervisor, Chesapeake Bay Field Office, 410–573–4573, genevieve_larouche@fws.gov

Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States.

SUPPLEMENTARY INFORMATION:

Background

Under section 4(b)(3)(B) of the Act (16 U.S.C. 1533(b)(3)(B)), we are required to make a finding on whether or not a petitioned action is warranted within 12 months after receiving any petition that we have determined contains substantial scientific or commercial information indicating that the petitioned action may be warranted ("12-month finding"). We must make a finding that the petitioned action is: (1) not warranted; (2) warranted; or (3) warranted, but precluded by other listing activity. We must publish a notification of these 12-month findings in the *Federal Register*.

Summary of Information Pertaining to the Five Factors

Section 4 of the Act (16 U.S.C. 1533) and the implementing regulations at part 424 of

title 50 of the Code of Federal Regulations (50 CFR part 424) set forth procedures for adding species to, removing species from, or reclassifying species on the Lists of Endangered and Threatened Wildlife and Plants (Lists). The Act defines "species" as including any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature. The Act defines an "endangered species" as a species that is in danger of extinction throughout all or a significant portion of its range (16 U.S.C. 1532(6)) and a "threatened species" as a species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range (16 U.S.C. 1532(20)). Under section 4(a)(1) of the Act, the Secretary of the Interior (Secretary) may determine whether any species is an endangered species or a threatened species because of any of the following five factors:

(A) The present or threatened destruction, modification, or curtailment of its habitat or range;

(B) Overutilization for commercial, recreational, scientific, or educational purposes;

(C) Disease or predation;

(D) The inadequacy of existing regulatory mechanisms; or

(E) Other natural or manmade factors affecting its continued existence.

These factors represent broad categories of natural or human-caused actions or conditions that could have an effect on a species' continued existence. In evaluating these actions and conditions, we look for those that may have a negative effect on individuals of the species, as well as other actions or conditions that may ameliorate any negative effects or may have positive effects.

We use the term "threat" to refer in general to actions or conditions that are known to or are reasonably likely to negatively affect individuals of a species. The term "threat" includes actions or conditions that have a direct impact on individuals (direct impacts), as well as those that affect individuals through alteration of their habitat or required resources (stressors). The

term “threat” may encompass—either together or separately—the source of the action or condition or the action or condition itself. However, the mere identification of any threat(s) does not necessarily mean that the species meets the statutory definition of an “endangered species” or a “threatened species.” In determining whether a species meets either definition, we must evaluate all identified threats by considering the species’ expected response and the effects of the threats—in light of those actions and conditions that will ameliorate the threats—on an individual, population, and species level. We evaluate each threat and its expected effects on the species, then analyze the cumulative effect of all of the threats on the species as a whole. We also consider the cumulative effect of the threats in light of those actions and conditions that will have positive effects on the species, such as any existing regulatory mechanisms or conservation efforts. The Secretary determines whether the species meets the definition of an “endangered species” or a “threatened species” only after conducting this cumulative analysis and describing the expected effect on the species.

The Act does not define the term “foreseeable future,” which appears in the statutory definition of “threatened species.” Our implementing regulations at 50 CFR 424.11(d) set forth a framework for evaluating the foreseeable future on a case-by-case basis, which is further described in the 2009 Memorandum Opinion on the foreseeable future from the Department of the Interior, Office of the Solicitor (M–37021, January 16, 2009; “M-Opinion,” available online at https://www.doi.gov/sites/doi.opengov.ibmcloud.com/files/uploads/M-37021.pdf). The foreseeable future extends as far into the future as the U.S. Fish and Wildlife Service and National Marine Fisheries Service can make reasonably reliable predictions about the threats to the species and the species’ responses to those threats. We need not identify the foreseeable future in terms of a specific period of time. We will describe the foreseeable future on a case-by-case basis, using the best available data and taking into account considerations such as the species’ life-history characteristics, threat projection timeframes, and environmental variability. In other words, the foreseeable future is the period of time over which we can make reasonably

reliable predictions. “Reliable” does not mean “certain”; it means sufficient to provide a reasonable degree of confidence in the prediction, in light of the conservation purposes of the Act.

In conducting our evaluation of the five factors provided in section 4(a)(1) of the Act to determine whether the Jackson Prairie crayfish, Ozark shiner, speckled burrowing crayfish, spiny scale crayfish, and spotted turtle meet the Act’s definition of an “endangered species” or a “threatened species,” we considered and thoroughly evaluated the best scientific and commercial data available regarding the past, present, and future stressors and threats. We reviewed the petition, information available in our files, and other available published and unpublished information for the species. Our evaluation may include information from recognized experts; Federal, State, and Tribal governments; academic institutions; foreign governments; private entities; and other members of the public.

In accordance with 50 CFR 424.14(h)(2)(i), this document announces the not-warranted findings on petitions to list the five species. We have also elected to include brief summaries of the analyses on which these findings are based. We provide the full analyses, including the reasons and data on which the findings are based, in the decisional file for each of the actions included in this document. Below, we describe the documents containing these analyses.

The species assessment forms for the Jackson Prairie crayfish, Ozark shiner, speckled burrowing crayfish, spiny scale crayfish, and spotted turtle each contain more detailed biological information, a thorough analysis of the listing factors, a list of literature cited, and an explanation of why we determined that these species do not meet the Act’s definition of an “endangered species” or a “threatened species.” To inform our status reviews, we completed species status assessment (SSA) reports for these five species. Each SSA report contains a thorough review of the taxonomy, life history, ecology, current status, and projected future status for each species. This supporting information can be found on the internet at https://www.regulations.gov under the appropriate docket number (see **ADDRESSES**, above).

Jackson Prairie Crayfish

Previous Federal Actions

On April 20, 2010, we received a petition from the Center for Biological Diversity, Alabama Rivers Alliance, Clinch Coalition, Dogwood Alliance, Gulf Restoration Network, Tennessee Forests Council, and West Virginia Highlands Conservancy to list 404 aquatic, riparian, and wetland species, including Jackson Prairie crayfish (*Procambarus barbiger*), as an endangered or threatened species under the Act. On September 27, 2011, we published a 90-day finding (76 FR 59836) that the petition contained substantial scientific or commercial information indicating listing may be warranted for the species. This document constitutes our 12-month finding on the April 20, 2010, petition to list Jackson Prairie crayfish under the Act.

Summary of Finding

The Jackson Prairie crayfish is a small (approximately 1.4 inches (3.6 centimeters) in length), primarily burrowing crayfish species that can be differentiated from other crayfishes through rostral (a stiff beaklike projection on the head), claw, hook, and carapace morphology. The species is a narrow-ranging endemic confined primarily to the Jackson and Blackland Prairie ecoregions of south-central Mississippi and extreme western Alabama, although there is some uncertainty about the validity of the Alabama records as potential misidentifications. The distribution of the species is within Scott, Rankin, Smith, Jasper, Newton, and Lauderdale Counties in Mississippi and Sumter County in Alabama. Occurrences noted from Perry County, Mississippi, were determined to be erroneous and are not included in our analysis.

The Jackson Prairie crayfish occupies a wide range of environments, including upland prairies, old prairie remnants, and grassland openings; wet roadside ditches; mown utility rights-of-way (i.e., parts of private lands designated for use by public utility, such as a road, railway, pipeline, or powerline); pastures and managed hayfields; sparsely wooded upland lawns and other managed suburban landscapes (e.g., gardens); grassy habitats at/adjacent to the forest edge (up to approximately 50 meters); and occasionally on trails within wooded areas that are isolated

from permanent water sources. Of the 21 analyzed populations of Jackson Prairie crayfish, there are 9 post-2014 (“current”) populations and 12 pre-2014 (“historical”) populations. Note, the pre-2014/”historical” designation does not indicate that these populations no longer exist; most of the historical locations have not been surveyed during recent efforts. We also note that 2025 surveys have discovered 32 additional populations; these populations were discovered after analyses had been completed, and thus, we did not analyze those populations in the SSA report, which we finalized in 2024. Based on the short lifespans (approximately 3-5 years) and generation times of burrowing crayfish, we used 2014 as the cutoff between historical and current timeframes. Observations across a wide array of open, wet, grassy areas suggests the Jackson Prairie crayfish occupies differing habitats with similar structural condition (i.e., open-canopy with low-statured, herbaceous vegetation) within the broader matrix of land covers that dominate the ecoregions within which it occurs.

Habitat elements that support a stable environment important to an individual Jackson Prairie crayfish are divided into two ecological conditions—within the burrow and outside of the burrow. A stable environment is defined herein as a burrow and surrounding habitat (e.g., ephemeral waterbody, wetland) that have the ability to support life history functions within a natural range of variation. Elements inside the burrow habitat include sufficient water, soil moisture, and ambient temperature to prevent desiccation and to support egg incubation and post-embryonic development; dissolved oxygen content adequate to support crayfish respiration or access to air/water interface to prevent gills from drying out; water quality suitable for survival; and sufficient food sources. Important elements outside of the burrow habitat include all of the aforementioned elements as well as the presence of shallow, ephemeral waterbodies to serve as nursery and foraging habitat. In addition, substrate composition in both environments is an important component because burrowing crayfish depend on relatively fine substrate particles (e.g., silt, sand, clay) that enhance the ease of burrowing to provide shelter and cover from predators, and to engineer chimney structures to facilitate burrow ventilation. Collectively, these

elements allow for Jackson Prairie crayfish to have sufficient food and shelter resources to grow, reach maturity, and reproduce. For populations to maintain resiliency, they need healthy demography (i.e., stable or positive growth rates of individuals of both sexes), sufficient functional connectivity of physical habitats to allow for gene flow among subpopulations, successful dispersal opportunity (i.e., physical connectivity between suitable habitat) and dispersal ability (i.e., species vagility, or ability to move), and sufficient habitat quality and quantity to support healthy individuals.

We have carefully assessed the best scientific and commercial data available regarding the past, present, and future threats to the Jackson Prairie crayfish. We evaluated all relevant factors under the Act's five listing factors, including any regulatory mechanisms and conservation measures addressing these threats. The primary threats affecting the Jackson Prairie crayfish's biological status now and in the foreseeable future include habitat modification from development and row crop agriculture, and drought.

We first assessed whether the Jackson Prairie crayfish is in danger of extinction throughout all of its range. Our analysis indicates that effects of drought and contemporary land uses (e.g., agriculture, urbanization, development) are not currently affecting the species at a population level and thus do not pose an imminent threat to the species. While the species' range is restricted because it is a narrow endemic, threats are not of a magnitude to have impacts on the species' viability. Furthermore, the 21 moderately-to-highly resilient Jackson Prairie crayfish populations are distributed across the known range of the species. Thus, the number and distribution of populations are likely to continue to enable the species to withstand catastrophic events, and we do not anticipate changes in the species' response to catastrophic events such as drought. The adaptive capacity evaluation suggests that the species' current representation, while naturally low because it is a narrow endemic, has not been diminished from historical representation (i.e., through range contraction or extirpation of populations). Thus, the Jackson Prairie crayfish has high estimated viability across its narrow range. After assessing the best

scientific and commercial data available, we conclude that the Jackson Prairie crayfish is not in danger of extinction throughout all of its range.

Our analyses using projections from two future scenarios at 2040 and 2060, representing high and low landscape suitability based on potential changes in development and agriculture, indicate that conditions will be mostly static and thus are not expected to decline to a level where the species' viability will be impacted. Regarding the effects of drought (e.g., precipitation and temperature), we anticipate minimal impacts on the species and therefore do not expect any population-level extirpations out to 2069. Thus, in a foreseeable future of approximately 45 years, we can make reasonable predictions that the Jackson Prairie crayfish viability will not be affected by the threat of development, row crop agriculture, or drought.

Given the species' current condition and the lack of threats that the species is expected to experience under future scenarios over the next 45 years, negligible reductions in resilience, redundancy, or representation are anticipated, and viability is expected to be maintained in the future. Under both future scenarios and timesteps analyzed, all current populations and nearly all pre-2014 populations are projected to be in high or moderate resiliency condition. Thus, the overall estimate of the future viability of Jackson Prairie crayfish is high across the majority of its geographic range. While not analyzed, the 32 newly discovered populations indicate further redundancy across the range. The results of our analyses highlight that Jackson Prairie crayfish exhibits a high degree of resistance to disturbance, indicating the species has a low susceptibility to threats and a high degree of stability. After assessing the best scientific and commercial data available, we conclude that the Jackson Prairie crayfish is not likely to become endangered within the foreseeable future throughout all of its range.

We also evaluated whether the Jackson Prairie crayfish is endangered or threatened throughout a significant portion of its range. We did not find any portion of the Jackson Prairie crayfish's range for which both (1) the portion is "significant," and (2) the species is in danger of extinction in that portion or likely to become so within the foreseeable future. We found that

threats are not disproportionately affecting the Jackson Prairie crayfish in any portion of its range and we found no portion of the Jackson Prairie crayfish's range where the biological condition of the species differs from its condition elsewhere in its range such that the status of the species in that portion differs from its status in any other portion of the species' range either in the near term or within the foreseeable future. Thus, after assessing the best scientific and commercial data available, we conclude that the Jackson Prairie crayfish is not in danger of extinction throughout a significant portion of its range or likely to become so within the foreseeable future.

Based on the best scientific and commercial data available, we determine that the Jackson Prairie crayfish does not meet the definition of an endangered species or a threatened species in accordance with sections 3(6) and 3(20) of the Act. Therefore, we find that listing the Jackson Prairie crayfish is not warranted at this time. A detailed discussion of the basis for this finding can be found in the Jackson Prairie crayfish species assessment form, SSA report, and other supporting documents on https://www.regulations.gov under Docket No. FWS–R4–ES–2025–0341 (see **ADDRESSES**, above).

Peer Review

In accordance with our joint policy on peer review published in the *Federal Register* on July 1, 1994 (59 FR 34270), and our August 22, 2016, memorandum updating and clarifying the role of peer review in listing actions under the Act, we solicited independent scientific reviews of the information contained in the SSA report for the Jackson Prairie crayfish. We sent the SSA report to seven independent peer reviewers and received two responses. Results of this structured peer review process can be found at https://www.regulations.gov under Docket No. FWS–R4–ES–2025–0341. We incorporated the results of these reviews, as appropriate, into the SSA report, which is the foundation for this finding.

Ozark Shiner

Previous Federal Actions

On April 20, 2010, we received a petition from the Center for Biological Diversity, Alabama Rivers Alliance, Clinch Coalition, Dogwood Alliance, Gulf Restoration Network, Tennessee Forests Council, and West Virginia Highlands to list 404 aquatic, riparian, and wetland species, including Ozark shiner (*Notropis ozarcanus*), as endangered or threatened species under the Act. On September 27, 2011, we published a 90-day finding (76 FR 59836) that the petition contained substantial information indicating listing may be warranted for the species. This document constitutes our 12-month finding on the April 20, 2010, petition to list Ozark shiner under the Act.

Summary of Finding

The Ozark shiner is a fish endemic to the Ozark Plateaus Physiographic Province (i.e., the "Ozarks") in northern Arkansas and southern Missouri, where it occurs in the drainages of the White, Black, and St. Francis River. The Ozark shiner is slender-bodied, pale yellow, with silver sides containing a dusky stripe, and a silvery-white belly. Lengths of adults commonly reach 45.7 to 63.5 millimeters (1.8 to 2.5 inches).

The needs of the Ozark shiner are likely akin to those common among other North American freshwater shiners. At the individual level, all life stages of Ozark shiner likely require medium- to large-sized upland rivers with appropriate flow and velocity, as well as appropriate water quality conditions, to support breeding, feeding, sheltering, and dispersal. The egg life stage requires mature males and mature females to become fertilized, and coarse substrate or aquatic vegetation in adequate supply is needed to provide refuge from predators and high-velocity water flow. The juvenile and adult life stages also require such substrate or vegetation for overwintering. In addition, juveniles and adults need appropriate food sources in adequate supply – particularly Ephemeropteran nymphs, but also other aquatic insects such as trichopteran larvae, dipteran pupae, and odonate nymphs.

We have carefully assessed the best scientific and commercial data available regarding the past, present, and future threats to the Ozark shiner. We evaluated all relevant factors under

the Act's five listing factors, including any regulatory mechanisms and conservation measures addressing these threats. The primary threats affecting the Ozark shiner's biological status include hydrologic alteration, sedimentation, and chemical contaminants. Dams, reservoirs, and urbanization contribute to hydrologic alteration and sedimentation. In addition to urbanization, agricultural or other developed land types are sources of chemical contaminants.

Suitability of habitat was divided by watersheds at the 8-digit hydrologic unit code (HUC 8) level, called analytical units (AUs), for resiliency and redundancy assessment. The 12 AUs aligned with the 12 medium-sized rivers from which Ozark shiner have been collected. To evaluate representation, we used the three major river drainages, or representation units (RUs) of occurrence, that encompass all identified AUs. In each AU, we assessed current resiliency through four metrics: extent of occurrence, watershed condition, riparian corridor condition, and connectivity. These metrics indicate how primary threats impact the habitat suitability for Ozark shiner within its range.

We first assessed whether the Ozark shiner is in danger of extinction throughout all of its range. Currently, the best scientific and commercial data available indicate that the Ozark shiner is present throughout its historical range. The species has adequate resiliency to withstand stochastic events, as a vast majority of AUs through its range (75%) are in moderate or high condition, meaning there are sufficient resources to sustain populations into the immediate future. The distribution of these moderate and high resiliency AUs throughout the range of the Ozark shiner provides sufficient redundancy for the species to withstand catastrophic events (e.g., droughts, large pollution events). The occurrence of moderate and high resiliency AUs in each RU will allow Ozark shiner to adapt to biological or physical changes in its environment (e.g. increased precipitation or water temperature). However, because many of the medium-sized streams and rivers used by Ozark shiner are spring fed, this abundant and reliable source of cool water may indicate that increased precipitation or water temperature is of less concern for this

Ozark endemic fish species. After assessing the best scientific and commercial data available, we conclude that the Ozark shiner is not in danger of extinction throughout all of its range.

Therefore, we proceed with determining whether Ozark shiner is likely to become endangered within the foreseeable future throughout all of its range. Predictions on future condition of the Ozark shiner, which were determined at the 2040 and 2060 timesteps, are based on models incorporating information related to future changes in habitat suitability for the species. These models were used as a surrogate for impacts to water quality (i.e., sedimentation and chemical contaminants) and are more accurate in the nearer term. Given models project either no change in percentage of developed land types or a slight increase under both levels of urbanization by 2060, no changes are expected in future resiliency from overall current resiliency for any AU. This means the species will retain adequate resiliency to withstand stochastic events with 75% of AUs in moderate or high condition, the distribution of these AUs throughout the range will continue to provide sufficient redundancy for the species to withstand catastrophic events, and the representation provided by their occurrence in each RU will allow Ozark shiner to adapt to biological and physical changes in its environment. After assessing the best scientific and commercial data available, we conclude that Ozark shiner is not likely to become endangered within the foreseeable future throughout all of its range.

We also evaluated whether the Ozark shiner is endangered or threatened throughout a significant portion of its range. We did not find any portion of the Ozark shiner's range for which both (1) the portion is "significant," and (2) the species is in danger of extinction in that portion or likely to become so within the foreseeable future. We found a portion of the range (the St. Francis River RU) where the regulatory status may be different than the rest of the range; however, this portion is not a significant portion of the Ozark shiner's range because it does not represent a large proportion of the current range of the species. In addition, it does not provide habitat for a large proportion of individuals or populations compared to the rest of the range, does not include important habitat features for species conservation, and does not contain unique

habitat of high value. The St. Francis River RU contains 6.25 occupied river miles (10.06 river km) representing less than one percent of the species' occupied river miles range wide. This RU also has fewer species records both historically and currently compared to the White River and Black River RUs, which is likely a reflection of its smaller size. Thus, after assessing the best scientific and commercial data available, we conclude that the Ozark shiner is not in danger of extinction throughout a significant portion of its range or likely to become so within the foreseeable future.

Based on the best scientific and commercial data available, we determine that the Ozark shiner does not meet the definition of an endangered species or a threatened species in accordance with sections 3(6) and 3(20) of the Act. Therefore, we find that listing the Ozark shiner is not warranted at this time. A detailed discussion of the basis for this finding can be found in the Ozark shiner species assessment form and other supporting documents on https://www.regulations.gov under Docket No. FWS–R4–ES–2025–0342 (see **ADDRESSES**, above).

Peer Review

In accordance with our joint policy on peer review published in the *Federal Register* on July 1, 1994 (59 FR 34270), and our August 22, 2016, memorandum updating and clarifying the role of peer review in listing actions under the Act, we solicited independent scientific reviews of the information contained in the SSA report for the Ozark shiner. We sent the SSA report to five independent peer reviewers and received three responses. Results of this structured peer review process can be found at https://www.regulations.gov under Docket No. FWS–R4–ES–2025–0342. We incorporated the results of these reviews, as appropriate, into the SSA report, which is the foundation for this finding.

Speckled Burrowing Crayfish

Previous Federal Actions

On April 20, 2010, we received a petition from the Center for Biological Diversity,

Alabama Rivers Alliance, Clinch Coalition, Dogwood Alliance, Gulf Restoration Network, Tennessee Forests Council, and West Virginia Highlands Conservancy to list 404 aquatic, riparian, and wetland species, including speckled burrowing crayfish (*Creaserinus danielae*), as endangered or threatened species under the Act. On September 27, 2011, we published a 90-day finding (76 FR 59836) that the petition contained substantial scientific or commercial information indicating listing may be warranted for the species. This document constitutes our 12-month finding on the April 20, 2010, petition to list speckled burrowing crayfish under the Act.

Summary of Finding

The speckled burrowing crayfish is a small (approximately 1.5 inches (3.8 centimeters) in length) burrowing crayfish species that can be differentiated from other crayfishes through rostral (a stiff beaklike projection on the head), claw, hook, and carapace morphology. The species is a narrow-ranging endemic to southern Mississippi and Alabama near the coast; its range is restricted to areas just west of the Pascagoula River and to the Mobile River (to the east), with two records on Dauphin Island. The distribution of the species is within Jackson and George Counties, Mississippi, and Mobile County, Alabama. The speckled burrowing crayfish occupies a wide range of environments, including wet pine savannas and pitcher plant bogs, roadside ditches and other developed/disturbed settings, as well as in shallow ephemeral/seasonal waterbodies. Of the 25 known populations of speckled burrowing crayfish, there are 18 post-2014 ("current") populations and 7 pre-2014 ("historical") populations. Based on the short lifespans (approximately 2.5 years) and generation times of burrowing crayfish, we used 2014 as the cutoff between historical and current timeframes. Observations across a wide array of open, wet, grassy areas suggests the species occupies differing habitats with similar structural condition (e.g., open-canopy with low-statured, herbaceous vegetation) within the broader matrix of land cover(s) that dominate the ecoregions within which it occurs (i.e., Gulf Coast Flatwoods, Southern Pine Plains and Hills, and Gulf Barrier Islands and Coastal Marshes). Ephemeral

wetlands lacking fish predators are also a universal aspect of the species' habitat.

Habitat elements that support a stable environment important to an individual speckled burrowing crayfish are divided into two ecological conditions—within the burrow and outside of the burrow. A stable environment is defined herein as a burrow (including all excavated channels, tunnels, and chambers) and associated non-burrow surrounding habitat (e.g., impermanent water bodies) that can support life history functions within a natural range of variation. Elements inside the burrow habitat include sufficient water, soil moisture, and ambient temperature to prevent desiccation and to support egg incubation and post-embryonic development; dissolved oxygen content adequate to support crayfish respiration or access to air/water interface to prevent gills from drying out; water quality suitable for survival; and sufficient food sources. Important elements outside of the burrow habitat include all of the aforementioned elements as well as the presence of shallow, ephemeral waterbodies to serve as nursery and foraging habitat. In addition, substrate composition in both environments is an important component since burrowing crayfish depend on relatively fine substrate particles (e.g., silt, sand, clay) that enhance the ease of burrowing to provide shelter and cover from predators, and to engineer chimney structures to facilitate burrow ventilation. Collectively, these elements allow for speckled burrowing crayfish to have sufficient food and shelter resources to grow, reach maturity, and reproduce. For populations to maintain resiliency, they need healthy demography (i.e., stable or positive growth rates of individuals of both sexes), sufficient functional connectivity of physical habitats to allow for gene flow among subpopulations, successful dispersal opportunity (i.e., physical connectivity between suitable habitat) and dispersal ability (i.e., species vagility, or ability to move), and sufficient habitat quality and quantity to support healthy individuals.

We have carefully assessed the best scientific and commercial data available regarding the past, present, and future threats to the speckled burrowing crayfish. We evaluated all relevant factors under the Act's five listing factors, including any regulatory mechanisms and

conservation measures addressing these threats. The primary threats affecting the speckled burrowing crayfish's biological status now and in the foreseeable future include habitat modification from development and changes to coastal hydrology through sea level rise.

We first assessed whether the speckled burrowing crayfish is in danger of extinction throughout all of its range. Our analysis indicates the effects of drought and contemporary land uses (e.g., agriculture, urbanization, development) are not currently affecting populations and thus do not pose an imminent threat to the species. The 18 moderately to highly resilient speckled burrowing crayfish populations are distributed across the known range of the species. Thirteen of these 18 resilient populations were recently discovered, and the known range of the species has expanded since 2017. While the species' range is restricted because it is a narrow endemic, and thus catastrophes pose an inherent risk, threats are not of a magnitude to have large impacts on the species. Furthermore, we do not anticipate major changes in the species' response to catastrophic events, such as hurricanes, that the species has previously weathered; therefore, the number and distribution of sufficiently resilient populations are likely to continue to enable the species to withstand catastrophic events.

The adaptive capacity evaluation suggests that the species' current representation, while naturally low because it is a narrow endemic, has not been diminished from historical representation (i.e., through range contraction or extirpation of populations). The speckled burrowing crayfish has high estimated viability across its narrow range. The current condition analysis indicates that resiliency, representation, and redundancy are sufficient to support the overall viability of the species. Thus, after assessing the best scientific and commercial data available, we conclude that the speckled burrowing crayfish is not in danger of extinction throughout all of its range.

Our analyses using projections 20 to 75 years into the future, representing high and low landscape suitability, sea level rise, or both, indicate that conditions are not expected to decline to a level where the species' viability is impacted, and environmental conditions are expected to

continue to meet life history requirements. Thus, in a foreseeable future of up to 75 years, we can make reasonable predictions that the speckled burrowing crayfish will not be affected significantly by the threat of development or sea level rise. Future sea level rise projections indicate that up to three populations may be impacted by sea level rise/inundation by 2100. Due to speckled burrowing crayfish having some potential tolerance to salinity and to not all areas of habitat experiencing inundation, we do not expect sea level rise to result in any population-level extirpation.

Given the species' current condition and the lack of threats that the species is expected to experience under future scenarios over the next 75 years, no reductions in resilience, redundancy, or representation are anticipated, and viability is expected to be maintained in the future. The results of our analyses highlight that the speckled burrowing crayfish exhibits a high degree of resistance to disturbance from habitat change, indicating the species has a low susceptibility to threats and a high degree of stability. After assessing the best scientific and commercial data available, we conclude that the speckled burrowing crayfish is not likely to become endangered within the foreseeable future throughout all of its range.

We also evaluated whether the speckled burrowing crayfish is endangered or threatened throughout a significant portion of its range. We did not find any portion of the speckled burrowing crayfish's range for which both (1) the portion is "significant," and (2) the species is in danger of extinction in that portion or likely to become so within the foreseeable future. We found that threats are not currently disproportionately affecting the speckled burrowing crayfish in any portion of its range and we found no portion of the speckled burrowing crayfish's range where the biological condition of the species differs from its condition elsewhere in its range such that the status of the species in that portion differs from its status in any other portion of the species' range either in the near term or within the foreseeable future. Thus, after assessing the best scientific and commercial data available, we conclude that the speckled burrowing crayfish is not in danger of extinction throughout a significant portion of its range or likely to become so

within the foreseeable future.

Based on the best scientific and commercial data available, we determine that the speckled burrowing crayfish does not meet the definition of an endangered species or a threatened species in accordance with sections 3(6) and 3(20) of the Act. Therefore, we find that listing the speckled burrowing crayfish is not warranted at this time. A detailed discussion of the basis for this finding can be found in the speckled burrowing crayfish species assessment form, SSA report, and other supporting documents on https://www.regulations.gov under Docket No. FWS–R4–ES–2025–0343 (see **ADDRESSES**, above).

Peer Review

In accordance with our joint policy on peer review published in the *Federal Register* on July 1, 1994 (59 FR 34270), and our August 22, 2016, memorandum updating and clarifying the role of peer review in listing actions under the Act, we solicited independent scientific reviews of the information contained in the SSA report for speckled burrowing crayfish. We sent the SSA report to six independent peer reviewers and received three responses. Results of this structured peer review process can be found at https://www.regulations.gov under Docket No. FWS–R4–ES–2025–0343. We incorporated the results of these reviews, as appropriate, into the SSA report, which is the foundation for this finding.

Spiny Scale Crayfish

Previous Federal Actions

On April 20, 2010, we received a petition from the Center for Biological Diversity, Alabama Rivers Alliance, Clinch Coalition, Dogwood Alliance, Gulf Restoration Network, Tennessee Forests Council, and West Virginia Highlands to list 404 aquatic, riparian, and wetland species, including spiny scale crayfish (*Cambarus jezerinaci*), as endangered or threatened species under the Act. On September 27, 2011, we published a 90-day finding (76 FR 59836) that the petition contained substantial information indicating listing may be warranted for

the species. This document constitutes our 12-month finding on the April 20, 2010, petition to list spiny scale crayfish under the Act.

Summary of Finding

The spiny scale crayfish is a small crayfish with a pigmented body. Two color morphs, red and blue, are noted. This species was first described in 2000 and is recognized as a unique species within a complex of species that inhabit the Cumberland Thrust Block region and Kentucky River Basin of the Appalachian Mountains. The spiny scale crayfish is currently found in five major drainages across northern Tennessee, southwestern Virginia, and southern Kentucky: the Powell River, Upper Cumberland River, and the North, Middle, and South Forks of the Kentucky River.

To ensure populations are able to persist, individual needs must be met through sufficient habitat parameters, including suitable water quality, temperature, and substrate, which must be available over long enough stream segments in close proximity to support a viable number of individuals for genetic exchange and recruitment. For the spiny scale crayfish to maintain viability, there must be adequate redundancy of populations (i.e., a suitable number and distribution to allow the species to withstand catastrophic events) and representation (i.e., genetic and environmental diversity to allow the species to adapt to changing environmental conditions). Redundancy improves with higher numbers of populations. Representation improves with increased genetic diversity and ability to persist in diverse environmental conditions within and among populations.

The spiny scale crayfish is associated with first- and second-order, clean, silt-free, cold-water spring-fed streams of high altitude and high gradient with coarse, rocky substrates that provide interstitial spaces, where the species is found, including the upper reaches of streams, all the way to the mouth of a spring and potentially into associated caves. Sites with the spiny scale crayfish are associated with primary or secondary growth forests, rhododendron or hemlocks, and often have aquatic mosses present. Additionally, spiny scale crayfish are assumed to require

habitats with rock or rubble substrates and low sediment, as the species uses the interstitial spaces within the substrate. The spiny scale crayfish appears to prefer consuming insect larvae and small amounts of plant material, but may eat other things in the wild.

We have carefully assessed the best scientific and commercial data available regarding the past, present, and future threats to the spiny scale crayfish. We evaluated all relevant factors under the Act's five listing factors, including any regulatory mechanisms and conservation measures addressing these threats. The primary threats affecting the spiny scale crayfish's biological status include habitat loss and degradation, and impacts from changing precipitation patterns and increased temperatures.

For the spiny scale crayfish, we divided the range into five major basins (8-digit HUC watersheds; representation units) across northern Tennessee, southwestern Virginia, and southern Kentucky: the Powell, Upper Cumberland, and the North, Middle, and South Forks of the Kentucky River. Within these basins, the species has been identified in 78 12-digit HUC watersheds, referred to as analysis units. The major basins (representation units) are the units that provide the appropriate scale to assess extinction risk for the spiny scale crayfish.

After evaluating threats to the species and assessing the cumulative effect of the threats under the section 4(a)(1) factors, our analysis indicates that populations with recent and historical detections are likely still present unless there has been a major land use change in the area. Of the 216 detections, 169 detections are current (2005 to 2024), 34 are recent (1985 to 2004), and 13 are historical (prior to1985). These detections occur at 205 unique locations and occupy 78 analysis units; 75 of these units have current detections (assumed present), 2 are recent (assumed likely present), and 1 is historical (unknown presence). The current, average forest cover within the range of the spiny scale crayfish is generally high (83.1 percent), with the Powell River basin having less forest cover on average (61.1 percent) compared to other major basins. Between 1985 and 2021, land cover change has been minimal, with only 2 analysis units losing over 10 percent of their forest. This suggests that any forest loss in the Powell River basin likely occurred

before 1985, as current land uses have remained stable since then. Additionally, experts suggest that populations with recent and historical detections are likely still present unless there has been a major land use change in the area. This would suggest that populations are likely resilient to most impacts that have occurred over time, other than direct habitat loss. Thus, we assume populations have high levels of resiliency to most stochastic events.

Although there may have been some losses of populations over time due to land use changes and mining operations, the species currently has relatively high redundancy given its presence in many analysis units within the expected range. While a potential catastrophic impact, such as a wildfire or heavy rainfall event, could impact all or parts of several analysis units at once, the impacts would be unlikely to impact the entirety of a major basin or the entire species. Additionally, the species is somewhat insulated from the broader-ranging impacts of climate change, such as temperature increases and droughts due to streams being spring-fed and the species' ability to burrow. Representation, likewise, has probably also declined from historical levels, but we do not expect much genetic diversity has been lost given the species still occurs across many analysis units across all of the major watersheds within its expected historical range. As such, it was determined that there is similar near-term extinction risk in each representation unit.

In summary, we find that the spiny scale crayfish is not in danger of extinction in any areas (i.e., representation units). Thus, there is no portion of the range where the spiny scale crayfish may be endangered. After assessing the best scientific and commercial data available, we conclude that the spiny scale crayfish is not in danger of extinction throughout all or a significant portion of its range. Therefore, we proceed with determining whether spiny scale crayfish is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

As mentioned above, spiny scale crayfish need multiple healthy, resilient populations distributed across the species' range to reduce the risk of extinction. After evaluating threats to

the species and assessing the cumulative effect of the threats under the Act's section 4(a)(1) factors, we found that habitat loss and degradation (i.e., land cover change), and changes to rainfall and increased temperature are the threats with the greatest potential to affect the species' viability within the foreseeable future. Based on the species life history, generation time, and the uncertainty of the species responses, projections for future condition were made using 20- and 50-year timesteps. These timesteps were not only within the temporal scope of model projections for assessing land use and changing rainfall and temperature levels, but also represented a timeframe over which we could make reasonably reliable predictions of the species' response based on our limited knowledge of the species' natural history. At each timestep, we forecasted changes in resiliency under two climate scenarios, a moderate scenario representing a lower trajectory for climate effects, and a high scenario, representing a higher trajectory for climate effects.

In the future, the biggest risk to the species is loss of forest cover around occupied areas. Areas that retain forest cover are less likely to experience impacts from changing rainfall patterns and rising temperatures. This is due to the role of forest cover in preserving stream habitat conditions by buffering against erosion from heavy rainfall events and filtering runoff from nearby incompatible land uses, thereby protecting the temperature regimes of streams. While species-specific responses to changes to rainfall and temperature are unknown, the expected potential impacts are assumed to worsen over time (e.g., global temperatures, with the potential to raise stream temperatures, are projected to increase between 0.3 °C to 4.8 °C (0.5 °F to 8.6 °F) degrees over the next 75years); however, we expect that the maintenance of forest cover around populations will buffer most of these potential impacts. The greatest projected risks are concentrated in the Powell River basin, where current forest cover and protected lands are generally lower and projected forest loss is higher compared to the rest of the range. As such, we identified that there is a different future extinction risk in the Powell River basin unit when compared to the other major basins (i.e., representation units). With increased forest loss, there is

a higher likelihood of decreased resiliency and more severe species response to catastrophic flooding events in the Powell River basin unit. Alternatively, the Upper Cumberland River basin and the North, Middle, and South Forks of the Kentucky River basin units within the major basins are projected to be resilient into the future.

Overall, while habitat loss, habitat degradation, and the impacts of changes to rainfall and temperature are affecting the spiny scale crayfish, the presence of sufficiently resilient populations, relatively high redundancy, and stable representation within the Upper Cumberland River basin and the North, Middle, and South Forks of the Kentucky River basin units indicate that the threats are not significant enough to substantially increase the risk of extinction. Therefore, the species is unlikely to become endangered within the foreseeable future in those units.

However, the spiny scale crayfish may be threatened throughout a portion of the range—the Powell River basin unit.

Although some of the analysis units within the Powell River basin unit face an elevated risk of forest loss, the overall resiliency of the unit is projected to remain high under both moderate and high climate scenarios through the 2074 timeframe. While the Powell River basin unit could potentially be at an elevated risk for a catastrophic impact, such as a heavy rainfall event, it is unlikely that impacts would threaten the entirety of the unit given the species inhabits the upper reaches of streams, providing geographical distance via stream branching that limits the impacts of many single catastrophic impacts. Similarly, the species has the ability to persist in place with changing environmental conditions through its ability to burrow, insulating individuals from impacts of changing precipitation and temperature patterns. As such, the spiny scale crayfish maintains sufficient representation and redundancy across this unit. Thus, we determined that the spiny scale crayfish does not have a different status throughout the Power River basin unit than the remainder of the range. As a result of our finding that the spiny scale crayfish is not likely to become in danger of extinction within the foreseeable future throughout

this portion of the range, we do not need to determine whether this portion of the range is "significant." Therefore, no portion of the species' range provides a basis for determining that the species is likely to become in danger of extinction within the foreseeable future throughout a significant portion of its range.

Based on the best scientific and commercial data available, we determine that the spiny scale crayfish does not meet the definition of an endangered species or a threatened species in accordance with sections 3(6) and 3(20) of the Act. Therefore, we find that listing the spiny scale crayfish is not warranted at this time. A detailed discussion of the basis for this finding can be found in the spiny scale crayfish species assessment form and other supporting documents on https://www.regulations.gov under Docket No. FWS–R5–ES–2025–0344 (see **ADDRESSES**, above).

Peer Review

In accordance with our joint policy on peer review published in the *Federal Register* on July 1, 1994 (59 FR 34270), and our August 22, 2016, memorandum updating and clarifying the role of peer review in listing actions under the Act, we solicited independent scientific reviews of the information contained in the SSA report for the spiny scale crayfish. We sent the SSA report to five independent peer reviewers and received three responses. Results of this structured peer review process can be found at https://www.regulations.gov under Docket No. FWS–R5–ES–2025–0344. We incorporated the results of these reviews, as appropriate, into the SSA report, which is the foundation for this finding.

Spotted Turtle

Previous Federal Actions

On July 11, 2012, we received a petition from the Center for Biological Diversity to list 53 amphibian and reptile species, including the spotted turtle (*Clemmys guttata*), as endangered or threatened species under the Act. On July 1, 2015, we published a 90-day finding (80 FR 37568) that the petition contained substantial information indicating listing may be warranted for

the species. This document constitutes our 12-month finding on the July 11, 2012, petition to list spotted turtle under the Act.

Summary of Finding

The spotted turtle is a small semiaquatic turtle found throughout the eastern coast of the United States and the Great Lakes region, from Maine south along the Atlantic Coastal Plain and Piedmont to Florida, and west to northeastern Illinois and Michigan. Although broadly distributed, the species is fairly uncommon in much of its range. Populations at the northern and southern extremes appear small, and the spotted turtle occurs in very low densities in Florida.

Generally, spotted turtles require wetland habitats with clear, clean water, soft substrate, and aquatic vegetation adjacent to accessible upland habitats. Throughout the year, spotted turtles can exploit a wide variety of mostly freshwater, shallow, wetland habitats, including sphagnum swamps, wooded swamps, small ephemeral and permanent pools, bogs, fens, wet meadows, cattail marshes, sedge meadows, small woodland streams, and artificial drainage ditches, as well as the edges of bays, ponds, and tidally influenced brackish streams. They often use different wetlands in different parts of the year, moving to new areas depending on the season and local conditions. Their activity patterns are somewhat temperature dependent, and spotted turtles have temperature dependent sex determination, with more females produced at higher temperatures. Although individual clutch sizes decrease from north to south, total annual reproductive output may be consistent across the range because southern populations are able to lay multiple clutches due to the extended active period. Alternatively, southern populations may be capable of exceeding reproductive output of the northern populations. Additionally, spotted turtles, like other turtle species, have high egg and juvenile mortality, iteroparity (i.e., repeated reproductive events over the lifespan), low adult mortality, and a long life, typically living at least 30 years, potentially up to 65 to 110 years old. Generation time has not been calculated for the spotted turtle, but it is likely 20 to 30 years. Because spotted turtles are long-lived with high egg and hatchling mortality, population persistence relies on high adult and subadult

survivorship, and increases in adult mortality can have large, lasting negative impacts on populations.

We have carefully assessed the best scientific and commercial data available regarding the past, present, and future threats to the spotted turtle. We evaluated all relevant factors under the Act's five listing factors, including any regulatory mechanisms and conservation measures addressing these threats. The primary threats affecting the spotted turtle's biological status are habitat loss, fragmentation, and alteration, followed by illegal collection, the latter of which can impact individual populations. We also examined other factors including land use and management (e.g., hydrology, invasive species), disease, parasites, predation, and direct loss of individuals from vehicle collisions and agricultural/mowing equipment; however, these factors did not rise to such a level that they affected the species as a whole.

We first assessed whether the spotted turtle is in danger of extinction throughout all of its range. The spotted turtle exists in restricted occurrences across a broad range that includes the Midwest and eastern United States, inhabiting many types of wetland habitats adjacent to accessible upland habitats that are used for nesting, basking, foraging, and overwintering sites. Approximately 83 percent of the species' range is ranked as highly or moderately resilient with abundant or somewhat abundant populations, abundant or widespread habitat availability, habitat connectivity, and stable or varied population trajectories. This level of resiliency across most of the spotted turtle's range contributes to its ability to withstand stochastic events. Redundancy is also robust, with many analysis units (containing multiple populations) distributed throughout a wide geographic extent, including multiple high resiliency units occurring from North Carolina to Maine. Despite threats acting on the species, there are also many moderately resilient units spread throughout the species' range, thus lending to the species' ability to withstand catastrophic events. At this time, there is no evidence of discrete genetic units within the spotted turtle's range. As a measure of representation and given the spotted turtle's use of various wetland types, upland habitats, and ecoregions across the landscape, the species is assumed to

have some amount of adaptive capacity to persist under broad ranges of conditions (recognizing there are limitations, especially given its long generational time of likely 20 to 30 years). Thus, after assessing the best scientific and commercial data available, we conclude that the spotted turtle is not in danger of extinction throughout all of its range.

In considering the status of the spotted turtle in the foreseeable future, we considered the relevant risk factors (threats) acting on the species and whether we could draw reliable predictions about the species' response to these factors. For the spotted turtle, we considered future condition under a high impact and a moderate impact scenario at two timesteps: 2050 and 2100. Our estimated future resiliency of spotted turtles is that more than half of the species' range (varying from 53.4 to 57.2 percent) is likely to maintain viability, with populations occurring within an average of 15.4 percent (varying from 14.3 to 16.6 percent) of the species' range exposed to the highest risk of extirpation. The projected viable populations (i.e., those with high and in some cases moderate resiliency, as well as low magnitude of future habitat impacts) that are largely inland (i.e., not in coastal or marsh migration areas), but otherwise distributed throughout the range with the exception of the southern limits of the species current distribution. The spotted turtle's future redundancy will be similar to the species' current ability to withstand catastrophes because we do not project entire analysis units being extirpated under either of the two scenarios at either timestep, although some population losses are possible, especially in highly developed analysis units and regions near the southern extent of the range. Representation for the spotted turtle is likely to decline an unknown degree as a result of loss of populations in specific habitat types, such as those available in predominantly the southern portion of the Southeast Coastal Plain L2 ecoregion, which is the area of greatest risk of extirpation under a high emissions scenario by 2100. However, the best scientific and commercial data available suggest that the spotted turtle has some ability to both adapt in place and shift its distribution, indicating it is capable of some undetermined level of change over time. Although redundancy and representation for the species is expected to decrease an unknown degree, under the most

likely future scenario and timesteps, the species would continue to occupy a wide variety of natural and artificial wetland and upland habitat types across its range, and under the high scenario and later timestep, would persist in a more limited area into the foreseeable future. After assessing the best scientific and commercial data available, we conclude that the spotted turtle is not likely to become endangered within the foreseeable future throughout all of its range.

We also evaluated whether the spotted turtle is endangered or threatened throughout a significant portion of its range. We did not find any portion of the spotted turtle's range for which both (1) the portion is "significant," and (2) the species is in danger of extinction in that portion or likely to become so within the foreseeable future. We found no portion of the spotted turtle's range where it is in danger of extinction. We found a portion of the range (SE Coastal Plain L2 ecoregion) where the spotted turtle may become in danger of extinction within the foreseeable future; however, this portion is not a significant portion of the spotted turtle's range given this portion does not contain unique or high quality habitat, nor does it constitute a large geographic area relative to the extensive range of the species as a whole. Thus, after assessing the best scientific and commercial data available, we conclude that the spotted turtle is not in danger of extinction throughout a significant portion of its range or likely to become so within the foreseeable future.

Based on the best scientific and commercial data available, we determine that the spotted turtle does not meet the definition of an endangered species or a threatened species in accordance with sections 3(6) and 3(20) of the Act. Therefore, we find that listing the spotted turtle is not warranted at this time. A detailed discussion of the basis for this finding can be found in the spotted turtle species assessment form and other supporting documents on https://www.regulations.gov under Docket No. FWS–R5–ES–2024–0108 (see **ADDRESSES**, above).

Peer Review

In accordance with our joint policy on peer review published in the *Federal Register* on July 1, 1994 (59 FR 34270), and our August 22, 2016, memorandum updating and clarifying the role of peer review in listing actions under the Act, we solicited independent scientific reviews of the information contained in the SSA report for the spotted turtle. We sent the SSA report to seven independent peer reviewers and received two responses. Results of this structured peer review process can be found at https://www.regulations.gov under Docket No. FWS–R5–ES–2024–0108. We incorporated the results of these reviews, as appropriate, into the SSA report, which is the foundation for this finding.

New Information

We request that you submit any new information concerning the taxonomy of, biology of, ecology of, status of, or stressors to the Jackson Prairie crayfish, Ozark shiner, speckled burrowing crayfish, spiny scale crayfish, and spotted turtle to the appropriate person, as specified under **FOR FURTHER INFORMATION CONTACT**, whenever it becomes available. New information will help us monitor these species and make appropriate decisions about their conservation and status. We encourage local agencies and stakeholders to continue cooperative monitoring and conservation efforts.

References

A complete list of the references used in these petition findings is available in the relevant species assessment form, which is available on the internet at https://www.regulations.gov in the appropriate docket (see **ADDRESSES**, above) and upon request from the appropriate person (see **FOR FURTHER INFORMATION CONTACT**, above).

Authority

The authority for this action is section 4 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.).

Brian R. Nesvik,
Director,
U.S. Fish and Wildlife Service.

[FR Doc. 2025-16933 Filed: 9/3/2025 8:45 am; Publication Date: 9/4/2025]